

BASICS OF PORTFOLIO PLANNING AND CONSTRUCTION

1. INTRODUCTION

To effectively tailor an investment portfolio, advisers must first understand the client's goals, resources, circumstances, and constraints. Investors are categorized based on these aspects, but individual needs may vary.

This reading emphasizes the importance of personalizing investment planning. It includes details on creating an investment policy statement, discusses the portfolio construction process with a focus on strategic asset allocation, portfolio construction principles and ESG considerations.

2. THE INVESTMENT POLICY STATEMENT

In the planning step, investment objectives and policies are formulated, capital market expectations are formed, and strategic asset allocations are established.

Portfolio planning involves:

- a) Understanding the needs (i.e., objectives and constraints) of clients.
- b) Developing an investment policy statement (IPS).

THE INVESTMENT POLICY STATEMENT (IPS)

IPS is a written document that describes:

- a) Investment objectives (i.e. return objectives and risk tolerance of a client) and constraints of a client.

- Internal constraints include client's specific liquidity needs, time horizon, and unique circumstances.
 - External constraints include tax issues and legal and regulatory requirements.
- b) Benchmark used to assess portfolio's performance.
 - c) For institutional investors (e.g. pension funds), it may also include
 - Policy and procedures regarding reviewing and appointing managers for portfolio, discretion provided to managers, corporate governance (i.e. use of shareholder voting rights).

The IPS serves as the governing document for clients and managers with regard to all investment decision-making.

It is a legal or regulatory requirement in some countries.

The IPS should be reviewed and updated regularly to ensure that it remains consistent with the client's circumstances, requirements and constraints.

Objectives and Constraints of IPS format: An IPS that includes the client's investment objectives and the constraints that applies to the client's portfolio reflects "Objectives and constraints format".

MAJOR COMPONENTS OF AN IPS

Major components include:

- 1) Introduction:** This section includes description about the client.
- 2) Statement of Purpose:** This section states the purpose of the IPS.
- 3) Statement of Duties and Responsibilities:** This section provides description regarding the duties and responsibilities of the client, the custodian of the client's assets and the investment managers.

4) Procedures: This section provides details regarding the policy and procedures to keep the IPS updated and to deal with various contingencies.

5) Investment objectives: This section specifically states investment objectives of the client.

6) Investment Constraints: This section states the client's constraints associated with meeting objectives.

7) Investment Guidelines: This section provides details regarding investment guidelines, which help to execute the policy e.g., it provides guidelines regarding the permissible use of leverage and derivatives and permissible assets.

8) Evaluation and Review: This section states guidelines with respect to portfolio evaluation & review.

9) Appendices: This section includes details regarding

- Strategic asset allocation
- Rebalancing policy

3. IPS RISK AND RETURN OBJECTIVES

RISK OBJECTIVES

An IPS can state a client's level of risk qualitatively based on the client's risk tolerance.

Risk objectives of a client reflect his/her risk tolerance. The risk tolerance of a client should be clearly stated in the IPS and the risk of the portfolio should be consistent with the client's risk tolerance.

Risk objectives can be stated in two ways:

Absolute risk objective: Absolute risk objective is stated in absolute terms; it is not related to investment market performance e.g., a specified level of standard deviation or variance of total return. It can be measured using variance or S.D. of returns and VAR.

Relative risk objective: Relative risk objective is stated relative to a benchmark. It is measured using tracking risk or tracking error (S.D. of the differences between

a portfolio's returns and its benchmark's returns). It can be stated as follows:

'An objective that with 95% probability, the portfolio return should be within x% of the benchmark return over a stated time period'.

Benchmarks include:

- S&P 500 Index for large-cap U.S. equities.
- LIBOR or Treasury bill rate for investments with cash like characteristics.
- Liability of an institution e.g. pension benefits payments for Pension fund.
- Discount rate used to estimate PV of pension liabilities.

Practice: Example 1 from the CFA Institute's Curriculum.

Risk Tolerance: The risk tolerance of a client is a function of two factors:

1) The client's ability to bear risk: It is determined by following objective factors

- Time horizon i.e. the longer the time horizon, the greater the ability to take risk.
- Expected income i.e. the greater the expected income, the greater the ability to take risk.
- Level of wealth (assets) relative to liabilities i.e. the greater the assets relative to liabilities, the greater the ability to take risk.
- Surplus level (for pension funds) i.e. the larger the surplus of assets over liabilities, the greater the ability to take risk.

- Client's dependents i.e. if a client has no dependent, he/she has higher ability to take risk.

2) The client's willingness to take risk: It is a subjective measure and it depends on the psychological factors, non-psychological factors (i.e. level of financial knowledge and understanding), client's decision making style and current circumstances. It can be measured using a psychometric questionnaire.

Rule:

- When both the ability and willingness to take risk is above average, → investor has above average risk tolerance.
- When both the ability and willingness to take risk is below average, → investor has below average risk tolerance.
- When ability to take risk is below average but willingness to take risk is above average, → investor's risk tolerance is below average.
- When ability to take risk is above average but willingness is below average, → investor's risk tolerance is below average.
 - The portfolio manager or advisor should not change client's willingness to take risk. However, the portfolio manager or advisor should counsel the client regarding the conflict and its implications.

NOTE:

It is recommended that the lower of the two factors (i.e. ability and willingness) should be chosen and the decision should be documented.

Willingness to Take Risk	Ability to Take Risk	
	Below Average	Above Average
Below Average	Below-average risk tolerance	Resolution needed
Above Average	Resolution needed	Above-average risk tolerance

Practice: Example 2 & 3 from the CFA Institute's Curriculum.

RETURN OBJECTIVES

The return objective may reflect the investor's required return to meet certain goals. Return objectives can be stated in two ways:

Absolute return objective: For example, objective to earn 10% return annually.

Relative return objective: It is a return relative to the benchmark's return e.g. 1.5% higher than the benchmark return.

- Return may be stated relative to a peer group or universe of managers. But this benchmark has drawbacks i.e.

- It is not investable
- It is difficult to measure when limited information is available regarding investment strategies or the returns calculation methodology being used by peers.

Return can be stated as:

- Nominal return
- Real (inflation-adjusted) return
- Gross Return i.e. before deducting fees.
- Net return i.e. after deducting fees.
- Pretax returns i.e. returns before taxes
- Post-tax returns i.e., returns after taxes are paid on investment income and realized capital gains

The return objective should be consistent with the client's risk objective and risk tolerance (i.e., high expected returns can be earned only by assuming high levels of risk) and with the current economic and market environment. In addition, the risk and return objectives must also be consistent with the portfolio constraints.

Practice: Example 4 from the CFA Institute's Curriculum.

4. IPS CONSTRAINTS

Portfolio Constraints:

1. Liquidity
2. Time horizon
3. Tax concerns

4. Legal and regulatory factors
5. Unique circumstances

1. LIQUIDITY

Liquidity refers to a need for cash in excess of savings (i.e. for individuals) or new contributions (i.e., for pension plans and endowments) at some specified point in time or to meet large amount of claims with unpredictable timing (i.e. for non-life insurance companies) or to meet life benefit payments (i.e. life insurance companies). Liquidity needs can be anticipated or unanticipated.

- The portfolio manager should allocate a portion of the portfolio to meet liquidity needs of the client.
- That portion of the portfolio is invested in highly liquid, short-maturity assets.

2. TIME HORIZON

Time horizon refers to a time period associated with investment objective. Time horizons can be short-term, long-term (e.g. ≥ 10 years), or a combination of both short-term and long-term.

- The time horizon of the investor affects the nature of investments used in the portfolio i.e.
 - Illiquid or risky investments are suitable for an investor with a long time horizon.
 - Liquid investments are suitable for an investor with a short time horizon.
- Time horizon affects investor's ability to take risk i.e. the longer (shorter) the time horizon, the greater (lower) the ability to take risk.

Practice: Example 5 from the CFA Institute's Curriculum.

3. TAX CONCERNS

Taxes affect investment decision making of taxable investors because tax payments reduce the amount of the total return that can be used to meet current needs or that can be reinvested for future growth of the portfolio.

Taxable investors select type of investments and their timing of sales based on the tax rates applied to investment income and capital gains. Tax rates vary among investors, types of return, countries, investment horizon etc. i.e.

- Higher tax rate is applied on investment income relative to capital gains → thus, a taxable investor may prefer to hold portfolio that generates more capital gains and less investment income; whereas, a tax-exempt investor will be relatively indifferent to any form of returns.
- Short-term capital gains are taxed more highly than long-term capital gains.

4. LEGAL AND REGULATORY FACTORS

Legal and regulatory factors refer to the restrictions imposed by governmental, regulatory, or oversight authorities that affect investment decision making e.g.

- Limit on the proportion of equities or other risky assets in the portfolio.
- Limits on proportion of the portfolio invested in foreign assets.
- Restrictions imposed on the acquisition and holding of employer securities by certain pension plans.
- Restrictions placed on the directors of a public company regarding trading the company's

stock at certain points of the year before financial results are published.

5. UNIQUE CIRCUMSTANCES

These are the internal factors that restrict the investment choices for the portfolio e.g.

- Under Islamic law (Shari'a), Muslims are prohibited from investing in gambling and lending money on interest.
- Some institutions avoid investments associated with ethical objections or social responsibility considerations e.g. companies that deal in weapons, tobacco, companies with poor environmental protection standards, poor labor standards etc. (known as environmental, social,

governance/ESG factors). This type of investing is referred to as SRI (socially responsible investing).

- Investment choices and decision-making may also be constrained by factors associated with investor capability i.e., time, interest, background, and technical expertise. For example, a stockbroker would invest a lower percentage in equities because his income-generating ability and skills (i.e., human capital) have positive correlation with performance of equities.

Practice: Example 6 from the CFA Institute's Curriculum.

5. GATHERING CLIENT INFORMATION

In order to effectively and efficiently manage a client's portfolio, the portfolio managers and investment advisors should have knowledge regarding their clients.

The information regarding the client is gathered at the beginning of the client relationship.

The information can be obtained informally or formally (using structured interviews or questionnaires or analysis of data). This practice involves gathering information regarding:

- Client's circumstances
- Client's objectives and requirements

- Client's family, employment and financial situation
- Health of the client and his/her dependents
- Institutional requirements for institutional investors (e.g. pension funds)

NOTE:

Advisory relationship: In an advisory relationship, investment firm provides investment advice to the clients (investors) and the clients make investment decisions based on such advice.

Execution-only relationship: In an execution-only relationship, investment firm only provides order execution and/or transmission services to the clients (investors) and the clients make investment decisions independently based on their own knowledge.

Practice: Example 7 & 8 from the CFA Institute's Curriculum.

6. PORTFOLIO CONSTRUCTION

The portfolio is constructed using the information documented in the IPS. A portfolio is constructed by integrating the investment strategies with capital market expectations to select the specific assets and their weights for the portfolio.

CAPITAL MARKET EXPECTATIONS

These expectations reflect investors' long-term forecasts of the risk and return characteristics of asset classes.

- These expectations are stated in terms of asset class expected returns, S.D. of returns and correlations among pairs of asset classes.
- Expected returns of asset class can be estimated using historical estimates, economic analysis, and various kinds of valuation models. They can be stated as risk-free rate + various risk premiums.
- Similarly, S.D. and correlations can be estimated using historical data.

7. THE STRATEGIC ASSET ALLOCATION (SAA)

SAA is determined by combining the IPS and capital market expectations to determine target asset class weights (% allocations to asset classes). It is also known as Policy Portfolio.

- It reflects the allocation of investable funds across different asset classes that are IPS-permissible based on the objectives and constraints of the client.
- It reflects the investor's target exposure to the systematic risks of asset classes.
- It is based on two principles:

- i. Changes in portfolio value over the long-term are primarily determined by portfolio's systematic risk.
 - ii. Similar assets have similar exposures to certain sets of systematic factors.
- SAA needs to be adjusted with changes in capital market expectations and changes in the circumstances and objectives of the client.

Asset Class: An asset class is a category of assets with similar characteristics, attributes and risk-return relationships. Major asset classes include:

- Cash

- Equities i.e.
 - Domestic equity and non-domestic equity.
 - Developed and emerging market equity.
 - Large and small cap equity.
- Fixed income/Bonds i.e.
 - Domestic bonds: These include government bonds, corporate bonds (investment grade and non-investment grade or high yield).
 - Non-domestic bonds (both government and corporate bonds).
- Real estate
- Alternative investments
 - Private equity, natural resources, hedge funds, commodities etc.

These asset class definitions are also useful from an organizational perspective because investment managers usually have expertise in specific areas of the market.

CRITERIA TO SPECIFY ASSET CLASSES

1) Assets within an asset class should be relatively homogenous i.e.

- Risk and return expectations should be similar within an asset class.
- Paired correlations of assets should be relatively high within an asset class.

2) Asset classes should be mutually exclusive.

3) Asset classes should be diversifying i.e. paired correlations of assets should be lower relative to assets in other asset classes.

4) As a group, asset classes should represent a preponderance of world investable wealth.

The risk & return of the strategic asset allocation depends on three things i.e.

- i. Expected returns of the individual asset classes.
- ii. Risks of the individual asset classes.
- iii. Correlation between individual asset classes.

- The lower the correlation, the greater the diversification benefits.
- However, the stand-alone risk of asset classes should not be > their diversification effects.

Typically,

- The strategic asset allocation for risk-averse investors will have a large weight in government bonds and cash.
- The strategic asset allocation for risk-seeking investors will have a large weight in risky asset classes i.e. equities, alternative investments.

Practice: Example 9 & 10 from the CFA Institute's Curriculum.

Utility Function:

Generally, investors are risk-averse i.e. they prefer lower risk given expected return or higher return given risk. Investors' risk and return objectives can be described using a utility function.

$$U_p = E(R_p) - \lambda \sigma_p^2$$

where,

- U_p = investor's expected utility from the portfolio
- $E(R_p)$ = expected return of the portfolio

- σ_p = S.D. of returns of the portfolio
- λ = Measure of the investor's risk aversion
- Portfolio represents a particular asset allocation.

THE UTILITY FUNCTION EXHIBITS

- Positive relationship between utility and expected portfolio return → the higher the expected return, the higher the utility (all else equal).
- Negative relationship between utility and volatility of portfolio return → the higher the S.D. of the portfolio return, the lower the utility (all else equal).
- The stronger the negative relationship between utility and volatility of portfolio return, the greater the risk aversion of investors.

LIMITATIONS

- The utility function does not take into account all investment constraints. Therefore, it cannot appropriately translate the client's investment objectives and constraints documented in the IPS.
- The utility function model is a single-period model whereas the constraints from the IPS represent multi-period perspective. In this case, simulation is preferred to single-period model.

IMPORTANT TO NOTE

- Different portfolios can be constructed with different risk levels but with the same expected returns.

- When assets with lower correlation with other existing assets are added to the portfolio → risk of the portfolio decreases → the efficient frontier moves "upward".
- When assets with higher correlation with other existing assets are added to the portfolio → risk of the portfolio increases → the efficient frontier moves "downward".

Effects of changes in capital market expectations on the Efficient Frontier: For example, if expected return for asset classes increases while volatility and correlation remains unchanged → portfolio expected return increases and the efficient frontier moves "upward" → as a result, the asset allocation needs to be adjusted accordingly.

- Similarly, the shape and location of Indifference curve change with the change in investment objectives and constraints of an investor → resulting in the change in the location of point of tangency" → thus, the asset allocation needs to be adjusted.

Optimal Portfolio/asset allocation: It is the portfolio that provides the highest expected utility for investor's given risk aversion. It is represented by the point where the efficient frontier intersects with the indifference curve (i.e. point of tangency). This point of tangency represents the Strategic Asset Allocation for the investor.

8. PORTFOLIO CONSTRUCTIONS PRINCIPLES

The SAA in itself does not represent an actual investment portfolio; rather, it is subsequently implemented into an actual investment portfolio.

Risk Budgeting: It involves:

- a) Setting the portfolio's overall risk budget (i.e. the amount of risk to assume in a portfolio).
- b) Allocating that risk among different sources of investment return. It implies selection between active or passive management.

Sources of investment return: There are three sources of returns of an investment strategy:

- 1) Strategic asset allocation i.e. the return generated by taking exposures to systematic risk factors specified in the strategic asset allocation.
- 2) Tactical asset allocation (TAA): Under tactical asset allocation, the portfolio manager deliberately deviate from the exposures to systematic risk factors specified in the SAA (i.e. the policy weights of asset classes) and the return is generated by responding to temporary changes in short-term capital market expectations rather than to investor circumstances.

TAA Return contribution =

Actual return of the portfolio – return that would have been earned if the asset class weights were equal to the policy weights

- 3) Security selection: Under security selection, the portfolio manager seeks to generate higher returns relative to asset class benchmark returns by selecting securities with a higher expected return. It involves active management. Security selection is a zero-sum game i.e. the gain of one investor relative to the market return is the loss of other investor relative to the market return.

The return of an average active manager < market return (net of costs) due to higher turnover and management costs associated with active management.

Similarly, the higher the turnover of an index → the greater the trading costs of a passive manager and → the lower the return of passive manager relative to his/her benchmark.

Generating higher returns from security selection depends on two factors i.e.

- i. Skills of investment managers i.e. the greater the skill, the higher the value added from security selection.
- ii. Informational efficiency of the market i.e. the more efficient an asset class or a subset of that asset class, the more skillful an asset manager needs to be to generate higher returns from security selection.

Generally, when an asset class or a subset of that asset class represents efficient market, passive management is preferred.

It should be noted that tactical asset allocation and security selection increases portfolio risk over and above the risk inherent in the policy portfolio. An asset class's actual weight may deviate from policy weights due to two reasons i.e.

- 1) Drift: Drift refers to deviations in the weights of the asset classes from the policy weights in the SAA due to changes in the returns of the asset classes and portfolio securities.
- 2) Tactical asset allocation or market timing.

Rebalancing Policy: It refers to a set of rules with regard to restoring the portfolio's original exposures to systematic risk factors.

Practice: Example 11 from the CFA Institute's Curriculum.

NEW DEVELOPMENT IN PORTFOLIO MANAGEMENT

1. Development in the growth of Exchange Traded Funds (ETFs) or ETFs along with algorithm-based financial advice (or Robo-advisors)

ETFs:

- are funds that track the performance of some asset-class index or sub-index.
- are relatively low-priced compared to actively managed accounts.
- are easily tradeable
- provide fast, inexpensive and liquid exposure of asset classes to retail investors.

2. Development relates to criticism of poor asset class return forecasts and perceived instability of asset class correlations and volatilities

Argument: Poor investment portfolio results

Portfolios are constructed based on modern-portfolio theory, which is highly sensitive to small errors in estimated return and correlations. The consequences are poor investment portfolio results.

Response: Risk parity investing

An investment approach where asset classes are weighted based on risk contribution.

9.

ESG CONSIDERATIONS IN PORTFOLIO PLANNING AND CONSTRUCTION

Responsible investing and ESG (environmental, social and governmental) considerations affect strategic asset allocation and portfolio construction process.

ESG investment approaches require a set of instructions for investment managers regarding investment strategies, security selection, shareholder rights etc.

Relevant ESG issues in the investment process include scarcity of natural resources, impacts of climate change, global economic and demographic trends, diversity & inclusion, rise of social media etc.

Asset owners may demand from their managers to consider these issues – may exclude or engage with companies in accordance with these issues - for their portfolio planning and construction. This may affect the expected return and risk of the portfolio.

Investment managers, on the other hand, prefer to measure their performance against a benchmark that reflects the limited universe (because of exclusion of companies or sectors due to ESG considerations).

ESG considerations determine the suitability of certain sectors. ESG filters may be in the form of:

- negative screening (or exclusionary screening) – exclude certain sectors or companies based on some criteria
- positive screening (or best-in-class) - include certain sectors or companies that perform well with regards to ESG criteria.

- thematic investing – investment in companies that follow some specific themes or overcome some challenges (e.g. energy-efficient, climate change).
- impact investing – is a related approach that seeks investment opportunities based on their societal contribution and intention to create positive environmental and social impact.

Shareholder Engagement refers to active interaction of shareholders with companies. This includes various forms of communication between management and shareholders as well as voting on corporate issues. The primary purpose of shareholder engagement is the resolution of matters that may affect the value of shares.

Practice: Example 12 from the CFA Institute's Curriculum.

Practice: CFA Institute's end of Chapter Questions and Questions from FinQuiz Question Bank