Alternative Risk-Adjusted Measures

Next to the Sharpe Ratio, there are alternative metrics to capture risk-adjusted returns, such as the Sortino Ratio as well as the Upside / Downside Capture.

The Sharpe Ratio measures the additional amount of return that an investor receives per unit of increased risk: It is calculated by subtracting the risk-free rate from the average rate of return of the investment under consideration. This amount is then divided by the standard deviation of the investment proposition (i.e. the degree to which its return varies from its mean returns). Therefore, the higher the Sharpe Ratio, the better the investment is doing at achieving relatively lower-risk returns.

Whilst the Sharpe Ratio measures the desirability of an investment and certainly has some value in assessing investment quality of low-volatility propositions, such as of mutual funds, it has its limitations, too. Most important, the Sharpe Ratio does not distinguish between ("good") upside and ("bad") downside volatility. In fact, higher outlier returns can have the effect of increasing the value of the denominator more than that of the numerator: Hence, lowering the value of the ratio.

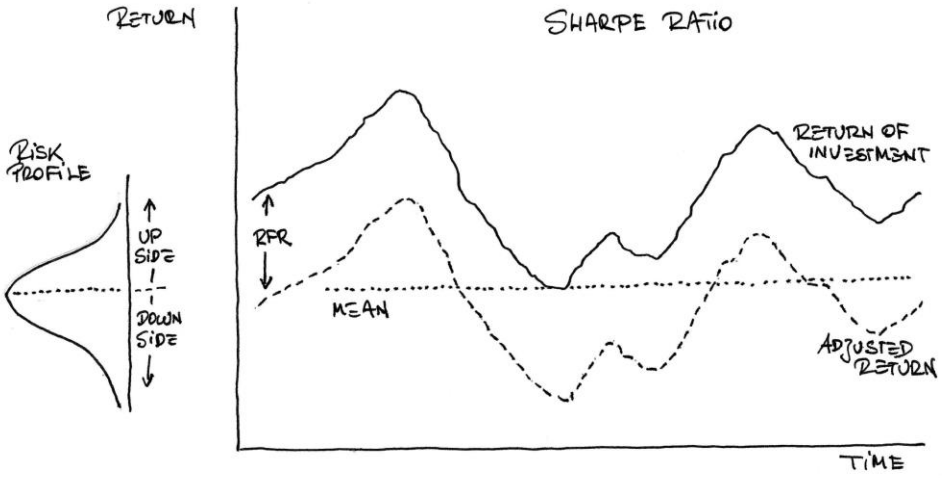
In consequence, this may penalize strategies that may have significant upside volatility. Besides, many investors rather focus on avoiding losses, and therefore deem downside volatility as more relevant to focus on than overall volatility.

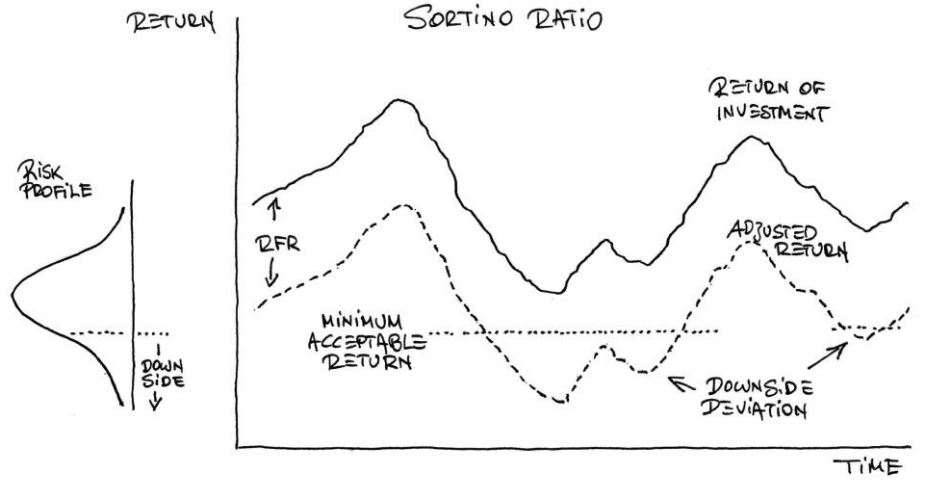
The Sortino Ratio aims to address that concern: Whilst it also subtracts the rate of return of a risk-free asset from the average return of a riskier asset, subsequently - unlike the Sharpe Ratio - it divides this result by the proposed asset's downside risk (downside deviation) only. Latter is calculated exclusively from the asset's returns when and if these fall below a minimum acceptable target return which can be individually set by the investor. Hence, the Sortino Ratio is more frequently applied in evaluating high-volatility portfolios, whereby it penalizes only downside volatility below target return.

The Downside Capture provides an alternative to the Sortino Ratio: It calculates a given asset's risk-adjusted return as a function of its benchmark (e.g. S&P 500, some MSCI index). In essence, it indicates whether the asset has lost less than a chosen benchmark during market weakness, and if so, how much less. Therefore, Downside Capture Ratios are calculated by dividing the asset's (usually: monthly) return during periods of negative benchmark performance by the benchmark return. To analyse this, Downside Capture Ratios are usually calculated over periods of 3, 5 or 10 years: A ratio of less than 100 would indicate that an asset has lost less than its benchmark in periods when the benchmark has been in the red. – As an alternative to this calculation approach, one could for instance only focus at those points in time when a benchmark - set in absolute terms - fell below a certain minimum acceptable return.

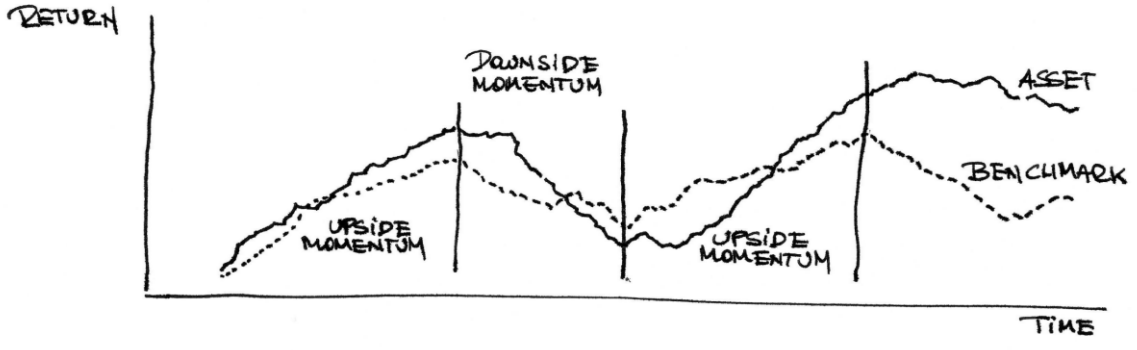
The Upside Capture is calculated accordingly.

The spread of the Upside/Downside Capture Ratio indicates whether an asset has outperformed - gained more or lost less than - a broad market benchmark during periods of market strength and weakness. For example, while an asset may not capture 100 per cent of the upside, if it captures even less of the downside (the Down Capture Ratio lower than its Upside Capture Ratio), the asset may still have the ability to outperform the market and potentially do so with even less risk over full market cycles.





UPSIDE | DOWNSIDE CAPTURE



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