

NPTEL

Course Name: Security Analysis and Portfolio Management

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Session 26: Multifactor Pricing Model (MPM)

1. What is Multifactor Pricing Model?

Ans:

It captures the essence of the Arbitrage Pricing Theory APT and relies on the direct specification of the form of the relationship to be estimated. The investor chooses the exact number and identifies the risk factors which affect the expected value of stock return. In a multifactor model, the investor chooses the exact number and identity of risk factors.

Approaches to Identify the Risk Factors:

- Macroeconomic Factors: They can attempt to capture the variations in the underlying reasons as asset's cash flows and investment returns might change over time
- Microeconomic Factors: These factors focus on relevant characteristics of the securities themselves such as size of the firm and other financial variables

2. Explain BARRA Characteristics Based Risk Factors?

Ans:

BARRA risk models are multiple-factor models that are developed better understanding of risk and return characteristic of a portfolio includes following factors:

- Volatility
- Momentum
- Size
- Size nonlinearity
- Trading Activity
- Growth
- Earnings Yields
- Value
- Earnings Volatility
- Leverage
- Currency Sensitivity
- Dividend yield

3. What are the different factors associated with stock return?

Ans.

Various firm and economic specific characteristics based factors and stock return includes:

- Monetary Policy and stock return
- Change in interest rate and stock returns
- Industry Dynamics and stock returns
- Burmeister, Roll and Ross (1994) macroeconomic factor model : Confidence risk, Time horizon risk, Inflation risk, Business cycle risk, Market timing risk
- Chen, Roll and Ross (1986) macroeconomic factor model: Return on a value weighted index, monthly growth rate of industrial production, Change in inflation, Difference between actual and expected inflation, Unanticipated change in the bond credit spread, Unanticipated term structure shift
- Fama and French (1993) Characteristics based approach