SAPM
(Module - 1)

Definition of Investment

Investment refers to the acquisition of the asset, in the expectation of generating income. In a wider sense, it refers to the sacrifice of present money or other resources for the benefits that will arise in future. The two main element of investment is time and risk

Nowadays, there is a range of investment options available in the market as you can deposit money in the bank account, or you can acquire property, or purchase shares of the company, or invest your money in government bonds.

Investments are majorly divided into two categories i.e. fixed income investment and variable income investment. In fixed income investment there is a pre-specified rate of return like bonds, preference shares, provident fund and fixed deposits while in variable income investment, the return is not fixed like equity shares or property.

Definition of Speculation

Speculation is a trading activity that involves engaging in a risky financial transaction, in expectation of making enormous profits, from fluctuations in the market value of financial assets. In speculation, there is a high risk of losing maximum or all initial outlay, but it is offset by the probability of significant profit. Although, the risk is taken by speculators is properly analysed and calculated.

Speculation ca be seen in markets where the high fluctuations in the price of securities such as the market for stocks, bonds, derivatives, currency, commodity futures, etc.

Difference Between Investment and Speculation

Comparison Chart

BASIS FOR COMPARISON	INVESTMENT	SPECULATION
Meaning	The purchase of an asset with the hope of getting returns is called investment.	Speculation is an act of conducting a risky financial transaction, in the hope of substantial profit.
Basis for decision	Fundamental factors, i.e. performance of the company.	Hearsay, technical charts and market psychology.
Time horizon	Longer term	Short term
Risk involved	Moderate risk	High risk
Intent to profit	Changes in value	Changes in prices
Expected rate of return	Modest rate of return	High rate of return
Funds	An investor uses his own funds.	A speculator uses borrowed funds.
Income	Stable	Uncertain and Erratic
Behavior of participants	Conservative and Cautious	Daring and Careless

Key Differences Between Investment and Speculation

The basic difference between investment and speculation are mentioned in the points given below:

1. Investment refers to the purchase of an asset with the hope of getting returns. The term speculation denotes an act of conducting a risky financial transaction, in the hope of substantial profit.
2. In investment, the decisions are taken on the basis of fundamental analysis, i.e. performance of the company. On the other hand, in speculation decisions are based on hearsay, technical charts, and market psychology.
3. Investments are held for at least one year. Hence, it has a longer time horizon than speculation, where speculators hold assets for short term only.
4. The quantity of risk is moderate in investment and high in case of speculation.
5. The investors, expect profit from the change in the value of the asset. As opposed to speculators who expect profit from the change in the prices, due to demand and supply forces.

6. An investor expects the modest rate of return on the investment. On the contrary, a speculator expects higher profits from the speculation in exchange for the risk borne by him.
7. The investor uses his own funds for investment purposes. Conversely, speculator uses borrowed capital for speculation.
8. In speculation, the stability of income is absent it is uncertain and erratic which is not in the case of investment.
9. The psychological attitude of investors is conservative and cautious. In contrast, speculators are daring and careless.

What is Gambling?

Gambling is very much different from the above two as gambling purely depends on the intuition or instincts of the investor. The investor trusts his instincts and the sole basis that he employs his money in hope of winning that gamble to earn profits. However, the chance of winning that gamble is particularly very less. This gameplay is less of economic activity and more of an artificial activity which is played with instincts

Example :- A person putting all his money in a horse race or casino is referred to as gambling. This is a gamble as the investment is not backed by any information or analysis and the chances of winning are unknown.

Investment Objectives

Investing is a wide spread practice and many have made their fortunes in the process. The starting point in this process is to determine the characteristics of the various investments and then matching them with the individuals need and preferences. All personal investing is designed in order to achieve certain objectives. These objectives may be tangible such as buying a car, house etc. and intangible objectives such as social status, security etc. similarly; these objectives may be classified as financial or personal objectives. Financial objectives are safety, profitability, and liquidity. Personal or individual objectives may be related to personal characteristics of individuals such as family commitments, status, dependents, educational requirements, income, consumption and provision for retirement etc.

Attributes of Investment

Risk averse. Your portfolio should not expose you to any more risk than is necessary to meet your objectives. For some, this will mean a portfolio composed of mostly stocks. For others, it will mean all cash. For most, it will mean something in between. For every investment portfolio, there is a minimum level of risk and return that are necessary to safely achieve its objectives.

Cost efficient. A good portfolio achieves its objectives at the lowest possible cost. If your portfolio costs more than about 0.20 percent to own, it could probably be better.

Risk efficient. Risk is something to be avoided, when- and wherever possible. To know the quality of your portfolio, you must know how much return to expect from it and how likely it is to deliver something else. A good portfolio delivers the expected return you need with the least possible risk. Risk efficiency is achieved by properly diversifying your portfolio.

Tax efficient. Like other costs, taxes must be minimized in order to maximize the quality of your investment strategy and the portfolio it produces.

Simple. A good portfolio minimizes complexity and avoids using unnecessary components. If your portfolio contains more than 20 securities, you can probably do better. When it comes to selecting the building blocks of your portfolio, fewer is better than more. You should be able to quickly review and assess your portfolio's performance from a few account statements that each contain no more than a handful of securities and transactions each year.

Transparent. You should clearly understand what each element of your portfolio is, and what it is supposed to do. Trust is not something that should be given to anyone in the investment business. It should be earned, and then given only sparingly and where absolutely necessary.

Easy to manage. Making changes to your portfolio should be convenient and easy for you to accomplish.

Investment Process

Step 1: Determine Your Investment Objectives and Risk Profile

Through personal consultations, we will develop a personal profile of your individual investment needs and objectives and time horizon. We will help you determine whether you need investments that generate income, offer growth potential, or a combination of both. It is also critical to understand risk, the types of risk that you potentially face, and your attitude toward these risks.

Step 2: Set Your Asset Allocation Policy

Research has shown that the asset allocation decision—how your investments are diversified among various asset classes (stocks, bonds, real estate, and cash)—has the most significant impact on overall portfolio performance.

We follow the principles of Modern Portfolio Theory, which earned a Nobel Prize in Economics in 1990 for Dr. William Sharpe and Dr. Harry Markowitz. This theory forms the basis of a well-known asset allocation technique called Capital Asset Pricing Model (CAPM). Using this highly sophisticated technique, we draw on decades' worth of market data and analysis to assess the likely behavior of your portfolio.

Step 3: Implementation

Once your asset allocation policy has been developed, we implement your investment strategy by investing in a well-diversified portfolio managed by pre-eminent money managers.
In addition, any needed legal documents would be drafted (will, trust, power of attorney, health care proxy, etc.). Titling of assets is also coordinated.
Our plans are designed and implemented with prudent flexibility to assure the strategies can be responsive in an ever-changing world.

Step 4: Rebalance Your Portfolio

Rebalancing is a disciplined method of ensuring that your portfolio is being managed in a manner consistent with your designated asset allocation policy. Once your portfolio is implemented, it is carefully monitored, on an ongoing basis, to ensure that it remains consistent with your desired asset allocation strategy.

Without rebalancing, the mix of assets in your portfolio may become inconsistent with your asset allocation policy. This can occur over time as different asset classes increase or decrease in value and can result in unplanned overexposure or underexposure to certain asset classes.

Step 5: Communication

We will communicate with you on a regular basis and provide various reports, including account performance and detailed account statements.

We establish reviews to evaluate your plan's performance and to make any necessary adjustment due to changing laws, market conditions, objectives, and/or investment performance.

Objectives of Investment

Safety

Even as no investment choice is completely safe, there are products which might be desired through investors who're threat averse. A few individuals make investments with a goal of retaining their cash secure, no matter the charge or going back they acquire on their capital. Such close to-secure products encompass constant deposits, financial savings debts, government bonds, etc.

Growth

While safety is an important objective for many investors, a majority of them invest to receive capital gains, which means that they want the invested amount to grow. There are several options in the market that offer this benefit. These include stocks, mutual funds, gold, property, commodities, etc. It is important to note that capital gains attract taxes, the percentage of which varies according to the number of years of investment.

Income

Some individuals invest with the objective of generating a second source of income. Consequently, they invest in products that offer returns regularly like bank fixed deposits, corporate and government bonds, etc.

Other objectives

While the aforementioned objectives are the most common ones among investors today, some other objectives include:

Liquidity

Many investment options are not liquid. This means they cannot be sold and converted into cash instantly. However, some people prefer investing in options that can be used during emergencies. Such liquid instruments in include stock, money market instruments, and exchange-traded funds, to name a few.

Tax exemption

Some people invest their money in various financial products solely for reducing their tax liability. Some products offer tax exemptions while many offer tax benefits on long-term profits

Every investor has common objectives with regard to the investment of their capital. The importance of each objective varies from investor to investor and depends upon the age and the amount of capital they have. These objectives are broadly defined as follows.

Lifestyle – Investors want to ensure that their assets can meet their financial needs over their lifetimes.

Financial security – Investors want to protect their financial needs against financial risks at all times.

Return – Investors want a balance of risk and return that is suitable to their personal risk preferences.

Value for money – Investors want to minimize the costs of managing their assets and their financial needs.

Peace of mind – Investors do not want to worry about the day to day movements of markets and their present and future financial security.

Definition of Portfolio Management

Portfolio management can be defined as :-

The process of selecting a bunch of securities that provides the investing agency a maximum return for a given level of risk or alternatively ensures minimum risk for a given level of return.

Investment portfolio composing securities that yield a maximum return for given levels of risk or minimum risk for given levels of returns are termed as “efficient portfolio”.

The investors, through portfolio management, attempt to maximize their expected return consistent with individually acceptable portfolio risk.

Portfolio management thus refers to investment of funds in such combination of different securities in which the total risk of portfolio is minimized while expecting maximum return from it.

As returns and prices of all securities do not move exactly together, variability in one security will be offset by the reverse variability in some other security. Ultimately, the overall risk of the investor will be less affected.

Types of Portfolio Management

1. **Active Portfolio Management**: When the portfolio managers actively participate in the trading of securities with a view to earning a maximum return to the investor, it is called active portfolio management.
2. **Passive Portfolio Management**: When the portfolio managers are concerned with a fixed portfolio, which is created in alignment with the present market trends, is called passive portfolio management.
3. **Discretionary Portfolio Management**: The Portfolio Management in which the investor places the fund with the manager and authorizes him to invest them as per his discretion, on the investor's behalf. The portfolio manager looks after all the investment needs, documentation, etc.

4. **Non-Discretionary Portfolio Management**: Non-discretionary portfolio management is one in which the portfolio managers give advice to the investor or client, who can accept or reject it.

The outcome i.e. profits received, or loss sustained belongs to the investor himself, whereas the service provider receives an adequate consideration in the form of fee for rendering services.

Activities Involved in Portfolio Management

- Selection of securities in which the amount is to be invested.
- Creation of appropriate portfolio, with the securities chosen for investment.
- Making decision regarding the proportion of various securities in the portfolio, to make it an ideal portfolio for the concerned investor.

These activities aim at constructing an optimal portfolio of investment, that is compatible with the risk involved in it.

Steps involved in Portfolio management process

Portfolio management involves complex process which the following steps to be followed carefully.

1. Identification of objectives and constraints.
2. Selection of the asset mix.
3. Formulation of portfolio strategy
4. Security analysis
5. Portfolio execution
6. Portfolio revision
7. Portfolio evaluation.

Now each of these steps can be discussed in detail.

1. Identification of objectives and constraints

The primary step in the portfolio management process is to identify the limitations and objectives. The portfolio management should focus on the objectives and constraints of an investor in first place. The objective of an Investor may be income with minimum amount of risk, capital appreciation or for future provisions. The relative importance of these objectives should be clearly defined.

2. Selection of the asset mix

The next major step in portfolio management process is identifying different assets that can be included in portfolio in order to spread risk and minimize loss.

In this step, the relationship between securities has to be clearly specified. Portfolio may contain the mix of Preference shares, equity shares, bonds etc. The percentage of the mix depends upon the risk tolerance and investment limit of the investor.

3. Formulation of portfolio strategy

After certain asset mix is chosen, the next step in the portfolio management process is formulation of an appropriate portfolio strategy. There are two choices for the formulation of portfolio strategy, namely

i. an active portfolio strategy; and
ii. a passive portfolio strategy.

An active portfolio strategy attempts to earn a superior risk adjusted return by adopting to market timing, switching from one sector to another sector according to market condition, security selection or a combination of all of these.

A passive portfolio strategy on the other hand has a pre-determined level of exposure to risk. The portfolio is broadly diversified and maintained strictly.

4. Security analysis

In this step, an investor actively involves himself in selecting securities.

Security analysis requires the sources of information based on which analysis is made. Securities for the portfolio are analysed considering of their price, possible return, risks associated with it etc. As the return on investment is linked to the risk associated with the security, security analysis helps to understand the nature and extent of risk of a particular security in the market.

Security analysis involves both micro analysis and macro analysis. For example, analysing one script is micro analysis. On the other hand, macro analysis is the analysis of market of securities. Fundamental analysis and technical analysis help to identify the securities that can be included in portfolio of an investor.

5. Portfolio execution

When selection of securities for investment is complete the execution of portfolio plan takes the next stage in a portfolio management process. Portfolio execution is related

to buying and selling of specified securities in given amounts. As portfolio execution has a bearing on investment results, it is considered one of the important steps in portfolio management.

6. Portfolio revision

Portfolio revision is one of the most important steps in portfolio management. A portfolio manager must constantly monitor and review scripts according to the market condition. Revision of portfolio includes adding or removing scripts, shifting from one stock to another or from stocks to bonds and vice versa.

7. Performance evaluation

Evaluating the performance of portfolio is another important step in portfolio management. Portfolio manager must assess the performance of portfolio over a selected period of time. Performance evaluation includes assessing the relative merits and demerits of portfolio, risk and return criteria, adherence of the portfolio management to publicly stated investment objectives or some combination of these factors.

The quantitative measurement of actual return realized, and the risk borne by the portfolio over the period of investment is called for while evaluating risk and return criteria. They are compared against the objective norms to assess the relative performance of the portfolio.

Performance evaluation gives a useful feedback to improve the quality of the portfolio management process on a continuing basis.

Risk

Risk can be defined as the probability that the expected return from the security will not materialize. Every investment involves uncertainties that make future investment returns risk prone. Uncertainties could be due to the political, economic and industry factors.

Risk could be systematic in future depending upon its source. Systematic risk is for the market as a whole, while unsystematic risk is specific to an industry or the company individually. The first three risk factors discussed below are systematic in nature and the rest are unsystematic. Political risk could be categorised depending on whether it affects the market as whole, or just a particular industry.

Types of Risk

Systematic Risk: An investor can construct a diversified portfolio and eliminate part of the total risk, the diversifiable or non-market part. What is left is the non-diversifiable portion or the market risk. Variability in a security's total returns that is

directly associated with overall movements in the general market or economy is called systematic (market) risk.

Virtually all securities have some systematic risk, whether bonds or stocks, because systematic risk directly encompasses interest rate, market, and inflation risks. The investor cannot escape this part of the risk because no matter how well he or she diversifies, the risk of the overall market cannot be avoided. If the stock market declines sharply, most stocks will be adversely affected; if it rises strongly, as in the last few months of 1982, most stocks will appreciate in value. These movements occur regardless of what any single investor does. Clearly, market risk is critical to all investors.

Non-systematic Risk: The variability in a security's total returns not related to overall market variability is called the non- systematic (non-market) risk. This risk is unique to a particular security and is associated with such factors as business and financial risk as well as liquidity risk. Although all securities tend to have some non-systematic risk, it is generally connected with common stocks.

Remember the difference: Systematic (market) risk is attributable to broad macro factors affecting all securities. Non-systematic (non-market) risk is attributable to factors unique to a security.

Different types systematic and unsystematic risk are explained as under:

1. **Market Risk:** The variability in a security's returns resulting from fluctuations in the aggregate market is known as market risk. All securities are exposed to market risk including recessions, wars, structural changes in the economy, tax law changes and even changes in consumer preferences. Market risk is sometimes used synonymously with systematic risk.

2. **Interest Rate Risk:** The variability in a security's return resulting from changes in the level of interest rates is referred to as interest rate risk. Such changes generally affect securities inversely; that is, other things being equal, security prices move inversely to interest rates. The reason for this movement is tied up with the valuation of securities. Interest rate risk affects bonds more directly than common stocks and is a major risk that all bondholders face. As interest rates change, bond prices change in the opposite direction.

3. **Purchasing Power Risk:** A factor affecting all securities is purchasing power risk, also known as inflation risk. This is the possibility that the purchasing power of invested dollars will decline. With uncertain inflation, the real (inflation-adjusted) return involves risk even if the nominal return is safe (e.g., a Treasury bond). This risk is related to interest rate risk, since interest rates generally rise as inflation increases, because lenders demand additional inflation premiums to compensate for the loss of purchasing power.

4. **Regulation Risk:** Some investments can be relatively attractive to other investments because of certain regulations or tax laws that give them an advantage of some kind. Municipal bonds, for example, pay interest that is exempt from local, state

and federal taxation. As a result of that special tax exemption, municipals can price bonds to yield a lower interest rate since the net after-tax yield may still make them attractive to investors. The risk of a regulatory change that could adversely affect the stature of an investment is a real danger. In 1987, tax law changes dramatically lessened the attractiveness of many existing limited partnerships that relied upon special tax considerations as part of their total return. Prices for many limited partnerships tumbled when investors were left with different securities, in effect, than what they originally bargained for. To make matters worse, there was no extensive secondary market for these illiquid securities and many investors found themselves unable to sell those securities at anything but 'firesale' prices if at all.

5. **Business Risk:** The risk of doing business in a particular industry or environment is called business risk. For example, as one of the largest steel producers, U.S. Steel faces unique problems. Similarly, General Motors faces unique problems as a result of such developments as the global oil situation and Japanese imports.

7. **Bull-Bear Market Risk:** This risk arises from the variability in the market returns resulting from alternating bull and bear market forces. When security index rises fairly consistently from a low point, called a trough, over a period of time, this upward trend is called a bull market. The bull market ends when the market index reaches a peak and starts a downward trend. The period during which the market declines to the next trough is called a bear market.

8. **Management Risk:** Management, all said and done, is made up of people who are mortal, fallible and capable of making a mistake or a poor decision. Errors made by the management can harm those who invested in their firms. Forecasting errors is difficult work and may not be worth the effort and, as a result, imparts a needlessly sceptical outlook. An agent-principal relationship exists when the shareholder owners delegate the day-to-day decision-making authority to managers who are hired employees rather than substantial owners. This theory suggests that owners will work harder to maximize the value of the company than employees will. Various researches in the field indicate that investors can reduce their losses to difficult-to-analyse management errors by buying shares in those corporations in which the executives have significant equity investments.

9. **Default Risk:** It is that portion of an investment's total risk that results from changes in the financial integrity of the investment. For example, when a company that issues securities moves either further away from bankruptcy or closer to it, these changes in the firm's financial integrity will be reflected in the market price of its securities. The variability of return that investors experience, as a result of changes in the credit worthiness of a firm in which they invested, is their default risk.

Almost all the losses suffered by investors as a result of default risk are not the result of actual defaults and/or bankruptcies. Investor losses from default risk usually result from security prices falling as the financial integrity of a corporation's weakness - market prices of the troubled firm's securities will already have declined to near zero. However, this is not always the case - 'creative' accounting practices in firms like Enron, WorldCom, Arthur Anderson and Computer Associates may maintain quoted prices of stock even as the company's net worth gets completely eroded. Thus, the

bankruptcy losses would be only a small part of the total losses resulting from the process of financial deterioration.

10. **International Risk:** International risk can include both country risk and exchange rate risk.

Exchange Rate Risk: All investors who invest internationally in today's increasingly global investment arena face the prospect of uncertainty in the returns after they convert the foreign gains back to their own currency. Unlike the past, when most US investors ignored international investing alternatives, investors today must recognize and understand exchange rate risk, which can be defined as the variability in returns on securities caused by currency fluctuations. Exchange rate risk is sometimes called currency risk.

❖ Realised Return

Realised return is the return on an investment that has been actually earned. There is an element of certainty and absence of risk in this type of return. An example of bank deposit may be taken to illustrate the above. 5,000 deposited in a bank as Fixed Deposit for one year @ 10% would be worth *5,500 on completion of one year. Realised return in this case is 500.

❖ Expected Return

Expected return is the return on an investment, which is anticipated or expected over a period of time in future. There is an element of uncertainty and existence of risk in this type of return, as the expectation may or may not come true. The uncertainty or risk in respect of expected return and its timing get compensated by the substantial high rate of return. The expected rate of return is the weighted average of all the possible returns multiplied by their respective probabilities. In symbolic language, it may be expressed as under:

❖ Annualised Return

An annual rate of return is a single-period return, while an annualised rate of return is a multi-period, geometric average return. An annual rate of return is the return on an investment over a one year period. In short the formula is,

Annual Return = Holding Period Return /Numbers of Holding Years

An annualised rate of return is the return on an investment over a period other than one year such as a month, or two years multiplied or divided to give a comparable one year return. For instance, a one month ROI of 1% could be stated as an annualised rate of return of 12%. Or a two year ROI of 10% could be stated as an annualised rate of return of 5%.

For example, if the amount of returns for four years together is ₹265 on an investment of 1,000, the annualised rate of return for the four years is:

265 / (1,000 x 4 years) = 6.625%.

Example: Mr. X buys a bond for 950, receives 80 in interest and later sells the bonds for 980. Find out the holding period return.

Solution: Holding Period Return = Income + Capital Gain/Purchase Price

= 80 + 30/950 = 11.58%

Example: Mr. X purchased one share of a stock for 100 at the beginning of the year. After three months, the stock price has gone up to 102 and it also pays a dividend of 2. What is the holding period return?

Solution: The holding period return will be:

HPR = (102-100 + 2)/100 = 4%.

Example: Mr. X buy a stock for 60 and sell it for 90 after five years. What are the holding period return, the average percentage return, and the annualized compound rate of return?

Solution: Holding Period Return= (90-60)/60 = 50%

Annual Return = Holding Period Return/Numbers of Holding Years

= 50%/5 = 10%

Annualized Compound Return = PV (1 + r)"

r = 8.45%

Example: Mr. A bought a share six months ago for 100 and sold it today for 106 and in the meantime received a dividend of 3, the return over six month holding period. Calculate the holding period return and annual return?

Solution: Holding Period Return = (106-100)+3/100 = 9%.

Annual Return = Holding Period Return/Numbers of Holding Years

=9% / 0.5= 18%

What Is Beta?

Beta is a measure of a stock's volatility in relation to the overall market. By definition, the market, such as the S&P 500 Index, has a beta of 1.0, and individual stocks are ranked according to how much they deviate from the market.

A stock that swings more than the market over time has a beta above 1.0. If a stock moves less than the market, the stock's beta is less than 1.0. High-beta stocks are supposed to be riskier but provide higher return potential; low-beta stocks pose less risk but also lower returns.

Alpha

Alpha (α) is a term used in investing to describe an investment strategy's ability to beat the market, or its "edge." Alpha is thus also often referred to as "excess return" or "abnormal rate of return," which refers to the idea that markets are efficient, and so there is no way to systematically earn returns that exceed the broad market as a whole. Alpha is often used in conjunction with beta (the Greek letter β), which measures the broad market's overall volatility or risk, known as systematic market risk.

Alpha is used in finance as a measure of performance, indicating when a strategy, trader, or portfolio manager has managed to beat the market return over some period. Alpha, often considered the active return on an investment, gauges the performance of an investment against a market index or benchmark that is considered to represent the market's movement as a whole.