



RR LEARNING

Enrich your Wisdom

Risk Calculation Ratios

1. Standard Deviation

- Standard Deviation is a measure of how much the actual performance of a fund over a period of time deviates from the average performance.
- Since Standard Deviation is a measure of risk, a low Standard Deviation is good.
- For example, Standard deviation of 28 means that the fund's return can fluctuate in either direction (up or down) by 28 per cent from its average return.

2. Sharpe Ratio

- The Sharpe Ratio of a fund looks at both, returns and risk, and delivers a single measure that is proportional to the risk adjusted returns.
- Since Sharpe Ratio is a measure of risk-adjusted returns, a high Sharpe Ratio is good.
- As standard deviation represents the total risk experienced by a fund, the Sharpe ratio reflects the returns generated by undertaking all possible risks.

3. Beta

- Beta is a statistical term; it measures the volatility of fund relative to the market or the benchmark. The value of beta of a stock or fund is always stated against its benchmark.
- The beta of benchmark or market is always equal to 1. A beta of less than 1 implies lesser volatility.
- For example, if a stock is benchmarked against Sensex and has a beta value greater than 1 (say 1.5), this indicates that the stock is 50% more volatile than the market as the beta of Sensex is 1. The stated stock will deliver 15% return if the market has delivered a 10% return in same time period and vice versa

4. Correlation

- It is a statistical measure of how two securities move in relation to each other. Correlation is computed into what is known as the correlation coefficient, which ranges between -1 and +1.
- Perfect positive correlation (+1) implies that as one security moves, either up or down, the other security will move in the same direction. Alternatively, perfect negative correlation means that if one security moves in either direction the security that is perfectly negatively correlated will move by an equal amount in the opposite direction.
- If the correlation is 0, the movements of the securities are said to have no correlation.

5. Treynor Ratio

- It helps in analyzing the returns in relation to the market risk of the fund. This Ratio, also known as the reward-to-volatility ratio, provides a measure of performance adjusted for market risk.
- Higher the Treynor Ratio, the better the performance under analysis
- For example, if the fund's average return is 10% and the risk free rate is 7%, the difference becomes 3%. If the historic beta of the fund is 1.5, then the Treynor Ratio is 2 (3 divided by 1.5). This means that in past, the fund has given two units of return for one unit of its market risk.

6. Jenson Measure

- This measure conveys that you must look not only at the overall return of a portfolio, but also at the risk of that portfolio.
- For example, if there are two mutual funds that both have a 12% return, a rational investor will want the fund that is less risky.
- If the value is positive, then the portfolio is earning excess returns.