

Lecture

Analysis of abnormal return
of managed portfolios by E. Fama.
GSS. CFDR. NSS.

Eugene Fama

Born in 1939, an American economist, known for his work on portfolio theory and asset pricing, both theoretical and empirical.

Currently he is a professor of finance at the [University of Chicago Booth School of Business](#). MBA, PhD.



Eugene Fama

E. Fama is most often thought of as the father of **efficient market hypothesis (EMH)**, beginning with his Ph.D. thesis.

In a ground-breaking article in the May, 1970 issue of the *Journal of Finance*, entitled "**Efficient Capital Markets: A Review of Theory and Empirical Work**," E. Fama proposed *three types of efficiency*:

- (i) *strong-form*;
- (ii) *semi-strong form*; and
- (iii) *weak efficiency*.

He was a co-founder of **Fama–French three-factor model (1993)**.

Analysis of abnormal return by E. Fama

GSS, Gross security selection = fact -

$$r_{CAPM} = CFDR + NSS$$

CFDR, Compensation for diversifiable risk is the effect of higher volatility of portfolio on the GSS.

$$CFDR = (r_m - r_f) * (\sigma_p / \sigma_m - \beta_p)$$

σ_p / σ_m could be called the «degree of volatility»

NB: $\sigma_p / \sigma_m > \beta_p$

NSS, Net security selection = GSS – CFDR

NSS is the effect of “smart” selection of securities for a portfolio, and effective & efficient trading (opening/closing positions).

Practice

In 2012, a managed portfolio:

mean return_p = 0,41%

beta_p = 0,77

sigma_p = 3,55%

Market proxy is ACWIFM (0,24%;1,83%)

Find:

- GSS
- Degree of volatility
- CFDR
- NSS
- Evaluate the portfolio manager's performance

If $NSS > 0$, the portfolio manager was effective:
he/she “added up” to the portfolio return.

If $NSS < 0$, the portfolio manager was
not effective: he/she “ate up” some return.

**Analysis of abnormal return
by E. Fama**