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Making the Best of Leverage Investing

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Opening an account with a private bank can be a glamorous and exhilarating event. With a prestigiously branded partner to provide expert investment advice and solutions, investors feel confident, sophisticated and empowered to grow their wealth. Armed with this false sense of security, some investors welcome the idea of using leverage for exponential returns as a wealth creation strategy. They are comfortable with using leverage as it is akin to buying a property or running a business, which could have brought them much wealth in the past.

However, leveraged investing on securities, currencies and derivatives is a different business. Investors face market risks and other variables beyond their knowledge. Without proper risk management and investment experience, leverage can lead a high-net-worth individual to financial ruin.

How Does Leverage Investing Work?

In the table shown below, an investor plans to invest in a basket of shares valued at $3.4m (Portfolio A), with a loan. The bank, being prudent, determines that the portfolio has a maximum lending ratio of 70%.

In other words, the maximum loan value it can provide would be 70% of the market value of Portfolio A, while the investor has to finance the other 30% himself. The investor is prudent, taking a smaller loan of 50% and funding the rest with his cash. Therefore, Portfolio A is acquired with $1.7m in cash and $1.7m in borrowings with the portfolio itself as collateral.

When the market value of the unleveraged version of Portfolio A, worth $1.7m, rises by 25%, the leveraged version would have an exponential gain of 50% on the investor's initial cash outlay. Attractive as the scheme may sound, leverage cuts both ways. If Portfolio A were to fall by 25%, the investor would suffer a huge 50% loss on his initial cash outlay.

**Interest Costs excluded*	With a margin loan	Without a margin loan
Market Value of Portfolio A	$3,400,000	$1,700,000
Lending Ratio	**70%**	**N.A.**
Maximum Loan Value	$2,380,000	N.A.
Percentage Loan Taken	50%	
Loan Value Taken	**$1,700,000**	
Investor's Cash Funding	$1,700,000	

Positive impact: Price Rises	**25%**	
Market Value of Portfolio A after assumed increase	$4,250,000	$2,125,000
Your remaining capital after loan repayment	$2,550,000	N.A
Gain as percentage of funds you invested	**50%**	**25%**

Negative impact: Price Falls	**25%**	
Market Value of Portfolio A after assumed fall (**MV**)	$2,550,000	$1,275,000
Your remaining capital after loan repayment	$850,000	N.A
Loss as percentage of funds you invested	**-50%**	**-25%**
New Maximum Loan Value (NMLV) (70% of MV)	$1,785,000	

Negative impact: Price Falls	**40%**	
Market Value of Portfolio A after assumed fall (**MV**)	$2,040,000	$1,020,000
Your remaining capital after loan repayment	$340,000	N.A
Loss as percentage of funds you invested	**-80%**	**-40%**
New Maximum Loan Value (NMLV) (70% of MV)	$1,428,000	
If choose to top Up (Initial loan of $1,700,000 less NMLV)	($272,000)	

Negative impact: Price Falls	**60%**	
Market Value of Portfolio A after assumed fall (**MV**)	$1,360,000	$680,000
Your remaining capital after loan repayment	($340,000)	N.A
Loss as percentage of funds you invested	**-120%**	**-60%**
Amount owing to the bank	($340,000)	
Total loss	($2,040,000)	($1,020,000)

Margin Call

The maximum loan value funded by the bank is limited by a lending ratio unique to the investment concerned. In this example, the new maximum lending value (NMLV) of 70% on Portfolio A after it has depreciated by 25% is $1,785,000. (Lending ratio of 70% x Portfolio Value). As long as the amount borrowed, at $1,700,000, is below the new maximum lending value, a margin call would be avoided. The investor would still have a chance to recoup his losses.

If losses widen sharply to 40%, the market value of leveraged Portfolio A would fall to $2.04m and its NMLV of 70% would be reduced to $1,428,000. Since the existing $1.7m loan has exceeded the NMLV, the bank would need to exercise a 'margin call' and the investor would need to pay $272,000 to reduce the loan to keep it within the NMLV rule. If the investor is unable or chooses not to meet the margin call within the agreed time frame, part of his portfolio will be liquidated to pay for the outstanding loan. By then, the investor would have lost 80%, and without the initial leveraged facility it would be difficult to recoup the losses. On the other hand, the non-leveraged portfolio of shares has a good chance to recover its value over time.

In a worst case scenario, if a systemic tail-risk occurs, causing the leveraged portfolio fall 60%, the investor would have lost $2.04m and now owes the bank $340,000! An investor's pain is compounded if the value of the portfolio recovers sharply and becomes a big winner he helplessly observes.

How to successfully invest with leverage

Investors must always avoid a margin call, and the best way to do so is to avoid aggressive leverage. Between 2005 and 2007, it was easy for investors to make money from the market, and they might have attributed their success to their superior investment ability. Those who used leverage could have been seduced to take up bigger positions as their judgment got clouded. It is likely that they failed to recognize an overvalued market and a stock market bubble set to explode. Moreover, it only takes an unforeseen and rare outlier event to hit a highly leveraged portfolio bad enough to wipe out an account. Some investors end up in a sad state as they try hard to recoup earlier losses, only to repeat the same mistakes repeatedly till they end up broke.

This a classic case of the fate of gamblers, which an investor may refuse to admit. When systemic risks and market volatility increase, leverage should be reduced or used very carefully. If leverage is kept low, margin calls are kept at bay and investors would be able to survive a few bad investment decisions. This also provides some buffer when a portfolio's volatility increases.

During a market crisis, it takes time for your adviser to call and warn their clients. It will take time for them to reach you, and that's reality. Therefore, it is best that investors carefully monitor their own leveraged positions to avoid margin calls. In a volatile market, loan value ratios can change widely.

As easy as it may sound, leverage investing can be a risky proposition if not managed well.

Investors can learn from investment legend Jesse Livermore who successfully used leveraged investing to amass a fortune in 1907 and famously made $100 million (equivalent to $1.26 billion) in 1929. His advice comes from the experience of making millions to becoming a bankrupt not once but a few times, and his views remain relevant today.

Firstly, always minimize mistakes. According to Livermore, "Being wrong is acceptable; staying wrong is unacceptable." A good trader minimizes mistakes and, if he does make a mistake, acts to minimise the damage by quickly exiting from the situation. This means having a written plan for each trade entered, the most important element of which is the stop-loss.

For many investors, it is often easy to exit a profitable trade early but difficult to cut losses. Humans dislike being wrong, and pride is one of the reasons. An investor holding on to a losing trade may find some excuse, saying that he is a long term investor and not a trader nor speculator, only to suffer the consequences. It is important to remain humble and admit to mistakes early, and it is easier to do this by keeping quiet on our trades and not boasting to peers on positions taken.

However, most investors have a loss-adverse nature that makes him unable to adopt and execute a stop-loss rule early. A losing trade is usually held onto until the loss becomes unbearable or when the investor gets a margin call from the lender and is forced to close a position. Depending on the level of leverage used, a small 5% loss can be swiftly magnified to 70% or more. From a mathematical perspective, the bigger we lose, the harder it will be to recoup losses. Therefore, mistakes must be acknowledged and stopped early.

Loss	**Returns needed to breakeven**	**Loss**	**Returns needed to breakeven**
-5%	5.26%	-40%	67%
-10%	11.11%	-50%	100%
-15%	17.65%	-60%	150%
-20%	25.00%	-70%	233%
-30%	42.86%	-80%	400%

Secondly, avoid the folly of trying to find a good reason why you should sell a leveraged investment. Answers take time to come and it would usually be too late to act profitably. Livermore feels that "the only reason an investor or speculator should ever want to have pointed out to him is the action of the market itself." Investors are encouraged to use technical analysis to make leverage trading decisions, rather than depend on assumed market fundamentals. Losses should be cut when prices do not act right, and it should be done when the market says so.

Investors should not accumulate more losing positions like 'averaging down' when they are wrong based on certain beliefs or fundamentals. Markets can remain irrational longer than you remaining solvent – especially for leveraged accounts.

Thirdly, it is important that an investor invest with leverage only when the risk-rewards ratio is great. One must be a disciplined trader and not become a compulsive gambler. As leveraged losses can be big, investors need to be patient and wait for potential returns that are large enough to make business sense and cover interest costs.

Fourthly, stick to liquid investments that you understand. In 2008, individuals and a few institutional investors, especially in Hong Kong, were sold financial derivative products like "accumulators" (a.k.a. "I kill you later') by their private banks. In some cases, leverage was used despite having insufficient knowledge about the product. Not many of their bankers truly understood the risks involved, and they had sales targets to meet. When the 2008 crisis was full-blown, investors had difficulty unwinding their positions and suffered huge losses.

Livermore was also famous for using an old trading strategy called 'Pyramiding', where a speculator adds to their position size by using margin from unrealized gains. The rewards are huge but will work well only in a strong and trending market. Livermore figured that the best way to pyramid is to establish a full position through a few early large trades. When large profits have been made, additional smaller leveraged positions could then be taken as price moves in a favorable direction. This helps protect against the sudden adverse losses that could occur at any time. Other than stop-loss rules, trailing stops must also be used to profit-take, as according to Livermore, "you get paid when you exit."

One can appreciate how Livermore was fully aware of the risks involved in leverage investing when he set aside money in a trust to protect his family from his own trading activities. Despite all the rules, dedication and success Livermore had with leveraged investing, he suffered from depression and lost all he had in 1934. In 1940, Livermore published a investment classic titled "How To Trade Stocks", where he described his experiences and techniques in trading in the stock and commodity markets. Shortly after, he shot himself in the head in the cloakroom of the Sherry Netherland Hotel in Manhattan.

In conclusion, engage in leverage investing only if you know how to make trading decisions. If you find this article difficult to understand, stay off leverage investing. And if you really want to, keep leverage within 120%.

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