PORTFOLIO MANAGEMENT STUDY TEXT

CERTIFIED INVESTMENT FINANCIAL ANALYSTS

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PORTFOLIO MANAGEMENT

INTERMEDIATE LEVEL

STUDY TEXT

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PAPER NO. 7

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UNIT DESCRIPTION

This paper is intended to equip the candidate with the knowledge, skills and attitudes that willenable him/her to apply relevant investment methods and techniques in portfolio management.

LEARNING OUTCOMES

A candidate who passes this paper should be able to:

- Prepare investment policy statements
- Construct optimal portfolios and illustrate the theory and empirical applications of assetpricing models
- Apply portfolio management concepts and techniques to their specific businessproblems
- Use documents within the Investment sector
- Apply behavioural finance concepts in portfolio management

CONTENT

1. **Overview of Portfolio Management**
   - 1.1 Portfolio perspectives in investments and its importance
   - 1.2 Portfolio management and strategies
   - 1.3 Types of investors, their distinctive characteristics and specific needs
   - 1.4 Investment Vehicles; Pooled investment products (mutual funds, exchange traded funds, separately managed accounts, hedge funds, buyout funds/private equity funds and venture capital funds)
   - 1.5 Portfolio Diversification: Avoiding disaster
   - 1.6 Steps in the Portfolio Management Process: Planning Step; Understanding the client's needs, Investment Objectives, Preparation of an investment policy statement (IPS), Major components of Investment policy statement. Execution Step; Asset Allocation - Asset Allocation Concepts, Types of Asset Allocation, Security Analysis, Portfolio Construction. Feedback Step; Portfolio Monitoring and Rebalancing, Performance Measurement and Reporting
   - 1.7 Introduction to Performance Standards

2. **Introduction to Portfolio Risk and Return**
   - 2.1 Measures of Portfolio risks and estimates: Standard Deviation, Variance and Coefficient of Variation
   - 2.2 Measures of Portfolio return, their calculation, interpretation, and uses: holding period return (HPR), average returns (arithmetic average return, geometric average), time-weighted return, money weighted return, gross return, pre-tax nominal return, after tax nominal return, real return, leveraged return
   - 2.3 Determinants of Required Rates of Return
   - 2.4 Assessing the relationship between Risk and Returns
   - 2.5 Historical Risk Return Characteristics of different asset classes
   - 2.6 Characteristics of major asset classes used to construct portfolios
   - 2.7 Portfolio selection; concept of risk aversion; utility theory

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2.8 The effect of the number of assets in a multi asset portfolio on the diversification benefits

3. Capital Market Theory

3.1 Modern Portfolio Theories; Risk Return Framework, Efficient Market Hypothesis,
3.2 Portfolio Theory, Capital Assets Pricing Model (CAPM), Arbitrage Pricing Theory(APT)
3.3 Implications of combining a risk-free asset with a portfolio of risky assets
3.4 Capital allocation line (CAL) and capital market line (CML)
3.5 Systematic and non-systematic risks
3.6 Return generating models and their uses
3.7 Capital asset pricing model (CAPM): assumptions; applications; practicallimitations; implications
3.8 Security market line (SML) and its application, the beta coefficient, market riskpremium
3.9 Market model: predictions with respect to market returns, variances and co-variances
3.10 Adjusted beta and historical beta: their use as predictors of future betas
3.11 Minimum variance frontier: importance and problems related to its instability
3.12 Arbitrage pricing theory (APT): underlying assumptions and its relation to multifactor models, estimation of expected return on an asset given its factor sensitivities and factor risk premiums, determination of existence of an arbitrage opportunity and how to utilise it
3.13 Understanding and interpretation of active risk, tracking error, tracking risk, information ratio, factor portfolio and tracking portfolio

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4. Portfolio Planning and Construction

4.1 Definition of portfolio planning
4.2 Investment objectives: risk and return objectives for a client
4.3 Investors financial risk tolerance: investors ability (capacity) to bear risk andwillingness to take risk
4.4 Investment constraints: liquidity, time horizon, tax issues, legal and regulatoryfactors, unique circumstances, and their effect to the choice of a portfolio
4.5 Ethical responsibilities of a portfolio manager
4.6 Introduction to asset allocation: Theory and practice, mean – variance model, asset assumptions, alpha and beta, diversified asset allocation, consolidated asset allocation
4.7 Factors affecting asset allocation: Goals factors, risk tolerance and time horizon
4.8 Strategies for asset allocation: Age based asset allocation, life cycle funds asset allocation, constant weight asset allocation, tactical asset allocation, insuredasset allocation, Dynamic asset allocation

5. Active Portfolio Management

5.1 Definition of active portfolio management
5.2 Alpha and information ratio (IR): post ante and ex ante definitions
5.3 Relationship between information ratio and alphas T-statistic
5.4 The concept of the value added (VA) and the objective of active portfoliomanagement in terms of value added
5.5 The optimal level of residual risk to be assumed with respect to manager abilityand investor risk aversion
5.6 Relationship between the choice of a particular active strategy and investor riskaversion
5.7 The 'Fundamental law of active management': Definition; assumptions; relationship between the optimal level of residual risk, information coefficient, andbreadth; relationship between the value added, information coefficient, and breadth
5.8 Information coefficient (IC) and breadth (BR) as used in determining information ratio
5.9 Market timing versus security selection in relation to breadth and investment skill
5.10 Effect of augmenting original investment strategy with other investment strategiesor information changes

6. Documentation of the Investment Sector

6.1 Investment documents
6.2 Objectives of documentation
6.3 Document classification systems
6.4 Types of internal documentation
6.5 Types of external documentation
6.6 Document management

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7. Evaluating Portfolio Performance

7.1 Dollar weighted rates of return
7.2 Time weighted rates of return
7.3 Other performance measures
7.4 Risk- adjusted performance measures: Sharpe, Treynor, Jensen, risk- adjustedreturn on capital, return over maximum drawdown, and the Sortino ratio
7.5 Value at risk (VaR): its role in measuring overall and individual position marketrisk.
7.6 Methods for estimating VaR: The analytical (variance–covariance), historical andMonte Carlo methods
7.7 Extensions of VaR: Cash flow at risk, earnings at risk, and tail value at risk
7.8 Stress testing and its alternative types
7.9 Use of VaR and stress testing in setting capital requirements

8. Behavioural Finance

8.1 Introduction to behavioural finance: definition; traditional finance versus behavioural finance
8.2 Behavioural Biases: Overconfidence and individual investors,

Overconfidence and professional investors, Disposition effect, Risk perceptions, Prospect theory, Decision frames, Mental accounting, Familiarity and representativeness. Behavioural portfolio management; Herding, Social interaction, Emotions and investment decisions

8.3 Expected utility versus prospect theories of investment decision

8.4 Effect of cognitive limitations and bounded rationality on investment decision making

8.5 Behavioural biases of individuals: cognitive errors versus emotional biases; commonly recognised behavioural biases for financial decision making and their implications; individual investor's behavioural biases; the effects of behavioural biases on investment policy and asset allocation decisions, and how these effects could be mitigated

8.6 Behavioural finance and investment process: Uses and effects of classifying investors in personality types; effects of behavioural factors on advisor client interactions; the influence of behavioural factors on portfolio construction; application of behavioural finance on portfolio construction process; effects of behavioural factors on an investment analyst forecasts and investmentcommittee decision making: mitigation of these effects

9. Private Wealth Management

9.1 Introduction to wealth management

9.2 The wealth management process

9.3 Taxes: local taxation regimes as in relation to the taxation of dividend, income, interest income, realised capital gains, and unrealised capital gains, impact of different types of taxes and tax regimes on future wealth, computation of accrual equivalent tax rates and after-tax returns, tax profiles of different types of investment accounts and explain how taxes and asset allocation relate.

9.4 Estate planning: purpose of estate planning and the basic concepts of domestic estate planning, forms of wealth transfer taxes and impact of important non tax issues such legal system, a family's core capital and excess capital

9.5 Wealth Management products and services: alternative investments, hedge funds, setting up trusts, equity, fixed income and structured products

10. Contemporary issues and emerging trends

10.1 Investing in International Markets

10.2 Stock lending

10.3 Program trading

10.4 Case studies on the application of portfolio management

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CHAPTER ONE

OVERVIEW OF PORTFOLIO MANAGEMENT

Overview of Portfolio Management

The art of selecting the right investment policy for the individuals in terms of minimum risk and maximum return is known as portfolio management.
Portfolio management refers to managing an individual's investments in the form of bonds, shares, cash, mutual funds etc so that he earns the maximum profits within the stipulated time frame.
Also, it refers to managing money of an individual under the expert guidance of portfolio managers.
In a layman's language, the art of managing an individual's investment is called portfolio management.

Need for Portfolio Management

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Portfolio management presents the **best investment plan** to the individuals as per their income, budget, age and ability to undertake risks.
Portfolio management **minimizes the risks** involved in investing and also increases the chance of making profits.
Portfolio managers understand the client's financial needs and suggest the best and unique investment policy for them with minimum risks involved.
Portfolio management enables the portfolio managers to **provide customized investment solutions** to clients as per their needs and requirements.

Explain the importance of the portfolio perspective
According to the portfolio perspective, individual investments should be judged in the context of how much risk they add to a portfolio rather than on how risky they are on a stand-alone basis.

Investors, analysts, portfolio managers should analyze the risk return trade-off of the portfolio as a whole, not the risk return trade-off of the individual investments in the portfolio, because unsystematic risk can be diversified away by combining the investments into a portfolio. The systematic risk that remains in the portfolio is the result of the economic fundamentals that have a general influence on the security returns, such as GDP growth, unexpected inflation, consumer confidence, unanticipated changes in credit spreads, and business cycle.

November 2015 Q1A
December 2017 Q1a

Describe the steps of the portfolio management process and the components of those steps

The three steps in the portfolio management process are the planning step (objectives and constraint determination, investment policy statement creation, capital market expectation formation, and strategic asset allocation creation); the execution step (portfolio selection/composition and portfolio implementation); and the feedback step (performance evaluation and portfolio monitoring and rebalancing).

The planning phase consists of analyzing objectives and constraints, developing an IPS, determining the appropriate investment strategy, and selecting an appropriate asset allocation. The focus of this topic review at Level II is the first step: planning.

Portfolio management process

1. Specification of investment objectives and constraints –

MAY 2016 Q3B

Evaluate four categories of assets that could be used to construct a portfolio (4 marks)

2. Selection of asset mix – based of objectives and constraints, selection of assets is done. Selection of assets refers to the amount of portfolio to be invested in each of the following asset categories:

a. Cash
b. Bonds – represent long-term debt instruments.
c. Stocks/Shares
d. Real estate
e. Precious objects or metals

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3. Formulation of portfolio strategy

There are two types of portfolio strategies:

i. **Active portfolio strategy** – most investment professionals follow an active portfolio strategy and aggressive investors who strive to earn superior returns after adjustment for risk. The four principle sectors of an active strategy are:

- **Market timing** – Involves departing from the normal or strategic or long-term asset mix to reflect one's assessment of the prospect of various assets in the near future.
- **Sector rotation** – May be applied to stocks as well as bonds. It involves shifting the weight for various industrial sectors based on their assessed outlook.
- **Security selection** – Involves a search for securities. If an investor resorts to active stock selection, he may employ fundamental and/or technical analysis to identify stocks that seem to promise superior returns and overweigh the stock component of his portfolio on them.
- **Use of specialized concepts** – Is to employ a specialized concept or philosophy particularly with respect to investment in stocks.

ii. **Passive portfolio strategy** – Rests on the fact that the capital market is fairly efficient with respect to the available information. It is implemented in two ways:

- Create a well-diversified portfolio at a pre-determined level of risk
- Hold the portfolio relatively unchanged over time unless it becomes inadequately diversified or inconsistent with the investor's risk-return preferences.

4. Selection of securities

Factors to consider when selecting bonds

I. Yield to maturity – Represents the rate return earned by the investor if he invests in the bonds.
II. Risk of default
III. Liquidity
IV. Tax shield

Approaches in Selection of stocks

i. Technical analysis
ii. Fundamental analysis
iii. Random selection approach – is based on the promise that the market is efficient and securities are properly priced.

5. Portfolio execution – Is the implementation of portfolio plan by buying or selling specified securities in given amounts.

6. Portfolio revision – Involves changing the existing mix of securities. This may be effected either by change the securities currently included in the portfolio or by altering the proportion of funds invested in the securities.

It has two steps/stages:

a. Portfolio rebalancing – involves reviewing and revising the portfolio composition. The 3 strategies we can consider include:

1. Buy and hold – once the initial allocation is made, no rebalancing takes place. If equities increase in value, the weight in equities increases and if equities decrease in value, the weight of equities decreases.
2. Constant mix- involves rebalancing the portfolio to its target weights, either on a periodic basis or when asset class weights move from the selected weights.
3. Constant proportion portfolio insurance – the target weights in equities varies directly with the difference between the portfolio value and some minimum value. The difference is called the cushion. As equities increase in value, the cushion increases the weight in equities of the portfolio is increased as a result.

Sept 2015 Q4a

Define the term 'portfolio upgrading' clearly stating any two principle objectives of portfolio upgrading (4 marks)

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