Pseudo Presentation

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Theorem

The Capital Asset Pricing Model (CAPM) describes the relationship between systematic risk and expected return for assets, particularly stocks.

CAPM is widely used throughout finance for pricing risky securities and generating expected returns for assets given the risk of those assets and cost of capital.

Capital Asset Pricing Model

Formula

$$ER_i = R_f + \beta_i(ER_m - R_f) \qquad (1)$$

where,
ER_i = expected return of investment
R_f = risk-free rate
β_i = beta of the investment

Example: Imagine an investor is contemplating a stock worth \$100 per share today that pays a 3% annual dividend. The stock has a beta compared to the market of 1.3. Also, assume that the risk-free rate is 3% and this investor expects the market to rise in value by 8% per year.

Solution:
The expected return of the stock $= 3\% + 1.3 \times (8\% - 3\%) = 9.5\%$

Capital Asset Pricing Model

CML and SML