FERSON-SCHADT MEASURE

Description of the Measure:
The Ferson-Schadt Measure is an absolute measure of performance. It is given by the annualized return of the fund, deducted the yield of an investment without risk, minus the sum of returns on the arbitrage portfolios (mimicking risk factors) multiplied by the estimated fund's sensitivities to risk factors (see risk indicator) during the same period.

Interpretation:
The Ferson-Schadt Measure gives the excess return obtained by the manager which is not explained by his/her current risk positions (supposing, this time, that risk factors are truly variable).

Use:
The magnitude of the Ferson-Schadt Measure depends on two variables: the return of the fund and risk sensitivities. This indicator represents the part of the mean return of the fund that cannot be explained by common factorial risk exposures. It is a function of how good were the anticipations of the manager in comparison with those of the model. It represents the weighted outperformance of the fund where the weights depends on the goodness-of-fit of the model.

Potential Misuse:
This measure should be used as a complementary one, because it measures the excess return that cannot have been obtained considering a multifactorial model of returns. Its validity relies on the accuracy of the model and as no equilibrium or arbitrage

argument has been advocated, the stability of the relation can be questioned.

Formula:

$$FS_{p,t} = \left[E_t\left(R_{p,t}\right) - R_f\right] - \sum_{i=1}^{I} \hat{\beta}_{p,i}\left(F_{jt}\right)\left[E_t\left(F_{it}\right)\right]$$

where:

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

R_f is a proxy for the riskless rate;

$\hat{\beta}_{p,i}\left(F_{jt}\right)$ is the modelized sensivity to factor j;

F_{jt} is a factor explaining the evolution of fund beta coefficients;

$E_t\left(F_{it}\right)$ is the annualized mean return on a portfolio perfectly correlated with factor i evolution.

Two year data of weekly series is considered.

References:
Ferson W. and R. Schadt, (1996), " Measuring Fund Strategy and Performance in Changing Economic Conditions", *Journal of Finance 51 (2),* June 1996, 425-461.