Chapter -1

INTRODUCTION TO INVESTMENTS

1.1 INTRODUCTION

Savings and Investments form an integral part of one’s life. Investments refer to the employment of funds with an objective of earning a favourable return on it. In other words, investment is a process, where money is being utilized with a hope of making more money.

Investment is the commitment of money that have been saved by deferring the consumption and purchasing an asset, either real or financial with an expectation that it could yield some positive future returns.

There is a plethora of investment avenues, each associated with varied risk-return trade-offs. Every investment avenue is distinct in its characteristic, which makes the investment decision fascinating. The investor thus needs to carefully analyze each of its characteristics and build a basket of assets that suits his risk profile and complies with his objectives and goals. Hence, investment decision making is a fascinating task to the investor.

There are different categories of investors. The investment strategies differ from each other, with regard to size of the investment, time-period, objectives, risk appetite etc. The investors can be classified into,

- Individual investors
- Corporate
- Institutional investors – Domestic and Foreign
- Pension Funds
- Government

The investor talked about in the present context refers only to individual investors.
According to Babylonian Talmud, any person should always segregate his wealth into three portions, namely,

- One-third in land
- One-third in commerce
- One-third retained in his own hands

The sages of the Talmud suggested, what is possibly the world’s first diversified investment portfolio, and despite the vicissitudes of fifteen hundred years their device is not without merit even today. A formal statement of investment management through risk diversification and portfolio selection, however, did not become available until the 1950’s when Harry Markowitz and James Tobin published their pioneering studies –

- “Portfolio Selection”, *Journal of Finance*, VII in March 1952 by H M Markowitz – New York

These studies were basically an attempt to explain in a systematic manner, why for almost two millennia, most investors have been following the advice implied in the Talmudic dictum.

Such attempts, following Markowitz, are usually classified as belonging to the theory of portfolio selection. Portfolio theory, like most economic theories, has two distinct aspects,

- Viewed as a positive theory, it attempts to explain and predict phenomena in capital markets
- Viewed as a normative theory or as an art, it sets out criteria concerning the way in which investment decisions should be made and stipulates the rules for attaining desired ends

The above distinction was possible as a result of efforts put in by John Neville Keynes, the distinguished Victorian logician and political economist.
The Indian economy is growing at a faster pace, which has resulted in higher disposable income level and a plethora of investment avenues. There are numerous options like, Government savings deposits, banks, NBFCs and mutual fund houses are vying for a share in the savings of investors. Investors now have wide-ranging options for making investments like equity, debt, mutual funds, gold etc. (Kathuria 2012 : 45-56).

Investment is defined as a commitment of funds made in the expectations of some favourable rate of return. If the investment exercise is properly undertaken, the return will be corresponding with the risk the investor assumes. (Fischer 2008 : 2)

Investment is an acquisition of a financial product or other item of value with an anticipation of favourable future returns. Investing is a serious subject that can have a major impact on investors’ future well-being. Investors have series of investment avenues and each of them differ in terms of risk, return, safety, security, regular income and various other parameters. The investor has to choose proper investment avenue, depending upon his specific need, risk preference and expected returns. (Kothari 2013 : 476-480)

Investment has got two attributes – time and risk. The sacrifice takes place in the present and is certain. The reward to be received in future is generally uncertain. In some cases, the time element dominates, as in case of government securities. Either time or risk or both are important. (F Sharpe W et al. 1996)

Investment decision-making process is concerned with how an investor should proceed in making a decision about what marketable securities to invest in, how extensive an investment should be and when the investment should be made. Investment is a sacrifice of current rupees for future rupees.

Investors’ investment pattern has witnessed a metamorphic change and this change can be attributed to changing scenario of investment alternatives available. Investors have started investing more in modern financial products like equity, mutual funds, ULIPs than the ordinary financial product like term deposits, post office deposits, etc. (Warne 2012 : 1)
The challenges confronted by the investors are taking right investment decisions. The varied investment opportunities poses a challenging questions to the investors, like, why, where, how, how much and when to invest. Hence investment involves complex decision making process with regard to choosing the investment avenue with the expectation of returns with or without making thorough analysis. The return on such investment depends on investor’s preferences towards various investment avenues, his ability to take risk and also his demographic characteristics. (Gabhane 2013 : 44-48)

The concept of savings plays an important role in an economy. In Indian context, the pre-independence period has witnessed people spending most of their income on consumption and a very less portion of income being saved. After independence, the major objective of the Government was promotion of savings and capital formation, which are engines of growth. There has been a consistent increase in the national savings rate in India through the post-independence period. (Athukorala 2004 : 491-503)

1.2 INTRODUCTION TO SAVINGS

Savings are of great importance in a developing country like India. The quantum of these savings has a direct bearing on the level of economic activity of the nation. The degree of progress attained in a country largely depends on what the households do with the additional income generated every year. There is a certain need for adequate integration of savings and investment programmes into development strategies that are capable of improving resource allocation, promotion of equitable distribution of income and reducing vulnerability.

There are various challenges in the savings behaviour of the Indian households. The sluggish economy, steep market declines, deteriorating revenues, alarming reports of scandals, insider trading, illegal corporate accounting practices etc have posed few challenges in savings pattern. In an emerging economy like India, majority of the savings are parked in financial assets rather than real or physical assets.
1.3 SAVINGS AND ECONOMIC GROWTH

The role of savings and investments and its impact on macro-economic factors have raised controversies amongst economists. While few economists argued that excess savings could lead to depression, other economists were against this argument. Adam Smith refuted the opinion and argued that savings could lead to economic growth. In the wealth of nations, Smith maintained that, “As the capital of an individual can be increased only by what he saves from his annual revenue or annual gains, so the capital of society, which is the same with that of all individuals who compose it, can be increased in the same manner....... what is annual saved is as regularly consumed as what is annually spent, and nearly at the same time too; but it is consumed by a different set of people” (1937, p 123).

According to classical theory of savings and investment, the key factor that would bring savings and investment into equilibrium at full employment is the interest rate. In other words, an increase in savings would lead to decrease in the interest rates and this would cause an increase in investment and thus stimulate growth.

Keynes challenged the classical theory and argued in his work Keynes General Theory that, “The traditional analysis has been aware that savings depend on income but it has overlooked the fact that income depends on investment, in such fashion that, when investment changes, income must necessarily change in just that degree which is necessary to make change in savings equal to the change in investment” (1936, p 184). He also stated that “increased investment will always be accompanied by increased saving, but it can never be preceded by it” (1939, p 572). Further, Keynes stated that, “The investment market can be congested on account of a shortage of cash. It can never be congested on account of saving” (1973, p 222). In contrast, the supply-determined growth theory suggests that savings determine investments and hence, any economic policy should be aimed at increasing the private savings which would result in lower interest rates and which, in turn, would increase investments.

1.4 INTRODUCTION TO INVESTMENTS

Post-second world war, economic growth has received considerable attention by economists, who raised the question of whether growth is determined by aggregate demand or aggregate
supply. In the demand-determined growth theory, investment determines savings through multiplier effect and that it plays a crucial role in determining the growth rate of productivity. In contrast, the supply-determined theory suggests that savings determines investment and therefore the direction of any economic policy should be, at the very least, to increase the amount of private savings which would result in lower interest rate and which, in turn, would increase investment. (Amirkhakhali 1990)

Investments and portfolio decisions are taken within the framework provided by a complex of financial institutions and intermediaries which together comprise the capital market. It is this market which provides the mechanism for channelizing current savings into investment in productive facilities, i.e., for allocating the country’s capital resources among alternative uses. In effect the financial market provides an economy’s link with the future, since current decisions regarding the allocation of capital resources are a major determining factor of tomorrow’s output. The crucial role played by the financial markets in shaping the pattern and growth of real output imparts a social significance to individual investment and portfolio decisions.

Investment strategy is so different from the hundreds or perhaps thousands of other strategies. The reason for differentiation is its unique blend of both traditional and modern investment concepts, and its focus on the individual investor. It is equally important to understand the criteria used by the investors to evaluate any investment and make decision.

Today, the investor lives in a more complex and contradictory world than before. Making money is not easier. At the same time, holding on to it, has never required more ingenuity. Taxes, inflation, a stop-and-go economy, a mind-boggling array of investments, the high cost of “expert” advice, all create a formidable obstacle course to investment success.

To make matters still more perplexing, technology has finally begun to turn investing into a science. Research Centres are continuing to pile up important new findings about investments. But, because of the limited mathematical expertise, few investors or professionals can benefit from these results. Indeed, faculties at many business schools remain unaware of the results.
Investment strategy reaches out to the individual investor and explains how these new findings can be used to develop successful investment strategies.

The investment strategies basically depend upon the following factors,

- Investment Environment
- Risk, Inflation and Rates of Return
- Taxes
- Institutions
- Cost of Investing
- Applications
  - Risk taking propensity
  - Portfolio selection
  - Risk-Return preferences
  - Consumption – Investment decisions
  - Rationality

The study of investments is of growing importance to every individual. In recent years, the field of investments has seen a variety of new opportunities and philosophies. While, these new approaches have aroused considerable debate among the members of the investment community, and have added a much needed quantitative aspect to investment management, some are nevertheless too hypothetical and unrealistic to be of much aid to a sound investment management program. Investing still remains primarily an art and cannot totally be reduced to a buy, hold and sell statistical equation.

Investments can be a fascinating and stimulating field of study for those who are interested in gaining knowledge and expertise in investment decision making. The same basic investment principles and procedures apply to both the individual investor and the institutional investor. The study of investments prepares the individual to operate in the securities markets either on his own behalf or on behalf of other investors through pension funds, mutual funds, and trust departments of banks, insurance companies or other indirect investing by the individual.
The study of investments presupposes that an investor has specific objectives. An individual’s desire to participate in a program presupposes that he wants to accumulate assets and expand his net worth. However, the financial goals for an investment program differ widely among individual investors, depending upon the investor’s financial needs and, to a significant extent, their social, family and moral views of the use of money.

Some investors participate in investment programs to accumulate money for the sake of accumulation and have no special need or goal. They derive satisfaction from the experience of successful investing. Some view investment as a means of providing a fund for their children’s college education, supplementary retirement income, or fulfilling other financially related needs. Others view investment as a means of increasing sources of funds for future family members, religious organizations that need expanding funds to better serve their objectives, and for community related organizations and programs that need private funding.

Whatever the goal of the investor, the purpose of the study of investments is to equip the individual so that he will make investment decisions intelligently.

Security analysis is being redirected from a narrow focus on stocks and bonds to a broader perspective that evaluates the full array of investment opportunities. Portfolio theory is becoming operational, and the integration of security analysis and portfolio selection assumes an increasingly critical role in translating theory into practice. Finally, the structure and operation of capital markets are in rapid transition as traditional markets give way reluctantly to a centralized national market system.

1.5 SAVINGS AND INVESTMENTS

It is quite important to understand the different motives of savings and investments. The difference lies in the key element that synchronized both savings and the investments. According to classical theory approach, the key element is the interest rates. In other words, interest rates shall synchronize motivation to save with motivation to invest by assuming that both savings and investments are functions of interest rate. On the contrary, according to Keynesian theory, motivation to savings is mostly independent of interest rates and depends heavily on the level on income and behavioural and institutional factors.
With respect to investment, classical economists emphasize interest rate as the main determinant of investment. They argue that investment is highly interest rate elastic as investors are mainly concerned with the cost of borrowing. On the other hand, the Keynesian view accepts that investment may respond to movements in the interest rates, but emphasize that such a responsiveness of investments to interest rate is very low as compared to the role of economic conditions or state of confidence.

Hence, it can be learnt that savings and investment decisions are generally made by different groups and for different reasons and the markets do not quickly coordinate savings and investments. Appropriate economic policies need to be implemented to guide the economy towards the optimum level of savings and investments.

Higher savings ratios are associated with higher investment ratios. Of the survey made amongst the seven countries for a period of 1960-87, Japan enjoyed the highest average ratios for both savings (0.364) and investments (0.316). The USA had the lowest ratios for both savings (0.186) and investments (0.152). In terms of variability, the USA showed the smallest standard deviation for both savings (0.015) and investments (0.009). The largest variability was observed for savings ratio in Italy (0.043) and for investment ratio in Germany (0.025). (Amirkhalkhali 1990)

1.6 REAL ASSETS v/s FINANCIAL ASSETS

The society’s material wealth is a function of productive capacity of the economy. The production capacity refers to the quantum of goods and services its members can create. This capacity is a function of real assets of the economy, namely, land, buildings, plant, machinery, intellect etc. On the contrary, financial assets, such as stock, bonds, etc either in material or de-material form, do not contribute directly to the productive capacity of the economy. These assets are the means by which individuals or institutions hold their claims on real assets.

Real assets generate net income to the economy and the financial assets define the allocation of income or wealth among investors.
Investor’s return on financial assets derives from the income generated from the real assets, which were financed by issuance of those securities.

The securities, that are financial assets to the investors, are the liabilities to the issuers of such securities.

1.7 PROPERTIES OF FINANCIAL ASSETS

Financial assets have specific properties that distinguish them from physical and intangible assets. These properties are,

- Monetary value
- Divisibility
- Convertibility
- Reversibility
- Liquidity
- Cash Flow

**Monetary Value**

Financial assets are exchange documents with an attached value. Their values are denoted in currency units determined by the government of an economy.

**Divisibility**

Financial instruments are divisible into smaller units. The total value is represented in terms of divisions that can be handled in a trade. The capital of a firm is collected through financial instruments that are issued in a unit format (shares). Each unit represents a face value of the total capital. The divisibility characteristics of financial assets enable all players, small or big, to participate in the market.
Convertibility

Financial assets are convertible into any other type of asset. For instance, a borrowing can be converted into capital. A firm might issue, in the first place, a debt instrument, which is to be repaid after the specific duration. At the end of the period, the firm could give the investor an option to convert it into a share of the company. This characteristic of convertibility gives flexibility to financial instruments. Financial instruments need not necessarily be converted into another form of financial assets; they can also be converted into any other type of asset.

Reversibility

This implies that a financial instrument can be exchanged for any other asset and logically the so-formed asset may be transferred back into the original financial instrument.

Liquidity

Liquidity is the distinct feature of financial asset. The financial instruments can be converted into cash at ease, due to the existence of a strong secondary market. The financial assets are quite liquid thereby, making the financial instruments tradable and exit at any point of time.

1.8 INVESTMENT MANAGEMENT – AS A PROFESSION

The computer revolution continues to generate a flood of data which must be converted into useful information if security analysis and portfolio management are to flourish. Making decision is after all, what investment is all about? It seems sensible, therefore, to take advantage of developments in modern decision theory.

The past two decades has seen increasing professionalization within the fields of SAPM. One reason is the advent of computers, which help the investment man collect and analyze Balance Sheet and Income Statement data, make earnings and price projections, and analyze risk. Investment professionals use these computer outputs to construct portfolios and evaluate portfolio performance. Since the computer makes quantification of important variables much
easier to achieve, the analyst or manager must understand quantitative techniques and how they can be used within the field.

In particular, the up-to-date financial analyst must be aware of elementary statistical techniques, the mathematics of finance, including the concepts of compounded growth, present values etc, probability theory and other fairly involved subjects. The investment business is, more complicated today than it has ever been before.

However, that complexity is not the only impetus for greater professionalization among security analysts and portfolio managers. Another reason is the changing character of the client, who now-a-days, is much more apt to be an institution or other large, astute investor. When dealing with such highly sophisticated clients, the security analyst and portfolio manager can achieve credibility only to the extent that they are through professionals.

1.9 THE PROBLEM OF RISK & RETURN

Every investment comes with some amount of risk and every investor wants to maximize the returns on his investment. Generally, investments with higher risks can only generate higher returns. Therefore, the investor has to question himself whether he should take higher risk to earn a higher rate of return. Even if the investor is willing to assume the risk, the question is, given his profile, can he afford to take very high risks. Often, the investor is confused between ability to take risks and willingness to take risks. A clear understanding of the two and application of them into practice is essential for investment discipline.

An investment manager aims to secure the largest possible rate of return at the highest level of risk an investor is able to assume. Risk means uncertainty about the size of future returns on a principal amount invested. Rate of return is the relationship between returns realized and the principal amount invested, usually expressed as an annual rate.

Thus, there are two central concepts of the theory of investment management. One is the concept of maximizing returns. The rate of return that is realized on the portfolio is the score, and it is subject to comparison either publicly or privately with scores of other investments. The second concept states the stability of investors to assume risk limits the efforts to
maximize returns. To assume risk is to take the chance of loss as well as the chance of gain. All investments carry some risk of loss and of gain, but the level of risk varies widely among the different kinds of securities. Some investors can afford to risk larger losses than others.

The investor needs to build a portfolio with asset class where risks are aligned with the financial goals. The investor should primarily need to be fully aware of the risk tolerance. The risk tolerance levels vary between individuals. Financial planning goes beyond stating investment goals and allocating money into assets. It also involves identifying an investor’s level of tolerance for risk and then investing money in asset classes that are most aligned to that level.

Risk profiling is a process that helps investors to assess how much risk they should take while identifying an asset mix, such that the level of risk is aligned to the stated investment goals. In other words, risk profiling helps investors determine the variations in returns they can tolerate in achieving their investment goals.

1.10 TYPES OF INVESTORS

Based on the risk tolerance level, investors can be classified into,

- Conservative
- Moderate
- Aggressive

Conservative investors shall take lower risks and is basically risk averse. The conservative investor’s basic priority is safety of the capital. He accepts minimal risks and is hence, prepared to receive minimum or low returns. Investors with such profile should allocate most of their money into fixed-income and money-market products.

Moderate investors are willing to take slightly higher risks as compared to conservative investors for a moderate level of return. Investors with this profile can allocate their money in debt as well as hybrid products like mutual funds, ULIPs etc so that they can earn a moderate level of income with moderate risks.
Aggressive investors are prepared to assume a high level of risk and expects high rate of return for over a period of 3-5 years. Such investors can park their savings in risky assets like equity, real estate etc. These instruments yield a high rate of return with a high degree of risk attached therein.

**Identifying Risk Profiles**

There are three key components that comprise a true risk profile, namely,

- Risk attitude
- Risk capacity
- Need to take risk

Risk attitude is psychological willingness to take risks; risk capacity refers to the financial ability to take risks; and the need to take risks refers to assumption of risks with a view to meet an objective. Understanding the investor’s tolerance helps the financial planner select investments that are appropriate for the investor and forms the foundation of an appropriate asset allocation process.

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(Source: “Know your risk profile before investing”, *Times of India*, dt-16th October 2012, p. 19)
1.11 FACTORS AFFECTING RISK TOLERANCE

Risk tolerance level of the investor depends on a number of factors and shall change from time to time. The risk tolerance level need not be a constant. Following are the factors that determine the risk tolerance level of an investor,

- Age
- Family situation
- Wealth and income
- Psychological
- Financial literacy

An investor may have lower risk tolerance as they get older. A young investor may take more risk and be more dynamic as against an elderly investor who may prefer to play safe.

The investor’s family position may also play a role in the risk tolerance level. An investor who needs to finance his children’s education or take care of his parents or have some domestic compulsions may have to take lesser risk. An investor who is free from such domestic compulsions may take higher degree of risks.

Wealth and income of an investor shall determine the risk tolerance level of the investor to a great extent. In case the investor has higher wealth or income, he shall start investing more aggressively; and the investor whose wealth or income is relatively less would invest in more cautious manner.

A mere psychological factor shall also have an impact on the risk tolerance level of an investor. If the personality of the investor is such that, he is risk averse, he shall take lesser risk as against the aggressive investor who is ready for some calculated risks.

The level of financial awareness has certainly the impact on the risk tolerance level of an investor. A financially educated investor is bound to understand the intricacies and take more risk; whereas an investor who is not financial literate may be risk averse.
1.12 RISK – RETURN RELATIONSHIP

Risk can be defined as the probability that the actual returns of a security deviates from the expected return. There is a positive relationship between the amount of risk assumed in managing a portfolio of securities and the amount of expected return. In very general terms, the greater the risk, the larger the expected return and vice-versa.

The investor who is ready to take greater risks shall be compensated with higher returns. An investor with moderate risk would get moderate returns and the investor who is risk-averse and takes very little risk shall get only lesser returns. Hence the degree of risk taking ability shall determine the level of returns.

A strategy has to be built which attempts to balance risk versus reward by adjusting the percentage of each asset in an investment portfolio according to investor’s risk taking ability, financial goals and investment time horizon.

1.13 INVESTMENT ATTRIBUTES

Following are the various investment attributes,

- Rate of Return
- Risk
- Safety
- Liquidity
- Hedge against inflation
- Tax Shield

*Return*

Investors always expect a good rate of return from their investments. Rate of return could be defined as the total income the investor receives during the holding period stated as a percentage of the purchasing price at the beginning of the holding period.
Return = \frac{\text{Capital appreciation & dividend (interest)}}{\text{Purchase price}} \times 100

**Risk**

Risk of holding securities is related with the probability of actual return becoming less than the expected return. Investment’s risk is just as important as measuring its expected rate of return because minimizing risk and maximizing the rate of return are interrelated objectives in the investment management.

An investment whose rate of return varies widely from period to period is risky than whose return that does not change much. Every investor likes to reduce the risk of his investment by proper combination of different securities.

**Safety**

The selected investment avenue should be under the legal and regulatory frame work. If it is not under the legal frame work, it is difficult to represent the grievances, if any. Approval of the law itself adds flavor of safety. Even though approved by law, the safety of the principal differs from one mode of investment to another.

**Liquidity**

Marketability of the investment provides liquidity to the investment. The liquidity depends upon the marketing and trading facility. If a portion of the investment could be converted into cash without much loss of time, it would help the investor meet the emergencies. Stocks are liquid only if they command good market by providing adequate return through dividends and capital appreciation.
Hedge against inflation

Since there is inflation in almost all the economy, the rate of return should ensure a cover against the inflation. The return rate should be higher than the rate of inflation; otherwise the investor will have loss in real terms.

The return thus earned should assure the safety of the principal amount, regular flow of income and be a hedge against inflation.

1.14 INVESTMENT OBJECTIVES

The investor needs to define his objectives so that he moves in that direction. The main investment objectives are

- Increasing the rate of return and
- Reducing the risk.
- Availing tax shield

Increasing the rate of return

Return is the ultimate objective in any investment program. Many investments have two components of return, namely,

- Capital Gain or Loss
- Some form of income – interest, dividend, etc

The returns shall be measured in any of the following form,

- Holding Period Return
- Arithmetic Mean Return
- Geometric Mean Return
- Return on Investment
- Expected Return
The investor shall always intend to maximize the returns on the investment.

**Reducing the risk**

Risk assessment is one of the most important aspects of modern financial management. Before embarking on any investment, a person should understand both the expected returns and the likely riskiness of those returns.

Following are the measures of total risk,

- Standard deviation
- Variance
- Semi-variance
- Geometric Mean

Risk is generally referred to as “chance of loss” and the risk has numerous subsets. Total risk refers to overall variability of the returns of the financial asset. The total risk has two principal components, namely,

- Un-diversifiable risk and
- Diversifiable risk

Un-diversifiable risk is the risk that must be borne by virtue of being in the market. The risk arises from systematic factors that affect all securities of a particular type. Diversifiable risk can be removed by proper portfolio diversification. The risk arises due to company-specific events or factors.

The investor shall aim to reduce the risk to the possible extent.

**Availing tax shield**

Investor tries to take advantage of certain privileges from the Income Tax Act of 1961 like Section 80C, 80CCC, 80CCD, 80D etc so that he engages in tax planning. In this process, he
chooses the investment channels that provide him cushion of paying lesser taxes. Investments such as Insurance, ELSS, ULIPs, etc provide tax shield.

1.15 INVESTMENT v/s SPECULATION

It is very important to distinguish investment from speculation. Investment differs from Speculation in many facets. Benjamin Graham once said, “....... Everyone who buys or sells a security has become an investor, regardless of what he buys, or for what purpose, or at what price .........”

Investors and speculators have different views and thus different actions. Benjamin Graham, in his book, Intelligent Investor, writes, “An investment operation is one which, upon thorough analysis, promises safety of principal and an adequate return.” Hence, investment has three components, namely,

- Thorough analysis
- Safety of principal
- Adequate return

Graham, further states that, if any operation does not include all these three components, it is speculative.

The following further differences can be seen between investment and speculation,

- Investors have long term view, whereas, speculators have relatively shorter duration
- Investors behave like the business owners, whereas, speculators behave like creditors
- Risk inherent in investment is relatively lower as compared to speculation, where the risk is quite high
- The investors expect a moderate and a normal rate of return, as against speculator, who expects relatively higher rate of return
- An investor shall more often concentrates on fundamental analysis, while, the speculator would depend on technical analysis, sentiments and psychology
• The investor more often is quite cautious and conservative, whereas, the speculator is more aggressive and careless
• Returns of an investor is more stable and reasonable, wherein, the returns of a speculator is uncertain and erratic

1.16 PORTFOLIO MANAGEMENT

Portfolio is the grouping of various financial assets that consists of equity, debt, mutual funds, exchange traded funds, and real assets like gold, silver, other precious metals, real estate, etc. Portfolio Management refers to the art and science of making decision with respect to investment mix or asset allocation, so that the underlying objectives are achieved. Portfolio management basically is choice of debt v/s equity, domestic v/s international, growth v/s safety and many other trade-offs encountered in the attempt to maximize the returns, at the given appetite for risk.

Portfolio management or investment management is the professional management of various assets, both financial and real assets, in order to meet the specified investment goals for the benefit of the investors.

1.17 INDIVIDUAL INVESTOR LIFE CYCLE

Financial plans and investment needs are as different as each individual. Investment needs change over a person’s life cycle. The investment plan should consider the investor's age, financial status, future plan, risk aversion characteristics, needs etc.

Before embarking on an investment program, the investor needs to make sure that his three important needs are satisfied, viz,

• Adequate income to cover living expenses and
• Safety net in case the unexpected could occur
• Cash Reserve
Life insurance has to be a part of any financial plan. The life insurance serves many purposes, like,

- To meet the long term or retirement plan
- To protect the loved ones against financial hardship, in case of death before policy maturity
- To provide protection against uncertainties like payment of medical bills, disability etc

Cash Reserve is quite important to help meet the contingencies and emergencies like job layoffs, unforeseen expenses, emergence of good investment opportunities, safety cushion etc. The proportion of cash reserves should also change over the life cycle of the investor. Assuming that the basic insurance and cash reserve needs are met, individuals can start a serious investment program with their savings. Due to the changes in net worth and risk tolerance levels, the individual investor’s investment strategies will change over their life time. Following is the Individual Investor’s Life Cycle,

*Figure 1.1 Individual Investor’s Life Cycle*

(Source: “Understanding the investor life cycle”, *The Dividend Guy, dt-29th December, 2007*)

*Phases in Individual Investor’s Life Cycle*
Accumulation phase

- Persons in their early and middle years of working
- These investors are focused on immediate needs (ex: the purchase of a new home) as well as longer term goals (retirement, etc.).
- Investors in the accumulation phase usually have a low net worth, and often carry high amounts of debt (mortgage, loans from college, etc.)
- Characterized by a willingness to make relatively high-risk investments in the hope of making significant gains over time

Consolidation phase

- Individuals in the latter half of their careers
- Have paid off major debts like college loans
- Investors in the consolidation phase still have a long investment horizon and willingness to accept risk in exchange for longer term gains.

Spending phase

- The spending phase usually begins with retirement
- Day-to-day expenses are covered by accumulated assets, employer pension plans, and social security.
- There is a reduced willingness to accept risk, because the prime earning years have passed, and there is a slimmer margin for loss.
- However, younger retirees can expect to live at least 20 more years. Therefore, they still have to think of long-term gains and income growth.
Gifting phase

- Similar in many ways to the spending phase.
- Investors in the gifting phase have the income needed to meet their daily expenses. They use excess assets to donate to charities, provide financial assistance to children and grandchildren, etc.

1.18 INVESTMENT PROCESS

The portfolio management process refers to the process an investor takes to aid him in meeting his investment goals. Following steps need to be considered while engaging in investment activity,

- Create a policy statement
- Choice of the asset mix
- Develop an investment strategy
- Selection of securities
- Portfolio execution
- Portfolio revision
- Performance evaluation

Create a policy statement

The investor has to primarily draft a policy statement which should contain the investor's goals and constraints relating to investments. This is certainly the most important step in the portfolio management process. The policy statement requires the investor to consider his true financial needs, both in the short run and the long run. It helps to guide the investor in meeting his needs. In case of market uncertainty or a change in investor's needs, the policy statement will help to guide the investor in making the necessary adjustments in the portfolio in a disciplined manner.
The major objectives include current income, capital appreciation, safety of the principal etc. He needs to prioritize these objectives based on his needs.

In addition, he has to also understand the constraints arising from the investments such as liquidity, time-horizon, tax etc.

**Choice of an asset mix**

This is the most important decision that the investor needs to take in the investment process. This decision is concerned with the proportion of ‘stocks’ and ‘bonds’ in the portfolio. The term ‘stocks’ include equity and equity related investments like mutual fund, ULIPs etc. ‘Bond’ includes investment in fixed income bearing securities like debentures, Government bonds, Corporate bonds etc. An appropriate ‘stock-bond’ mix is vital component of investment decision, which depends on various factors like risk tolerance, investment horizon, current income v/s capital appreciation etc.

**Develop an investment strategy**

This entails creating a strategy that combines the investor's goals and objectives with current financial market and economic conditions. There are basically two strategies available, namely, active portfolio strategy and passive portfolio strategy. In an active portfolio strategy, the investor tries to earn superior risk-adjusted returns through market timing, sector rotation, securities selection and so on. On the contrary, passive investment strategy aims to hold a diversified portfolio and maintain a pre-determined level of risk-exposure.

**Selection of securities**

The investor plays the most important role in selection of securities. He may select from his own wisdom or borrow the ideas from the experts. The investor shall undertake fundamental analysis and technical analysis to select ‘stock’ related securities. In case on ‘bond’ related securities, he shall consider yield-to-maturity, credit rating, term-to-maturity, tax shelter, liquidity etc.
**Portfolio execution**

This entails putting the investment strategy to work, investing in a portfolio that meets the investor’s goals and constraints. This is the practical step, where the investor tries to buy the securities or sell the specified securities in given amounts. This is an important decision that shall have an impact on the investment results.

**Portfolio revision**

Both markets and investors' needs change as time changes. As such, it is important to monitor for these changes as they occur and to update the plan to adjust for the changes that have occurred. The portfolio value and the portfolio composition may change, subject to change in the values of stocks and bonds. Hence, there could be a need for shift form stocks to bonds or bonds to stocks, stock rotation, security switches etc.

**Performance Evaluation**

A periodical survey of the portfolio performance is quite essential in the investment process. The key factors to be considered are risk and return of the portfolio. The investor needs to check if the returns are in line with the underlying risk. This review shall enhance the quality of the entire process and must be undertaken on a continued basis.
Chapter – 2

REVIEW OF LITERATURE AND RESEARCH DESIGN

2.1 REVIEW OF LITERATURE

2.1.1 INTRODUCTION

Review of literature is an important and key aspect in every academic research. Accordingly, the literature with respect to the defined problems have been collected and reviewed appropriately. The two main focus areas with regard to literature review are,

- in quest of information and
- critical appraisal of the information

A literature review is a body of text that aims to evaluate the critical points of existing knowledge and systematic approaches on a particular theme. Literature review consists of secondary sources and hence it does not account for any novel or original experimental work.

Literature review primarily consists of academic-related literature, such as theses, research papers, working papers, etc. However it may also include corporate reports, industry reports, research reports, regulatory guidelines, etc.

The ultimate goal of any literature review is to assemble the existing body of knowledge available up to date on a particular topic and to examine the research gap or scope for further research in the related topic.

2.1.2 SAVINGS AND INVESTMENT

This chapter consists of literature on savings, investment, investment pattern, sources of investment information, investors’ attitude, investors’ preferences and related topics.
Robert Kiyosaki once made a profound statement which reads as follows,

“The benefit of living in a free society is that we all have the choice to be rich, poor or middle class. The decision is up to you”

Investors make money out of money. They don’t have to work hard because their money is working for them. We are past the traditional life, where the company or the government had guaranteed a pension for the old age. It is time for everyone to plan their retirement and investments in a systematic manner.

Robert Kiyosaki (2000) in his famous book “Cash Flow Quadrant: Rich Dad’s Guide to Investing” is of the opinion that people are tuned to the conditional life, where they are taught to go to school, obtain good grades and then to secure a safe job. This thought is Industrial Age thinking and has become obsolete. He further clarifies that today we live in an information age and it would be wiser to condition ourselves and our children into thinking – Going to school, getting good grades, build business, and become a successful investor.

Since money has been the pivotal factor of all human activities, the thirst to earn money has been from times immemorial. Savings and Investments are some of the most important monetary action tools to make money. The investor tries to apply all his skills, knowledge and expertise in managing his money to get the maximum benefit for the investment.

One of the most important assumptions that underline the study of investments is that the investors behave in a rational manner. But, many academic researchers have questioned the full rationality.

Monika Aggarwal and Amit Baruah (2012) attempted to analyze the silver commodity as an investment option and have tried to establish the relationship in gold, silver, platinum and palladium. The average returns for the silver for a time period of 1813 – 2010 is 2.28%, with a minimum of 0.25% and a maximum of 21.79% per annum. The study also reveals that the risk in silver prices is low as compared to gold, platinum and palladium. Silver also has a strong positive correlation with gold, indicating that with a rise in prices of gold, the silver
prices also go up. This means that the investors should watch the trends in gold to invest in silver.

G Jayabal and R Kasilingam (2011) found that the investor’s preferred source of information was newspaper, followed by TV/Radio, Expert Opinion, Friends/Colleagues, Magazines, Investment Consultant, Brokers/Agents and Relatives. They have further discovered that the information source used is having impact on range of awareness, choice criteria, expected return and savings motive.

Mohit Gupta and Subhash Chander (2011) have discovered that there is a significant difference between retail and non – retail mutual fund investors with respect to factors of advertisement and shows and published articles.; while former is more important for the retail investors, the latter is more important for the non – retail investors. The study further concludes by assuming that there is more importance in the sense that all advertisements and TV shows regarding mutual funds should be more oriented towards retail investors.

Hakan Ozerol, Selin Metin Camgoz, Mehmet Baha Karan, Azize Ergeneli, (2011) in their study have investigated adaptive and maladaptive effects of certain demographic variables like age, gender, education and marital status and the trading strategies like portfolio value, turnover ratio, investment period, consulting advice, number of stocks in the portfolio, percentage of stock investments on trading performance of individual investors. The study has revealed that the investors who have less amounts of portfolio value and turnover rates, have tendency to outperform the market and thus exhibit superior performance. Also, the study concludes that the investors who are outperforming the market are the ones with highly educated, relying on the recommendations of experts and women in gender.

Samuel F Clark (2011) made a study to understand and explain differences in household investment efficient and also identify household characteristics that are correlated with distance from the most efficient point. The results of the analysis signify that intellectually developed, more financially sophisticated, better organized and consultative households are ore mean-variant efficient investors. Another significant observation was that the investors, who anticipated economy to remain stable over the next five years, were more efficient than those who expected the economy to either decline or improve.
Abhijeet Chandra and Dinesh Sharma (2010) found that there are five main cognitive biases namely, over confidence, conservatism, representativeness, under/over opportunitism and excess sensitivity to rumours does influence the investor’s behaviour and decision making. Rationality in Investments has always been a contradictory talk. Rationality hereby refers to two main factors, namely, the exhaustive and objective treatment of available potential information. Investors are supposed to be perfectly rational and supposed to make investment decisions objectively using all the available and useful information. In real financial paradigm, some irrational investor’s reactions has been identified; these irrational reactions deviate investors from making rational decisions.

R Kasilingam and G Jayabal (2010) in their study have classified the investors into three categories, namely, Rational Investors, Normal Investors and Irrational Investors. The study reveals that that both the rational and normal investors give high importance to risk protection which means around 74% of investors will not go to equity market where there is a high risk component in capital market, due to market fluctuations.

Syed Tabassum Sultana (2010) in her study has observed that male investors dominate the investment market in India. She has also found that the investors possess higher education like graduation and above of which, majority of them relate to financial and accounting related employment. She could also observe a particular investment habit amongst the investors.

Yuan Yang (2010) examined the determinants of retirement plan decisions including participation and contribution in defined contribution plan. Age, income, marital status, education and occupation, workplace financial planning benefits were the important factors affecting participation in and contribution to a defined contribution plan. The results also suggests that interventions including information and social interaction, as well as financial literacy and education played an important role in retirement plan decisions. The results showed different effects for gender and risk tolerance in participation and the amount of contribution. Women and risk averse respondents were likely to participate than their counterparts, but they contributed smaller amounts.
A wide study is made with regard to investor’s investment behaviour and pattern. P Balasubramanian and Dr. R Ganesan (2009) found that there are certain factors that influence the investment behaviour and pattern amongst which, capital gains and dividends are the most important ingredients. Few other factors would be nature of industry, expected earnings, dividend polarity, price volatility, liquidity, growth prospects and EPS.

There are many interesting attributes amongst the savings behaviour of Indian households. It is considered that in a developing economy, majority of household savings are parked in financial assets rather than physical assets. On the contrary, in India, household savings are almost equally distributed between physical and financial assets. Many studies have been carried out to find out whether Indians are habituated with a high degree of thrift, they are not ready to invest in financial assets, particularly in capital market securities.

Swarnankur Chatterjee, Michael Finke and Nathaniel Harness (2009) have found that individual financial decision is often influenced by higher self-esteem. Those with high level of self-esteem generally invest in risky assets and have the motivation to enhance self image through wealth accumulation. It is also possible that those with greater self-esteem are over-confident and destroy wealth through sub-optimal trading behaviour. The study also concludes that a lack of self-esteem can be a significant barrier to long-run financial success.

Kusum Deep, Krishna Pratap Singh, M L Kansal and C Mohan (2009) in their study are of the view that there are basically five important objectives in portfolio management, namely, short-term return, long-term return, dividend, liquidity and risk. The study also reveals that there are few constraints in portfolio management, like, capital budget, maximal fraction of the capital that can be invested in a single asset, minimal fraction, number of asset in a portfolio, etc. The study also observes that some of the objectives in the model are conflicting in nature. The investor basically looks forward to choose a single optimal solution as against multiple options available. Hence, fuzzy interactive model may be followed for the problem of multi-objective portfolio management. The fuzzy interactive model is a three phased model. The first phase represents the goal of each objective using fuzzy number and aggregate different fuzzy goals. The second phase includes the use of minimum reservation level for each goal to guide the search. The third and the final phase uses real coded genetic algorithm to solve the resultant problem in each interactive phase. The study finds out that the
investors pursuing aggressive portfolio strategy aspire for higher returns and liquidity even though it may imply higher risk and on the other hand, investor pursuing conservative portfolio strategy prefer lower risk even though such a strategy may imply lower returns and liquidity.

Steve A Nenninger (2009) has undertaken a study to test whether mutual funds provide investors with positive risk-adjusted return in either good markets or poor markets. The study also identifies the attitudes of investors and examine mutual funds perform differently under different under different conditions. The study finds that actively managed funds perform 2.3 percentage points better on a risk-adjusted annualised basis in good states over bad. The study concludes that mutual fund managers structure portfolios to take advantage of good market conditions rather that to offer protection against market declines.

Helmen (2009) has made a study on the confidence level of prospective retirees from 1993 to 2009 and found that the proportion of workers who were very confident of having enough money for a comfortable retirement fell to the lowest level (13%) in the year 2009, continuing a two year decline. Further in his study, he found that the retirees also posted a new low in confidence about having a financially secured retirement, with only 20% of them being confident in 2009, down from 41% in 2007.

Syngjoo Choi, Raymond Fisman, Douglas Gale and Sachar Kariv (2006) have made a series of experiments studying decision making under uncertainty and have used innovative graphical interface. In this experimental task the study considers that the individuals make decisions under conditions of uncertainty about the objective parameters of the environment. The study observes that the individual investor’s behaviour can be rationalized by “kinky” preferences that are consistent with loss or disappointment aversion.

R Adeyemo and A S Bamire (2005) found that the investment pattern of cooperative farmers are influenced by income, age, amount of borrowed fund, family size, farming experience, loan repayment etc. It was further observed that income, farming experience, family size, loan repayment and the amount of borrowed funds positively influenced investment pattern, while only age had a negative impact.
David M Cordell (2005) has built a strategy for asset allocation in the retirement portfolio. He is of the opinion that, for the retirement portfolio, the retirement date is little more than one day’s movement along the continuum of life. He differs from the traditional approach and suggests multi-horizon approach. The two important factors that is considered is cash flow’s time-horizon and client’s risk tolerance. Later, the discounted value is calculated, based on the projected rates of return for the asset allocation.

Steven L Beach (2005) in his study observes that the investing decisions are driven normally by human behaviour that can have a devastating impact upon long-term wealth accumulation. Individual investors and sometimes also professional fund managers, allow their emotions to get in the way of rational investment decision-making. There are three common behavioural issues affecting investing investment, namely, herd mentality, regret aversion, and mental accounting. These behaviours quite often result in investor’s chasing performance. The study compares two investing styles, chase and rebalance, based on returns of the three asset classes from 1926-2002. The study found that even conservative investors should not allocate less than 45% to stocks. The study also found that the chase portfolio outperformed the rebalance portfolio only when the rebalanced portfolio’s stock allocation was lower than 25 percent.

Daniel Dorn and Gur Huberman (2005) in their study examines some of the causes for the apparent failure to buy and hold a well-diversified portfolio. The study confronts investors’ actual portfolio and trading choices with their stated attributes toward investing in order to shed light on the apparent failure to buy and hold a well-diversified portfolio. The study finds that the inclusion of subjective investor attributes offers several insights into investor behaviour. The main result is that the investor’s risk attitude is the most successful variable in explaining cross-sectional variation in both portfolio diversification and turnover. The study also finds it difficult to empirically prove the behavioural hypothesis ‘overconfidence causes trading’ since it is tougher to assess due to the underlying unobservable personal attributes. The study also finds that the younger and male investors trade more aggressively than the older and female investors. The study concludes that the risk-attitude of investors is a key to understanding behavioural aspects of investors – poor diversification and high turnover.

Coval and Shumway (2005), suggests that investors’ decision approximate that which prospect theory would advocate. They reviewed the activities of market makers trading at
Chicago Board of Trade and found that traders who had experienced losses by mod-day began displaying risk-seeking tendencies during the latter part of the day; whereas, those who are ahead for the day were less inclined to pursue risk-seeking behaviour later in the day. Investors who exhibit either type of behaviour, based on their reference point, certainly display a strong decision to avoid losses.

Guy Kaplanski (2004) in his study has developed an analytical tool for extracting the VAR of a portfolio from the general distributions of its underlying assets. If the target functions and constraints are expressed in terms of VAR, the analytical VAR can be used to construct optimal portfolios of generally distributed assets. The model covers many practical problems and answers the questions on the optimal combination of shares and bond portfolios. Also, the model is useful in finding the minimal VAR portfolio and to analyzing the impact of adding an asset to an existing portfolio on the overall portfolio VAR.

Pei-Gi Shu, Shean-Bii Chiu, Hsuan-Chi Chen and Yin-Hua Yeh (2004) in their study find that investors with large portfolio values tend to be informed traders whose excess trading does create performance value. The empirical results show that individual investors purchase 73.4% and sell 64.5% of their stock portfolios each month. The results show that men trade more excessively than women do; however men’s performance measures is not dramatically lower than performance measure of women. The study also reveals that, though men are more overconfident than women, electronic traders are more overconfident than men.

Jack Allen, Sukanto Bhattacharya and Florentin Smarandache (2003) have categorized the investors into three categories, namely, conservative and security oriented, growth oriented and dynamic, and chance oriented and progressive. They are of the opinion that the fuzziness surrounding investor classification stems from the fuzziness in the preference relations regarding the allocation of funds between the risk-free and the risky assets in the optimal portfolio.

Sita Nataraj and John B Shoven (2003) have made a study comparing the risks of social security with and without funded-individual accounts. The main purpose of their study is to evaluate the merits of two-tier plans. The study assumes that asset returns, population growth rates, and wage growth rates are not contemporaneously correlated. Thereby, the correlation
between the benefit streams of the PAYGO and individual accounts systems is zero. The study concludes that two-tier programs make sense on pure risk-return efficiency grounds. Hence, the optimal structure for social security involves a substantial individual-accounts component, even for highly risk averse participants. The entire paper focuses on those who solely rely on social security for their retirement benefit.

Gulnar Muradoglu (2002) has investigated two main domains, namely, utilization of actual portfolio managers as forecasters and the real time assessment in the form of forecasting the prices of specific stocks traded on the stock exchange. He feels that the melding psychological and financial research is necessary for a better understanding of the market mechanism in general and financial markets in particular. Risk perceptions may differ across investors with different expertise, across bull versus bear markets, and across real world versus simulated environment. The study observes that the variations in risk premia should be attributed not only to stocks being more risky in terms of traditional risk measures or changes in risk aversion, but also to differences in risk perception.

Barber and Odean (2001) have made an investigation of 35,000 households who invest in common stocks and have found some interesting findings about age. Concerning age of the households, the findings reveal that the young investors hold more volatile portfolios and their average monthly turnover declines as age increases. They have also reported that these differences are more pronounced between single men and single women. Single men trade 67% more than single women and earn annual risk-adjusted net returns that are 2.3% less than those earned by single women. Additionally, married women earned a stock market annual risk-adjusted net return of 1.4% more than married men.

SEBI – NCAER Survey (2000) of Indian Investors observed that investor households diversify their investment portfolio to balance risks. For households, safety and liquidity were the primary considerations which determined the choice of an asset. Ranked in the ascending order of risk perception, bank fixed deposits were considered safe, followed by gold, units of US-64, fixed deposits of non-government companies, mutual funds, equity shares and debentures.
Moshe Arye Milevsky (1999) in his study has demonstrated the effect of investment time horizon on the choice of risky assets in a portfolio. The individual concerned with maximizing a Safety-First utility function, will choose an asset allocation that is invariant to time-horizon. The study concludes that the risk-free rate remains constant, irrespective of the time-horizon in consideration. An economic agent whose sole objective is to earn a rate of return that is greater than the risk free rate, will select the same amount of the risky asset, regardless of time-period for which the portfolio is constructed.

Kevin J Sigler (1998) observes that one of the major components in retirement planning is the investment strategy involved in building a portfolio adequate enough to support an individual during retirement. The study reveals that retirement planning has taken on a high priority with individuals and one of the major reasons is due to the fact that people are now responsible for their own retirement planning considering most plans are defined contribution or self directed plans as opposed to the past where many employees owned defined benefit pension plans.

Sally A Hill (1998) in his study has questioned the appropriateness of pre-tax returns in the optimization process. There are basically two reasons for the financial advisors to use pre-tax asset class in the optimization process. The first reason is that the theory of asset allocation was developed within an institutional setting where investors are not subject to tax. The second main reason is that pre-tax investment returns are readily available and are uniform for all investors. There are few asset classes, that consume around 50% of pre-tax returns and there are other asset classes, where the long term tax-effect is very minimal. This ignorance of differential impact of taxes can have a significant deficiency in building optimal portfolio. The study concludes that the asset allocation must not only be based on mean-variance factors, but must also consider many other factors that are specific to meet the special needs of the investors. One of the foremost factors that need to be considered is to minimize the effect of tax on wealth accumulation. Hence, using after-tax returns in mean variance optimization can help identify which asset classes and asset class combinations are most effective in helping taxable investors build spendable wealth.

Somasundaram (1998) in his doctoral thesis made a study on investment pattern on salaried class at Coimbatore and found that safety was the key element for the choice of investment,
followed by regular return and capital appreciation. He also found that the investors at different locations had different choice criteria for investment; however, gender did not play a major role in choice criteria, i.e., both male and female investors did not differ with respect to choice criteria for investments. The interesting fact was that the private sector employees had more focus on returns, whereas, government employees looked at tax benefits.

A survey that was conducted by Srinivasan (1997) “Preference of Investors”, revealed that most of the investors favoured investing in fixed deposits of banks, followed by post office savings schemes, bonds issued by government organisations and equity shares. This survey was mainly conducted to know the important factors that influence an investor to prefer one investment to another. It was found that the guaranteed return coupled with capital appreciation was the main expectation of most investors.

Kemdal and Montgomery (1997) investigated the influence of an individual’s emotions in their decision-making process. They concluded that an individual’s decision-making activity was impacted by their emotions, as well as their internal and external environment. They have stated that “We definitely need more knowledge about the role of emotions in personal decision-making, which appears to be neglected area in research in decision-making”. (p. 87)

Luigi Guiso, Tullio Jappelli and Daniele Terlizzese (1996) have found that the background risk depresses the willingness to bear other avoidable risks; the investors are confronted with uninsurable income risk and hence reduce the overall exposure to risk by holding a lower proportion of risky assets. The study also reveals that the house-hold saving behaviour is characterized decreasing prudence. There also evidence that borrowing constraints induce people to keep their wealth in a safer and more liquid form.

William F Sharpe (1995) has observed market sensitivity and portfolio diversification as the main quantitative measures of evaluating risk. He is of the opinion that the risk needs to be categorized into market risk and non-market risk. Market risk is measured by market sensitivity of the asset, commonly called as beta. He has advocated for at least some sort of diversification, since it can reduce non-market risks. He has concluded that the relative simple measures like beta and non-market risk measure can greatly increase the understanding of the characteristics of a portfolio.
Forgas (1995) has made a study on mood of the investor and its impact on the judgement and in his study has found that computations required for making investment decisions are typically complex, abstract, an involve risk, which are precisely the attributes that are believed to induce people to rely more heavily on their emotions when making a choice.

Hal Varian (1993) has observed a commonality of theory and empiricism running through the research of the three important financial economists – Markowitz, Miller & Sharpe. He has concluded that it is not enough just to formulate theory of portfolio choice. It is necessary to find a feasible way to compute optimal portfolios. Similarly, it is not enough to formulate a theory; the theory must be estimated and tested. Lastly, it is not enough to look at a information pertaining to firm values and debt-equity ratios; it is required to establish a theory for why there should be or should not be a relationship among these variables.

Mark Kritzman (1992) has brought about the differences that prevail in the asset allocation of individual investors & Institutional investors. He is of the opinion that the asset allocation techniques employed by the institutional investor can be readily translated and adapted by the individual investor. Although there are few factors that are distinctly different between the individual investor and institutional investor, the asset allocation choices are quite similar.

Laonnides (1992) builds on the work of King & Leape (1987) and finds a positive relationship between various demographic factors and investment diversification. The results indicate that net worth, marriage, education, professional investment advice and income all increased diversification.

Michael C Ehrhardt and John M Wachowicz (1990) have conducted a study on Tactical Asset Allocation and suggested a model for individual investors. Firstly, the investors have to divide the investible amount into two components, namely, permanent component and TAA component. The permanent component should contain a wide array of securities, such as, stocks, bonds, commodities, insurance etc, based on his risk taking abilities. The second proportion i.e. TAA component has to be invested in appropriate mutual fund investment companies, which have low management expenses and a proven track record.
Syed Samad Amirkhalkhali (1990) made an attempt to examine the savings – investment causal relationship and seven major countries were considered to determine the direction of causation between private domestic savings and private domestic investment within the framework of Granger Causality Tests. Based on the empirical evidence, the relationship between savings and investment could be divided into three groups. The first group consists of the countries France, Germany and Italy, where bidirectional causal relationship were observed between savings and investments. The second group consists of Canada and the UK, where no significant causal relationships were observed. Finally, the third group consists of Japan and the USA countries, where savings was a significant causal variable in determining the level of investors.

C Sherman Cheung & Clarence C Y Kwan (1988) observes that specific securities will be selected depending on the reward per unit of risk of individual securities and the two cut off rates, one each for bonds and stocks. The study concludes bonds are treated as another instrument in the investor’s portfolio, rather than considering them as immunization against interest rate risk. The study further explains the fact that the decision to hold bonds is not based on the ability of the instrument to reduce risk but on the ability of the bonds to enhance the risk-return characteristics, that an economic agent faces. The investor would prefer to hold the risky portfolio with the maximum return per unit of risk instead of holding a bond portfolio with minimum risk.

King and Leape (1987) conducted an examination with regard to probability of owning different information-intensive assets and studied the impact of age on the diversification of investments. They illustrated the existence of a correlation between age and diversification. The study revealed that there was a good relationship between age and the number of assets owned that was quite high around the age of sixty.

Merton (1987) has made a study to explore the market implications of investor’s collective awareness of a particular stock. He argues that the investors would select a stock in his portfolio, only if he is aware of the respective stock or prominent firm’s stock and in this case, the expected returns shall be much lower on better-known firms, since there is a large investor base. Later, he also finds that the investors shall include stocks in their portfolio that captures their attention.
Shefrin and Statman (1985) addressed the investor behaviour and provide evidence that investors can have a difficult time holding onto a particular investment for the proper time frame. They have identified that an investor who is experiencing loss will hold that security longer than they should, while an investor who is experiencing a gain will sell the profitable position prematurely.

Feldstein and Horioka (1980) analyzed the relationship between savings and investment by testing the assumption of perfect international capital mobility. If capital were mobile across countries, countries with a high level of investment need not rely on equally high level of savings. That is, savings can always be financed by foreign savings via a current account deficit. The study results based on ordinary least squares as well as instrumental variables estimation techniques, indicated that the assumption of perfect capital mobility is invalid in the sense that countries investment rates are highly correlated with their domestic saving rates.

Edward Zabel (1973) in his study has examined the impact of transaction costs on optimal consumption and portfolio decisions. The study indicates that the introduction of transaction costs changes the character of the individual’s consumption and portfolio choices over time. The study’s utility lies in the introduction of more general transaction cost functions. The addition of either fixed or lump sum payment per transaction to the proportional component would capture another major feature of transaction costs. The consumer usually invests in a wide range of portfolio opportunities that are available to him for investment. At the same time, he tends to be indifferent between investing in either individual portfolio opportunities or in a selected mutual fund, which consists of a combination of assets. The study reveals that with a fixed payment per transaction, the number of assets in an optimal portfolio would be sensitive to the magnitude of the fixed transaction costs. As a result, the choice between constructing a portfolio and investing in a mutual fund would hinge critically on comparative fixed transaction costs payment. Based on the relative magnitudes of these transaction costs, there would be a tendency for the risk-averse consumer to prefer mutual fund. Hence, the individual behaviour is quite consistent with examination of the force of fixed, as well as proportional, transaction costs in the theory of the consumer.
Jon Neumann and Oskar Morgenstern (1944) in their famous book “Theory of Games and Economic Behaviour”, which is widely considered the groundbreaking text that created the interdisciplinary research field of game theory, gave some relevant psychological findings that assert the natural and evident irrationality of human beings.