CIFA

PORTFOLIO MANAGEMENT

PART 2

SECTION 4

STUDY TEXT

PAPER NO 10

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GENERAL OBJECTIVE

This paper is intended to equip the candidate with the knowledge, skills and attitudes that will enable him/her to apply investment tools in portfolio management.

11.0 **LEARNING OUTCOMES**

On successful completion of this paper, the candidate should be able to:

- Apply various investment strategies to manage a portfolio
- Construct and manage portfolios
- Assess the risk levels of portfolios
- Prepare investment policy statements
- Understand the application of tax in private wealth management
- Apply behavioural finance concepts in portfolio management.

CONTENT

11.1 **Overview of portfolio management**

- Definition of portfolio management and strategies
- Portfolio perspective and its importance
- Steps of the portfolio management process and the components of those steps
- Types of investors, their distinctive characteristics and specific needs
- Pooled investment products (mutual funds, exchange traded funds, separately managed accounts, hedge funds, buyout funds/private equity funds and venture capital funds)

11.2 **Introduction to risk and return of a portfolio**

- Measures of 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
- Characteristics of major asset classes used to construct portfolios
- Portfolio selection; concept of risk aversion; utility theory
- The effect of the number of assets in a multi asset portfolio on the diversification benefits

11.3 **Capital market theory**

- Introduction to modern portfolio theory
- Implications of combining a risk-free asset with a portfolio of risky assets
- Capital allocation line (CAL) and capital market line (CML)
- Systematic and non-systematic risk
- Return generating models and their uses
- Capital asset pricing model (CAPM): assumptions; applications; practical limitations; implications
- Security market line (SML) and its application, the beta coefficient, market risk premium
- Market model: predictions with respect to market returns, variances and co-variances
- Adjusted beta and historical beta: t heir use as predictors of future betas
- Minimum variance frontier: importance and problems related to its instability
- 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
- Understanding and interpretation of active risk, tracking error, tracking risk, information ratio, factor portfolio and tracking portfolio

11.4 **Portfolio planning and construction**

- Definition of portfolio planning
- The investment policy statement (IPS): major components and its importance

- Capital market expectations
- Investment objectives: risk and return objectives for a client
- Investors financial risk tolerance: investors ability (capacity) to bear risk and willingness to take risk
- Investment constraints: liquidity, time horizon, tax issues, legal and regulatory factors, unique circumstances, and their effect to the choice of a portfolio
- Ethical responsibilities of a portfolio manager
- Introduction to asset allocation:

11.5 **Active portfolio management: Residual risk and return**
- Definition of active portfolio management
- Alpha and information ratio (IR): their definition in both post ante and ex ante
- Relationship between information ratio and alphas T-statistic
- The concept of the value added (VA) and the objective of active portfolio management in terms of value added
- The optimal level of residual risk to be assumed with respect to manager ability and investor risk aversion
- Relationship between the choice of a particular active strategy and investor risk aversion

11.6 **Fundamental law of active management**
- Information coefficient (IC) and breadth (BR) as used in determining information ratio
- The 'Fundamental law of active management': Definition; assumptions; relationship between the optimal level of residual risk, information coefficient, and breadth; relationship between the value added, information coefficient, and breadth
- Market timing versus security selection in relation to breadth and investment skill
- Effect of augmenting original investment strategy with other investment strategies or information changes

11.7 **Behavioural finance**
- Introduction to behavioural finance: Definition; traditional finance versus behavioural finance
- Expected utility versus prospect theories of investment decision
- Effect of cognitive limitations and bounded rationality on investment decision making
- Behavioural biases of individuals: cognitive errors versus emotional biases; commonly recognized 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
- 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 investment committee decision making: mitigation of these effects

11.8 **Risk management**
- Introduction: risks faced by an organisation: market risk, credit risk, liquidity risk; operations risk; model risk; settlement risk; regulatory risk; legal risk; tax risk; accounting risk
- The risk management process: strengths and weaknesses of a company's risk management process
- Risk governance and risk reduction.
- Enterprise risk management system: steps in an effective enterprise risk management system
- A company's or a portfolio's exposures to financial and non-financial risk factors
- Value at risk (VaR): its role in measuring overall and individual position market risk.

- Methods for estimating VaR: the analytical (variance–covariance), historical, and Monte Carlo methods
- Extensions of VaR: Cash flow at risk, earnings at risk, and tail value at risk
- Stress testing and its alternative types
- Methods for managing market risk: risk budgeting, position limits, and other methods
- Methods for managing credit risk: exposure limits, marking to market, collateral, netting arrangements, credit standards, and credit derivatives
- Measures of risk- adjusted performance: Sharpe ratio, risk- adjusted return on capital, return over maximum drawdown, and the Sortino ratio
- Use of VaR and stress testing in setting capital requirements

11.9 **Private Wealth Management**

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.

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 as legal system
- a family's core capital and excess capital

11.10 **Emerging issues and trends**

TOPIC **PAGE NO.**

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

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

(b) 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

3. Formulation of portfolio strategy

There are two types of portfolio strategies:

i. **Active portfolio strategy** – most investment professional s 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

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

b. Portfolio upgrading – Calls for re-assessing the risk-return characteristics of various securities i.e. selling overpriced securities and buying underpriced securities.

7. Portfolio evaluation – This process is concerned with assessing the performance of the portfolio over a selected period of time in terms of risk and return.

Sept 2015 Q3a

(a) In relation to portfolio management, explain the meaning of the following terms:

(i) Passive portfolio management. (2 marks)

(ii) Active portfolio management. (2 marks)

(iii) Tactical asset allocation. (2 marks)

Solution

(i) and (ii) refer to the notes.

(iii) Tactical asset allocation is an active management portfolio strategy that shifts the percentage of assets held in various categories to take advantage of market pricing anomalies or strong market sectors. This strategy allows portfolio managers to create extra value by taking advantage of certain situations in the marketplace.

Explain the role of the investment policy statement in the portfolio management process and describe the elements of an investment policy statement

Investment policy statement is a formal document that governs investment decision making, taking into account objectives and constraints. The main role of the IPS is to:

- Be readily implemented by current or future investment advisors (i.e. it is easily transportable).
- Promote long term discipline for portfolio decisions.
- Help protect against short-term shifts in strategy when either market environment or portfolio performance cause panic or overconfidence.

NOVEMBER 2016 Q3a

There are numerous elements to an IPS. Some elements that are typically included are:

1. A client description that provides enough background so any competent investment adviser can gain a common understanding of the client's situation.
2. The purpose of the IPS with respect to policies, objectives, goals, and restrictions, and portfolio limitations.
3. Identification of duties and responsibilities of parties involved.
4. The formal statement of objectives and constraints.
5. A calendar schedule for both portfolio performance and IPS review.
6. Asset allocation ranges and statements regarding flexibility and rigidity when formulating or modifying the strategic asset allocation.
7. Guidelines for portfolio adjustments and rebalancing.

Explain how capital market expectations and the investment policy statement help influence the strategic asset allocation decision and how an investor's investment time horizon may influence the investor's strategic asset allocation

The final step in the planning stage is creation of a strategic asset allocation. This step combines the IPS and capital market expectations to formulate long term target weightings for the asset classes to be included in the portfolio. The need for flexibility in the asset allocation to allow for temporary shifts (called tactical asset allocation) in response to alterations in short-term capital market expectations should also be considered.

There are three common approaches used to implement the strategic asset allocation:

1. Passive investment strategies represent those strategies that are not responsive to changes in expectations. Indexing and buy and hold investment strategies are examples of passive investment strategies.
2. Active investment strategies are much more responsive to changing expectations. These strategies attempt to capitalize on differences between a portfolio manager's beliefs concerning security valuations and those in the marketplace. Generating alpha and investing according to a particular investment style fall into the active investment strategy category.
3. Semi active, risk controlled active, or enhanced index strategies are hybrids of passive