

Unit-4

CAPM

Security above Security Market line is considered undervalued and below is considered undervalued.

Use to calculate expected return of portfolio

$$E(R) = R_f + \beta (R_M - R_f)$$

R_f : risk free rate

R_M : market return

Markowitz Portfolio Model

Create and select a portfolio that would yield maximised return.

$$CMZ = R_f + (R_M - R_f) \frac{\sigma_p}{\sigma_m}$$

(i) Sharpe Ratio

$$= \frac{R_p - R_f}{\sigma_p}$$

Risk adjusted return per unit of risk

(ii) Treynor's Ratio

$$= \frac{R_p - R_f}{\beta}$$

(iii) Jensen's Alpha

$$= \text{Actual Return} - \text{Expected Return}$$

Positive alpha means portfolio outperformed its risk.

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