[Frequently Asked Questions]

Portfolio Theory (Part - 2)

Subject:	Business Economics
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Frequently Asked Questions:

1. **Who is the father of modern portfolio theory? What did he formulize?**

Harry Markowitz is regarded as the father of modern portfolio theory. He formulized a technique called “mean variance analysis” for selection of investments for portfolio construction.

2. **What is efficient frontier?**

Markowitz has formulized the risk return relationship and developed the concept of efficient frontier. For selection of a portfolio, comparison between a combinations of portfolios is essential.

3. **What is capital market line?**

Capital market line (CML) is the tangent line drawn from the point of the risk free asset to the feasible region for risky assets. All the points on this line represent superior risk return profiles to any portfolio on the efficient frontier.

4. **What is Capital asset pricing model (CAPM)? How is it useful?**

It is a model that describes the relationship between systematic risk and expected return for assets, particularly stocks. William Sharpe and John Linter developed the capital asset pricing model. This model emphasizes both on systematic and unsystematic risk. This model suggest that a security’s return is directly related to its systematic risk which cannot be neutralized through diversification. The total variance of returns is equal to market related variance plus company’s specific variance. CAPM explains the behavior of security prices and provides a mechanism whereby investors could assess the impact of a proposed security investment on the overall portfolio risk and return. CAPM suggests that the prices of securities are determined in such a way that the risk premium or excess returns are proportional to systematic risk, which is indicated by beta coefficient.

5. **What is Security Market Line?**

It is the representation of the capital asset pricing model. It displays the expected rate of return of an individual security as a function of systematic, non-diversifiable risk.

6. **How can CAPM be used to decide on stock selection in a portfolio?**

The CAPM model can be used to sell, buy or hold stocks. It One can quantify the expected returns based on some benchmark or current scenario and then take a decision as follows;

If compared with benchmark returns	If compared with actual market price
CAPM < ERR=undervalued stocks = buy	Actual market price < CAPM= undervalued stocks = buy
CAPM > ERR=overvalued stocks = buy	Actual market price > CAPM= overvalued stocks = sell
CAPM = ERR= correct valuation=hold	Actual market price = CAPM= correct valuation=hold

7. **List the advantages of CAPM**

They are; 1. It considers only systematic risk. 2. It generates a theoretically-derived relationship between required return and systematic risk. 3. It is generally seen as a much better method of calculating the cost of equity than the dividend growth model (DGM) as it explicitly takes into account a company’s level of systematic risk relative to the stock market as a whole.

8. **What is a Characteristic line?**

A characteristic line is a line formed using regression analysis that summarizes a particular security or portfolio's systematic risk and rate of return. The rate of return is dependent on the standard deviation of the asset's returns and the slope of the characteristic line, which is represented by the asset's beta.

9. What is Alpha Coefficient? How is it measured?

The investing term alpha coefficient refers to a measure of an asset's risk-adjusted performance. Alpha is a measure of "excess" returns and is frequently used along with beta values to judge the performance of an individual stock or mutual fund manager. It is measured as;

Alpha = Return of Asset - (Risk Free Rate + (Benchmark Return - Risk Free Rate) x Beta)

10. What is The Arbitrage Pricing Model (APM)? How is it different from CAPM?

In 1976, Stephen Ross suggested a theory based on the idea that asset's returns can be predicted using the relationship between that asset and many common risk factors. It forecasts a relationship between the returns of a portfolio and returns of a single asset through linear combination of many independent macro-economic variables. This is called the arbitrage pricing model (APM). It is generally used as an alternative to CAPM. When CAPM uses markets expected return, APM uses the risky assets' expected return and the risk premium of a number of macro-economic factors