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Portfolio Management (1)

This study session begins by examining exchange-traded funds (ETFs), including the creation and trading of ETFs, costs and risks of using ETFs, and how ETFs are used in strategic, tactical, and portfolio efficiency applications. Multifactor models including the arbitrage pricing theory (APT) and Carhart (4 factor) model are introduced as alternatives to the capital asset pricing model (CAPM). Considerations and applications of the three multifactor model types (macroeconomic, fundamental, statistical) are presented. The session ends with a discussion on value at risk (VaR) and its use in measuring and managing market risk. The three VaR approaches (parametric, historical simulation, Monte Carlo) along with the advantages and limitations of each are examined.

READING ASSIGNMENTS

Reading 43	Exchange-Traded Funds: Mechanics and Applications by Joanne M. Hill, PhD, and Dave Nadig
Reading 44	Using Multifactor Models by Jerald E. Pinto, PhD, CFA, and Eugene L. Podkaminer, CFA
Reading 45	Measuring and Managing Market Risk by Don M. Chance, PhD, CFA, and Michelle McCarthy Beck

LEARNING OUTCOMES

READING 43. EXCHANGE-TRADED FUNDS: MECHANICS AND APPLICATIONS

The candidate should be able to:

a   explain the creation/redemption process of ETFs and the function of authorized participants;

b   describe how ETFs are traded in secondary markets;

c   describe sources of tracking error for ETFs;

d   describe factors affecting ETF bid–ask spreads;

e   describe sources of ETF premiums and discounts to NAV;

f   describe costs of owning an ETF;

g   describe types of ETF risk;

h   identify and describe portfolio uses of ETFs.

READING 44. USING MULTIFACTOR MODELS

The candidate should be able to:

a   describe arbitrage pricing theory (APT), including its underlying assumptions and its relation to multifactor models;

b   define arbitrage opportunity and determine whether an arbitrage opportunity exists;

c   calculate the expected return on an asset given an asset's factor sensitivities and the factor risk premiums;

d   describe and compare macroeconomic factor models, fundamental factor models, and statistical factor models;

e   explain sources of active risk and interpret tracking risk and the information ratio;

f   describe uses of multifactor models and interpret the output of analyses based on multifactor models;

g   describe the potential benefits for investors in considering multiple risk dimensions when modeling asset returns.

READING 45. MEASURING AND MANAGING MARKET RISK

The candidate should be able to:

a   explain the use of value at risk (VaR) in measuring portfolio risk;

b   compare the parametric (variance–covariance), historical simulation, and Monte Carlo simulation methods for estimating VaR;

c   estimate and interpret VaR under the parametric, historical simulation, and Monte Carlo simulation methods;

d   describe advantages and limitations of VaR;

e   describe extensions of VaR;

f   describe sensitivity risk measures and scenario risk measures and compare these measures to VaR;

g demonstrate how equity, fixed-income, and options exposure measures may be used in measuring and managing market risk and volatility risk;

h describe the use of sensitivity risk measures and scenario risk measures;

i describe advantages and limitations of sensitivity risk measures and scenario risk measures;

j describe risk measures used by banks, asset managers, pension funds, and insurers;

k explain constraints used in managing market risks, including risk budgeting, position limits, scenario limits, and stop-loss limits;

l explain how risk measures may be used in capital allocation decisions.