

Notes:
(x) = Scheme Return
(y) = Benchmark Index Return
Std Dev = Standard Deviation
RFR = Risk Free Rate of Return
Avg = Average

Ratio Formula used in AceMF

Ratios	Formula
Average	Simple Average of (x)
Beta	Slope (x) : (y)
Beta (Correlation)	Correlation (x) * [Std Dev(x) / Std Dev(y)]
Correlation	$[\text{Avg}(x*y) - \text{Avg}(x)*\text{Avg}(y)] / [(\text{Std Dev}(x) * \text{Std Dev}(y))]$
Downside Probability	Sum of all negative returns / No of days
Downside Risk	Downside risk = MeanOfRetDSR ^(1/2) MeanOfRetDSR= SumSq/ no of days SumSq= sum of all squares of X X = If (Return- RFR)>0 then 0 else Return- RFR
Fama	$(\text{Avg}(x) - \text{RFR}) / [(\text{Std Dev}(x) / \text{Std Dev}(y)) * (\text{Avg}(y) - \text{RFR})]$
Information Ratio	$(\text{Avg}(x) - \text{Avg}(y)) / \text{Std Dev}((x) - (y))$
Jensen's Alpha	$(\text{Avg}(x) - [(\text{RFR}) + (\text{Beta}(x) * (\text{Avg}(y) - \text{RFR}))])$
Return Due to Improper Diversification	$(\text{Std Dev}(x) / \text{Std Dev}(y)) * (\text{Avg}(y) / \text{RFR})$
Return due to Selectivity	$((\text{Avg}(x) / \text{RFR}) * ((\text{Std Dev}(x) / \text{Std Dev}(y)) * (\text{Avg}(y) / \text{RFR})))$
R-Squared	$\text{Covariance}(x,y) / [\text{Std Dev}(x) * \text{Std Dev}(y)]^2$
Standard Deviation Annualised	Std Dev (x) * Sq. Root (no. of dates in range)
Standard Deviation	Simple Standard Deviation of (x)
Semi Standard Deviation	Std Dev (x) which are below the average of (x) Here Value above Avg (x) are taken as 0 for Std Dev Calc.
Semi Standard Deviation (2)	Std Dev (x) which are below the average of (x) Here Value above Avg (x) are taken as blank for Std Dev Calc.
Semi Standard Deviation (3)	Std Dev (x) which are below the average of (x) Here Value above Avg (x) are taken as blank and only negative values are considered for Std Dev Calc.
Sharpe	$(\text{Avg}(x) - \text{RFR}) / \text{Std Dev}(x)$
Sortino	$(\text{Avg}(x) - \text{RFR}) / \text{Semi Std Dev}(x)$
Sortino (2)	$(\text{Avg}(x) - \text{RFR}) / \text{Semi Std Dev } 2(x)$
Tracking Error	Standard Deviation of difference between (x) and (y)
Treynor	$(\text{Avg}(x) - \text{RFR}) / \text{Beta}$
Up Capture Returns	$\{(((\text{Sum of}(x) \text{ returns during bull runs})^{(1/n)-1}) * 100) / (((\text{Sum of}(y) \text{ returns})^{(1/n)-1}) * 100)\} * 100$
Down Capture Returns	$\{(((\text{Sum of}(x) \text{ returns during bear runs})^{(1/n)-1}) * 100) / (((\text{Sum of}(y) \text{ returns})^{(1/n)-1}) * 100)\} * 100$
Up/Down Capture Ratio	Up Capture Return / Down Capture Return
PE of Scheme	Weighted Avg PE i.e Sum of (Company's TTM PE * Company's Holding %)
PB of Scheme	Weighted Avg PBV i.e Sum of (Company's PBV * Company's Holding %)