

# 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 =  $r_{act}$  -

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

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

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

$\sigma_p / \sigma_m$  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<sub>p</sub> = 0,41%

beta<sub>p</sub> = 0,77

sigma<sub>p</sub> = 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**