



Winning by Minimizing Downside Capture



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No one likes losing money. Not only is the experience itself emotionally unsettling, but sudden portfolio losses can also derail an investor's progress and put their goals in jeopardy. Furthermore, the effects of compounding mean that a 50% loss requires a 100% positive return just to break even.

While downside risk can't be eliminated, investors are increasingly looking for ways to participate in up markets without giving up all of those gains when the going gets tough. To discuss one approach for measuring progress towards this goal, we recently sat down with Martin Ruszkowski, PhD, Smart Beta Portfolio Manager for Rothschild.

Q: Martin, there are many ways to measure risk. Why should advisors and their clients consider downside capture in addition to some of the more commonly accepted measures of risk?

MR: Yes indeed, there are many ways to measure risk, but even some of the more widely accepted measures have their limitations. For example, standard deviation is a common measure of volatility, and in fact, one which we use in conjunction with correlation (how stocks move together) as an input for selecting stocks for our portfolios.

That said, standard deviation is a concept that might prove challenging to explain to clients. If I tell you that Stock A's standard deviation is 17.4, most investors don't know what conclusion to draw from that.

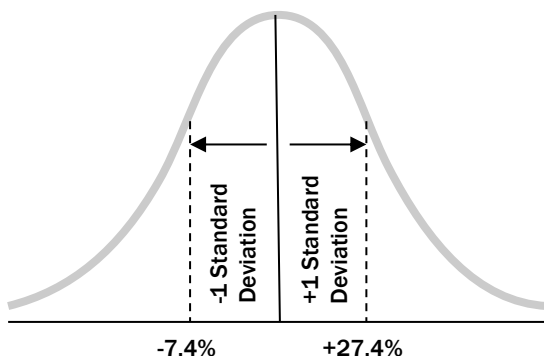
Computing standard deviation also first requires that an investment's average or "mean" returns be calculated as a starting point. In the simplest terms, standard deviation is best conceived by imagining a bell curve, where the peak represents the mean return, and solving for the average distance on either side of the mean such that 68% of all returns will fall within this range.



Q: That's a bit tough to grasp for many investors, no?

MR: Not only that, but then you have to explain that distributions of returns can be skewed such that the range of outcomes differs from the classic bell curve, possibly making negative outcomes more likely, or increasing the chance of outliers. In addition, while what goes up usually comes down, standard deviation considers all volatility to be negative, even upside volatility.

An investment with a mean return of 10% and a standard deviation of 17.4% would be expected to have approximately two-thirds of its distribution of returns fall between -7.4% and +27.4%



Note: See page 4 for important disclosures.

Q: Investors might not grasp the concept of deviation around the mean, but they do understand what it means to lose money. Why not evaluate how well an investment holds up in bear markets?

MR: While conceptually simple, this approach has severe limitations, including the fact that bear markets—defined as a market decline of greater than 20%—are few and far between. For example, the last bear market in the US occurred in 2008. Thus, investors have only one data point to consider over the past ten years, which is not very scientific.

In addition, the information is quite stale: particularly when considering a stock, the company may have taken on more debt or seen its market share erode in recent years, making its performance during the financial crisis less relevant. Moreover, certain bear

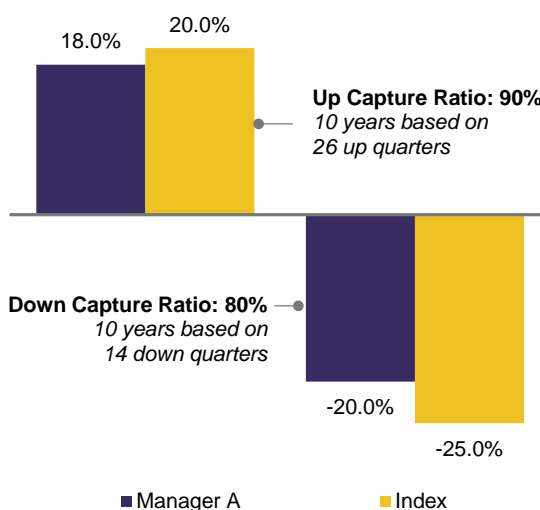
markets are more sector-focused: when the NASDAQ lost three-fourths of its value during the Tech bubble, many stocks in more value-oriented sectors actually rose in price.

Q: When we previously spoke, you mentioned that Downside Capture might be a better approach. Why can this statistic be more effective?

MR: Downside capture considers an investment strategy's performance during any time periods in which the benchmark declines. Let's assume that during a ten-year period, the benchmark exhibited 14 quarterly declines which produced annualized losses of 25%. If the corresponding strategy's average decline was 20%, then its downside capture would be 80%, or 20% less risky than the benchmark.

Q: So downside capture is more statistically valid and timelier than bear market performance, correct?

MR: Exactly. An additional benefit is that the concept is easier to explain to investors when compared to standard deviation. They understand that the market goes down from time to time, and downside capture puts the strategy's relative performance into perspective.



Past performance is not necessarily indicative of future results.

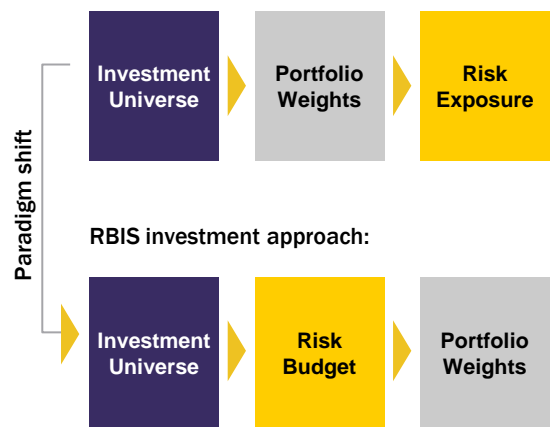


Q: How do you design a strategy which attempts to provide good downside capture?

MR: First and foremost, you make risk a point of emphasis. Most investment strategies treat risk like a byproduct: they look for stocks within certain characteristics or expected returns, but risk is largely an afterthought. Our strategy puts the horse back in front of the cart by using risk as the key selection criteria.

Q: What does that process look like in simple terms?

MR: We consider not only a stock's volatility, but also how such fluctuations correlate with other investments in the portfolio. This helps us improve the portfolio's downside capture because when two stocks have low correlation, one may zig when the other one zags.



Q: Martin, maybe a good place for us to close is to discuss the limits of downside capture. Does a low downside capture necessarily make for a low upside capture?

MR: It is hard to conceive of an investment that would consistently deliver 80% downside capture while exhibiting 120% upside capture. That said, even if that same strategy delivers 90% of the upside, it would present a favorable risk-reward profile. This might offer the added benefit of keeping investors committed to a long-term program, instead of bailing on their program at the first hint of market volatility.

Measure	Advantages	Limitations
Standard Deviation	Statistically sound; measures both upside and downside volatility	Complex calculation; not immediately relatable for investors; may penalize "good (upside)" volatility
Bear Market risk	Immediately intuitive (i.e., "How much did I lose when the market went down?")	Infrequency of bear markets (declines of 20%) can render the statistic outdated or misleading
Upside/Downside	Highly relatable (e.g., 20% less risk than the market) and easy to calculate	Captures any negative return (not just 20% or greater), but stretches of low volatility could understate risk



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