Use compounded growth rate, not absolute return, to gauge investments -

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Often, individuals sign up for investment products just by looking at absolute numbers. “Double Your Money” or “Triple Your Money” are some of the best hooks to make someone write the cheque. Such an approach creates an optical illusion for the investor. However, it may not be the best thing to do unless you get into the details. An investor should first ascertain the compounded annual growth rate to figure out if he is being compensated for the risks he takes.

This should best be understood with an example. We are always told to invest with a long-term view. Many people come across offers of doubling or tripling their money over a period of time. Say, invest Rs 1 lakh and get Rs 4 lakh after 20 years. Here you are being offered 300 percent returns over 20 years. Optically, it looks good. The only problem is, if you calculate returns this way, you will earn 300% returns in 20 years, 10 years or even four years. The reason why this 300 percent return is optical, is because it doesn’t account for the time that your money stays invested.

The compounded returns take into account the time of your investments. Now, if you sit and calculate the compounded annual growth rate (CAGR), it works out to 7.18%. This gives the true picture. Even safer options such as public provident funds have offered better returns over the past 20 years. The CAGR return, which explains the annual return rate over a period of time, is a better barometer of checking long-term returns. Take another case of an apparently-high return generating transaction. You must have heard someone saying that his grandfather bought a piece of land for Rs 10,000 in the 1950s. And, his father sold it for one crore in 2015. That sounds like a great deal. For the person receiving the sale proceeds, it is definitely a windfall gain. No doubt, one crore in absolute term is a large sum of money. However, if we see the CAGR, it works out to 3.6 percent per annum. This number makes it clear that it was rather a mediocre investment operation.

A look at the upward trending gold prices chart over the long term suggests that gold investors must be doing very well. Gold was quoting at an average price of Rs 685 per 10 gram in 1978. In 2018, it was quoted at Rs 31,438, according to BankBazaar. This is really a big move. But, if you do the math, you will realise that it is just 13.04 percent rate of return on compounded basis. This still looks respectable if we look at the rate of interest payable on fixed income options today. However, if you ask an old-timer, he would point out to high double-digit rate of interest payable in the nineties. The optical illusion can really make it difficult to decide rationally.

All these calculations can be done in a minute on a Microsoft excel sheet (or any other spreadsheet software), using a simple formula called the future value (FV) function. The reality should make one think twice before writing the cheque.

Ideally, if you have a long-term view then you should be investing in stocks through equity mutual funds. Multicap funds have delivered 13.8 percent CAGR over the past 10 years. The longer you hold a well-managed equity portfolio, the lower is the risk and the better is the risk-adjusted returns, say experts. If we take a conservative estimate of 12 percent rate of return over 20 years for Rs 1 lakh invested now, you will take home Rs 9.64 lakh. Whenever you are investing money, do not forget to ask for the CAGR.

$$\text{CAGR} = \left(\frac{\text{Ending Value}}{\text{Beginning Value}}\right)^{\left(\frac{1}{\text{\# of years}}\right)} - 1$$