
ANG-CHUA EXCESS RETURN

Description of the Measure:

The Ang-Chua Excess Return is an absolute measure of performance. It is given by the annualized mean return of the fund, deducted by the yield of an investment without risk, minus beta times market excess return augmented by the product of the sensitivity of portfolio returns to market volatility by the market volatility.

Interpretation:

The Ang-Chua Excess Return gives the excess return obtained by the manager which is not explained by his/her current risk positions (supposing, this time, that there are two stable risk factors: the market factor and the excess volatility of the market factor).

Use:

The magnitude of the Ang-Chua Measure depends on three variables: the return of the fund and risk sensitivities variability. This indicator represents the part of the mean return of the fund that cannot be explained by common factorial risk exposure (supposing, this time, that the relation between fund return and market risk depends also on the level of market volatility). It is a function of how good were the anticipations of the manager concerning market factor and market volatility evolutions.

Potential Misuse:

Accuracy and reliability of this measure is based on the quality of the market proxy.

Formula:

$$AC_{p,t} = [E_t(R_{p,t}) - R_f] - \hat{\beta}_{1,p} [E_t(R_{m,t}) - R_f] - \hat{\beta}_{2,p} E_t \left\{ [R_{m,t} - E_t(R_{m,t})]^2 \right\},$$

where:

$E_t(R_{m,t})$ is the annualized mean return on the fund considered over period;

R_f is a proxy for the riskless rate;

$E_t(R_{m,t})$ is the annualized mean return on the market portfolio considered over period;

$\hat{\beta}_{1,p}$ is the sensitivity of portfolio returns to market fluctuation;

$\hat{\beta}_{2,p}$ is the sensitivity of portfolio returns to market volatility.

Two year data of weekly series is considered.

References:

Ang J. and J. Chua, (1979), "A simplifying Performance Measure Recognising Skewness", *Journal of Financial and Quantitative Analysis* 14 (2), June 1979, 361-384.