

Leverage: What It Is and How We Can Profit from It

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Definition

In the context of investing, *leverage* means using one of many techniques to improve our speculative capacity, **amplifying the effect of the money we invest in the pursuit of a higher rate of return.**

A well-known example of leverage is when people acquire mortgages to buy their houses. They have an amount of money for the purchase and, thanks to a mortgage on their newly-acquired property, they *amplify* the effect of the money and buy houses that cost more than what they had originally. There is no free ride: after the purchase they return the extra money in regular settlements, plus some costs such as interest and other fees.

The most widely used technique for applying leverage to securities exchange is called **buying on margin** and is similar to the previous case. When investors buy on margin, an institution is **lending** them money for the operation, to be added to the amount they are putting from their own pockets, with the purchased securities as collateral. Therefore, **they are able to buy more securities** than if only their own money was used, and thus attain a higher exposure with presumably-higher returns. But there is no free ride here neither, as they're assuming a **higher risk** and have to pay interest and other **costs**.

Let me give an example. My broker offers me a margin account for borrowing up to a 50% of the amount I'm investing with my own money (this is, a *1.5x leverage*), with a 5% interest. There is a company whose stock offer (I think) good annual returns. I have money to buy up to 1,000 shares, but I choose to accept my broker's offer and buy 500 more on margin, to a total of 1,500. After one year the stock has provided a 10% return and I sell it, returning the loan. The 1,000 shares I bought with my own money earned a 10%, and I had an extra return of a 5% of the 500 shares I purchased on margin, because the 10% return of the stock minus the 5% interest results in a 5% profit. Therefore, total return was not just 10%, but 10% times 1,000 plus 5% times 500, over 1,000, which equals a 12,5% (it is not important that you understand this math).

As can be seen, the rate of return was augmented, as was intended. So far, leverage is beautiful. But that was only because **the purchased security returned more than the interest of the loan**. What if it had lost a 3% instead? The 1,000 shares I bought with my money would have lost that 3%, and the 500 I bought on margin would have lost a 3% plus the 5% interest. Total return would be minus 3% times 1,000 minus 8% times 500, over 1,000, which equals a -7%, much worse than the -3% return of the stock.

This situation can be especially ugly if the price drops so much that the securities **become insufficient collateral** for the loan, so the broker issues what is called a **margin call**, asking the investor to cover part of the loan or some of the securities will be sold. If the investor doesn't have the cash and they have to be sold, they would be at rock bottom prices. Buying on margin can thus have catastrophic effects on an investor's account if done excessively.

Cost of Leveraging

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So leverage doesn't look as beautiful anymore, but it can be a useful tool. One of the key elements is the **cost of leveraging**. When buying on margin, we profit from leveraging as long as the purchased securities return more than the loan's interest. If the interest were zero, the risk would be augmented by the leveraging factor (1.5 in the previous example), as well as the potential profits. But as they are higher than zero, the benefit-over-risk relation is worse than that. So it is key to have low leveraging costs. How can this be accomplished?

One way is **buying stock from a fund that is leveraged**, be it **a mutual one, a CEF or an ETF**. If they buy on margin, the interest they pay will most probably be significantly lower than the one we can obtain as individuals (perhaps a 3% versus a 6%, for example). On the other hand, it is important that we pay attention to the degree of leveraging of the funds we buy. If a fund we are buying stock from **is leveraged and we don't know it, we are assuming a risk that is higher than what we think**. Many high-yield bond funds are leveraged to a 25% to 40% (which means that they borrowed a 25% to 40% of the money they have invested). That info is not hard to find if you spend a little time reading about the fund from their papers or informative third-party websites.

Other ways of keeping leveraging costs down are **employing techniques other than margin**, as they may be less expensive. Using **financial derivatives** such as options is one of them. Because of the high transaction costs and the sophistication needed to trade them efficiently, options are not a suitable trade for average investors unless they really want to pump up the risk-reward they are assuming. But, as in the previous case, they are more efficiently accessible through mutual funds.

If a fund we are studying employs derivatives, it is **not as easy to estimate the cost of leveraging as with margin**, where we just need to know the interest of the fund's borrowings. We need to rely on comparisons with benchmarks and some analysis. For example, if a fund is 1.5x leveraged and the annualized rate of return of the past three years for a relevant benchmark (meaning one formed by a similar set of securities) is 14%, then we would expect the annualized return of the fund's last three years to be approximately 14% times 1.5, minus fees and leveraging costs. An 18% would mean fees and leveraging costs are probably good, which wouldn't be the case if return was a 15%. Many inexperienced investors read that 15% and assume the fund is good because it returns more than the market average, without realizing that there is a higher risk that is not sufficiently rewarded.

Further Costs of Daily-Based Leverage

When analysing a leveraged fund that uses a more sophisticated technique than margin, there is another factor to consider. Many leveraged funds aim at providing x times the *daily* return, which is not the same as x times the long-term return. **Augmenting each daily return by a given factor will very probably result in less than similarly augmenting the long-term return.**

The reason can be seen by doing simple math on examples. If one day the return is +10% and the next it is -5%, the two-day return will be 1.10 times 0.95, which is equal to 1.045. That is, a 4.5% two-day return. The same security daily-leveraged 2 times will not return a 9%, but 1.20 times 0.90, which results in 1.08, or 8%.

Even when applied to securities that are reasonably stable in their price, this kind of discount produces a sensible difference in the long term, because it occurs little-by-little, everyday. Its value depends on the **price volatility** the security experiments.

To summarize, each time there is a daily drop in price followed by a recovery, the daily-leveraged fund lags behind the long-term-leveraged one (if such fund exists, which is doubtful, but that's for another article) and the difference is proportional to both price variations. This can be considered as another cost of such leveraged funds, that we need to address during our fund-selection process. It is worth noticing that the dependance on volatility makes daily-leveraged funds less recommendable for **periods of high uncertainty** and **risky securities**. Also, when analysing past performances, we must

bear in mind that a significant discrepancy with the expected return might be the result of an exceptional volatile scenario that, according to our speculations, may not repeat.

Swaps

An interesting technique for leveraging are **swaps**. These financial derivatives are contracts that parties sign, agreeing to transfer to the other an amount of money relative to the performance of a certain security or index. A fifty-percent-leveraged fund based on the S&P 500 index, to give an example, may accomplish that leverage by signing swap contracts, for an amount equivalent to half its belongings, with other parties who wish to receive money if the index goes down and are willing to pay if it goes up. Those other parties would be betting on the index losing value instead of gaining it: these kinds of positions are called *short*. If such a contract is for 10 million dollars and the index goes up a one percent, then the leveraged fund receives 100,000 dollars from the other party. If the index goes down, it has to pay. As can be seen, leverage is realized and, as long as the fund can find enough counter parties, it is almost costless.

Conclusions

To summarize, it is important that we analyse **leveraging costs** so as to choose only those leveraged funds that have acceptable ones, as well as the lag produced by daily-based leverage, which depends on the **volatility**. Another key element for deciding if leveraging is a good choice for us is **our desired risk-benefit**. Leveraging increases both risk and potential benefit, so it might be the right tool for us if we are willing to assume a higher risk in the pursuit of higher returns. Be it a good choice or not for our case, we need to pay attention to the amount of leverage our chosen funds might have, so as to avoid assuming a risk higher than intended.

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