Standard deviation or volatility explained…

Standard deviation, or volatility, is a statistical measurement of dispersion about an average, depicting how widely a model or simulations' returns are varied over a certain period of time.

When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

Investors can use the standard deviation of historical performance to try to predict the range of returns that are most likely in the future.

Since a models' returns are assumed to follow a normal distribution, then approximately 68% of the time the returns will fall within one standard deviation of the mean, and 95% of the time within two standard deviations.

For example, for a fund with a mean annual return of 10% and a standard deviation of 2%, you would expect the return to be between 8% and 12% about 68% of the time, and between 6% and 14% about 95% of the time.

Implementation within Risk101

Risk101 does NOT add 1 to the sample when calculating standard deviation.

Where to find it in Risk101:

All the graphics procedures allow you to calculate the standard deviation of a time series.

Value at risk allows you to enter confidence intervals when calculating VAR. The normally accepted standard is to use 95%, and 98% or 99%. (Interestingly : The United Kingdom and Europe tend to use 95% and 98% as a standard, whereas the USA and Pacific-rim countries tend to use 95% and 99%)

Author : JPE
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