1.1 INTRODUCTION

Man, it is said, lives on hope. Hope, though necessary, is not sufficient in life. There are many other materialistic things that he needs like food, clothing, shelter, etc., and these needs keep changing throughout his life. To make things more uncertain, his ability to fulfill the needs too changes significantly. When his current income to fulfill his needs exceeds his current expenditure, he saves the excess. The savings may be buried in the backyard, or hidden under a mattress. Or, he may feel that it is better to give up the current possession of these savings for a future; larger amount of money that can be used for future consumption.

In contrast to the above situation, if the amount available for current consumption is less than the current needs, he has to engage in negative saving, or borrowing. The funds thus borrowed may be used for current consumption. But, the lender of the money who foregoes his current possession and hence its consumption will ask for more than what he has lent. That is, the borrower should be willing to pay more than he has borrowed.
This trade-off between the amount available for present consumption and future consumption is at the heart of all savings and investments. The ratio between the amounts of current consumption that can be exchanged for a certain future consumption is called the pure or risk-free rate of interest or pure time value of money. This relationship is influenced by the forces of supply and demand and is determined in the capital markets. If foregoing Rs.100 of certain income today gives a certain income of Rs.104 after one year, the pure rate of exchange or pure rate of interest is said to 4 per cent.

The pure rate of interest referred to above is a real rate as it is based on two amounts of money that are fully certain. If the lender expects the purchasing power of money to fall during the period of his loan, he expects, in addition to the pure or risk-free rate, an amount to compensate him for the fall in the purchasing power of money. If the realization of the future amount is uncertain, he will expect much more and such excess is called the risk premium.

Keeping all the above in view, it can be said that an investment is an agreement for a current outflow of money for some period of time in anticipation of a future inflow that will compensate for the changes in the purchasing power of money, as well as the uncertainty relating to the inflow of the money in future.
This understanding describes well all the possible investments, like stocks, bonds, commodities or real estate by all classes of investors like individuals, institutions, governments, etc. In all these investments, the trade-off is between a known amount that is invested today, in return for an expected amount in future. While the amount being invested is certain, as it is now in our hands of rather is going out of our hands, the expected future inflow carries with it uncertainties regarding its realization; and its real worth will be known only when it is due for realization.

Managing the investment is a dynamic and an ongoing process. This process starts with planned initial investment and the real task is monitoring and updating the investments in the wake of new developments¹.

Numerous avenues of investment are available today. One can either deposit money in a bank account or purchase a long-term government bond or invest in the equity shares of a company or contribute to a provident fund account or buy a stock option or acquire a plot of land or invest in some other form. Almost everyone owns a portfolio of investments. The portfolio is likely to comprise financial assets (bank deposits, bonds, stocks, and so on) and real assets (motorcycle, house, and so on). The portfolio may be the

¹Portfolio management, ICFAI Publications, ICFAI University.
result of a series of haphazard decisions or may be the result of deliberate and careful planning\(^2\).

**Factors influencing individual investment behaviour**

Risk is a widely used term in cross disciplines of knowledge and holds various meanings in different contexts. In behavioral finance, it is one of the key variables that is observed, measured and analyzed. For an investment professional the risk is the probability of losing a client, while the client may view risk as the possibility of losing their principal investment or a portion of it, or even a variation in return (Victor Vicciardi, 2004). After a careful examination of the literature we found that the previous empirical literature was focused on the relationship between risk perception, attitude towards risk and investment decision of individual investors; it is obvious that investment decision largely depends on risk perception and risk attitude. Behavioral Finance literature assumes that decision of asset allocation in risky and riskless assets relies on the risk-taking attitude of investor (Noscic and Weber, 2007). Researchers have always been interested in the factors that determine the risk. Broadly, these factors have been classified into three groups:

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i.e.

Factors that Affect Individual Behavior,

Presentation of Risk and the

Factors Regarding Characteristics of Risk

Factors that Affect Individual Behavior: It can further classify the Individual Investor’s factors into

Cultural Background,

Past Experiences

Educational Level,

Maturity Level, and

Personal Tendencies

Cultural Background

Investor’s cultural background bears heavy impact upon his/her attitude towards risk perception. Hence, when analyzing individual investor’s risk attitude, he/she should think of his ethnic and religious background as well as his/her family context to understand his/her risk attitude (Noone, 2000). In this era of globalization, several social researchers conducted research across the boundaries and determined that individual investor show different behavior in

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his investment in different types of culture and society (Ricciardi, 2006). 

**Experience**

It plays a very vital role in investment decision making; while calculating risk, one reviews experiences regarding similar situations. Therefore, it is critical to assess ones previous experiences while analyzing his risk attitude (Haam, Grimes, Popkin and Smith, 2001). Personal past experience has a great impact on individual risk taking behavior, greater the frequency and degree of experience of risk taking the more risk will he/she take (Hayward et al, 2006).

**Education Level**

Psyche of investor heavily depends upon his level of education. It affects investor’s perception of risk. Less educated people are more skeptical in their perception of risk, whereas, educated people tend to take rather greater degree of risk (Grimes and Snively, 1999). Investors having higher education tend to invest in

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7 Grimes D.A & Snively G.R. (1999), Patients understanding of Medical Risks: Implications for Genetic counseling Obstetrics and Gynecology, 93, 910-914.
risky asset i.e. level of education have an impact on individual’s
tendency to bear risk (Chen & Tsai, 2010).

**Age or Maturity Level**

Age or Maturity Level of Individual is another investment
factor. Young investors lack in analytical skills to precisely evaluate
risk (Mann, Harmoni and Power, 1989). Hence, lack of abstract and
deep thinking, hampers young investors to perceive things in broader
text context resulting higher risk attitudes (Steinberg 2004). A number
of studies have been conducted and concluded that there is an
inverse relationship between maturity level and risk forbearance i.e.
low age high risk and vice versa.

**Personal Tendencies**

In addition to these factors, individuals have certain set
patterns of psyche like optimism or pessimism. Optimistic people
tend to take higher degree of risk than the pessimists do. They tend
to overlook certain risk factors and over-simply risk environment
(Bowling and Ebrahim, 2001). An investor’s social factors also
affect the individual decision process, the investor rationally,

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8 Chen & Tasi (2010), Investment Preference, Risk Perception and Portfolio Choices under Different
Socio-Economic Status Department of Finance, Nan Hua University, Chiayi, Taiwan.
competence, Journal of Adolescence, 12, 265-278.
Academy of Sciences, 1021, 51-58.
11 Blowing, A & Ebrahim, S. (2001), Measuring Patients’ Preferences for Treatment and Perceptions of
Risk Choice, Management Science, 2, 123-144.
analytically search the market efficiency, and then determine the investment alternative.

**Factors affecting presentation of Risk**

Risk Presentation has heavy impact on risk perception. Within presentation of risk, researchers are interested in designing of risk and the credibility of information source. The way risk information is framed affects its perception (Edwards, Elwyn and Mulley, 2004\(^{12}\)). Positive framing, as telling that half glass of water is full rather saying that half is empty, effects perception of risk. However, in some cases negative framing could also be helpful. For example, if you have to convince people to undergo a screening test for detection of some disease, you have to negatively frame the chances of risk to convince the people to take the test. In addition, investors tend to magnify risk if they do not trust the source fully as a precautionary measure (Benett, 2006)\(^{13}\). Similarly, degree of uncertainty causes people to view risk as larger than actual.

**Factors Regarding Characteristics of Risk**

Nature and characteristics of risk have impact on perception of risk. Harvard Centre of Risk Statistics, 2003\(^{14}\) shows that individuals


\(^{13}\) Bennett, P. (2006), Communicating About Risks to Public Health: Pointers to Good Practice, Available at http://www.dh.gov.uk.

are more concerned about the risks that are beyond their control, are involuntary, have some uniqueness or novelty, are a consequence of other humans’ mistakes or deliberate actions or could be more easily recalled.

**Employees Investment Behavior**

Decision of Employee Investment Behavior depends on the following constructs as frequently in behavioral finance literature (Rayan and Zaichkowsky, 2010):

- Investor Confidence
- Time horizon
- Risk Attitude
- Control

**Investor Confidence**

Investor Confidence is a state that shows chosen option/action is very affective. Most of the researcher and scholars agreed that, to determine the investment decision making of an investor confidence plays a crucial role. Conventional school of thought recommends that investor’s behavior is more confident when stocks are lifting upward, and lack of confidence behavior when stock is facing downfall.
Investors react differently to positive price shocks than negative shocks in prices. Investor’s confidence on decision-making can be pointed by immense fluctuations in stock prices (Ray & Sturm, 2003). Confidence of investor also stimulates investor towards more and more frequent trading. More confidence of investor also tends to more frequent trading behavior (Barber and Odean’s, 1999\textsuperscript{15}).

**Time Horizon**

A time spans in which an individual investor expected to invest his wealth. Some recent research and studies conducted a more extensive debate on relationship between investment time horizon and investment behavior. Empirically research concluded that individual investor who invests for longer period of time they behave towards the more risky investment and vice versa (Klos, Langer, and Weber, 2003). The experts of investment recommended that if individual investor invests for longer period they invest in risky assets. Siebenmorgen and Weber (2004)\textsuperscript{16} have conducted research on investment horizon and its effects on investment behavior. The result shows that investment horizon has a direct impact on behavior of the individual investor. Benartzi and

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\textsuperscript{15} Barber, B & Odeam T.(1999), The courage of Misguided convictions, Financial Analysts Journak, 55, 41- 55.

Thaler (1999)\textsuperscript{17} determine the influence of time horizon on investment behavior. They work on taking different times i.e. one-year investment and thirty-year investment.

**Risk attitude**

Different people react differently when they perceive risk in a certain situation. Their psychological reaction is called attitude. It could be an attempt to avoid the negative fallout of that situation or they may attempt to take advantage of that situation i.e. they may think of exploiting the situation in their own favor. Risk taking attitude could be termed as risk seeking or propensity to take risk and risk avoidance is usually called risk aversion (Rohrmann, 2004\textsuperscript{18}). Weber (2003) stated that risk attitude is a reaction that results from the subjective perception of risk. Some people perceive risk as something enjoyable and then try to take advantage of it by putting themselves in risky situations. They try to enjoy the uncertainty and want to explore what could be the outcome of this uncertain situation. Others may like to avoid such a situation and they take safe position and thus avoid the risk. Markowitz (1952\textsuperscript{19}), in his classical portfolio theory stated that investors are compensated.

\begin{flushright}
\textsuperscript{17} Benartzi, S \& Thaler R.H. (1999), Risk Aversion of Myopia? Choices in Repeated Gambles and Retirement investments, Management Science, 45, 364-381.
\textsuperscript{19} Markowitz, H. (1952), Portfolio selection, J. Finance, 7, 77-91.
\end{flushright}
for taking systematic risk. Therefore, risk attitude depends that whether one is interested to increase his returns by taking a certain degree of risk.

**Investor control**

Control is the key factor of investor behavior. Many behavioral researchers found the relationship between individual investor behavior and control. Individual investors that trade quickly and watch their investment carefully they have high level control about their investment decision. Investor involvement and control increase the confidence and choice of investor behavior (Langer and Roth, 1975\(^{20}\)).

Ryan and Zaichkowsky (2010)\(^{21}\) found that there is a significant relationship between investor behavior and their investment control.

**Risk Perception and Investment Behavior**

The decision making behavior of an individual is affected by the attitude towards the risk as well as the way in which the investment risk is subjectively perceived by the individual such as decision making behavior of an investor is influenced by the

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stocks. Sitkin and Pablo (1992) and Sitkin and Weingart (1995) discussed that taking action on risk is affected by both perception of risk and attitude towards risk. A number of empirical researches have been conducted on this bond and concluded that investor decision-making process according to his investment is majorly affected by risk perception (Weber and Hsee, 1998). Chen and Tsai (2010) investigated empirically the relationship between perception of risk and decision making of investment particularly they consider the individual investor factors. Asset allocation is crucial part of decision making of an individual investor who requires more return from investment and less loss (Veld and Markoulova, 2008; Frijns et al, 2008).

A lot of researchers, academicians and experts conducted research under simple investment choice but some psychologists and researchers also conducted research and make decision under uncertainty. Some researchers indicate that decisions of investments largely depend on how much individual take risk financially (Grable et al, 1999) and risk forbearance (Veld and Veld Markoulova, 2008).

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24 Weber and Hsee C. (1998), Channel Contract Behaviour: The role of Risk Attitudes, Risk Perceptions, and channel member’s market structures, Management Science,44.

2008). It is important for individual investor to notify the crucial factors that play significant role in portfolio choices especially when he/she perceives risk (Grable et al, 1999; Hallahan et al, 2004). The contribution of our paper is to make a bond between perception towards risk and individual investor decision making who makes investment in different equity shares options. Tolerance of risk is the individual behavior towards the decision making so this a significant factor that is used by management and other service providers at the time of investment. On this factor an individual investor trades off between risky and risk less assets in his portfolio and after this he invests in that asset that gives him more return according to his requirement (Hallahan et al, 2004). If the level of perception towards risk and forbearance of risk is different, the individual investor thinks differently about his investment, based on economic position and his psyche; for this reason, different investors within different concepts about risk make his choice in investment differently.

INVESTMENT AVENUES

Shares

Companies issue different types of shares to mop up funds from various investors. Before companies Act, 1956 public companies used to issue three types of shares of shares, i.e. Preference Shares, Ordinary Shares and Deferred Shares. The Companies Act, 1956 has limited the type of shares to only two – Preference Shares and Equity Shares\(^2^9\).

The first company that issued shares was the Dutch East India Company, in the early 17th century (1602). The innovation of joint ownership made a great deal of Europe's economic growth possible following the middle ages. The technique of pooling capital to finance the building of ships, for example, Netherlands made as a maritime superpower. Before the widespread adoption of the joint-stock corporation, an expensive venture such as building a merchant ship could only be undertaken by governments or by very wealthy individuals or families. The owners of a company may want additional capital to invest in new projects within the company. They may also simply wish to reduce their holding, freeing up capital for their own private use. By selling shares they can sell part or all of the company to many part-owners. The purchase of one share entitles

the owner of that share to literally share in the ownership of the company a fraction of the decision-making power, and potentially a fraction of the profits, which the company may issue as dividends\(^{30}\).

**Equity Shares**

Equity shares, also known as ordinary shares or common shares, represent the owners’ capital in a company. The holders of these shares are the real owners of the company. They have a control over the working of the company. Equity shareholders are paid dividend after paying it to the preference shareholders. The rate of dividend on these shares depends upon the profits of the company. They may be paid a higher rate of dividend or they may not get anything. These shareholders take more risk as compared to preference shareholders. Equity capital is paid after meeting all other claims including that of preference shareholders. They take risk both regarding dividend and return of capital. Equity share capital cannot be redeemed during the life time of the company.

**Preference Shares**

As the name suggests, these shares have certain preferences as compared to other types of shares. These shares are given two preferences. There is a preference for payment of dividend.

\(^{30}\text{www. wikipedia.com}\)
Whenever the company has distributable profits, the dividend is first paid on preference share capital. Other shareholders are paid dividend only out of the remaining profits, if any. The second preference for these shares is the repayment of capital at the time of liquidation of company. After paying outside creditors, preference share capital is returned. Equity shareholders will be paid only when preference share capital is returned in full. A fixed rate of dividend is paid on preference share capital. Preference shareholders do not have voting rights; so they have no say in the management of the company. However, they can vote if their own interests are affected. Those persons who want their money to fetch a constant rate of return even if the earning is less will prefer to purchase preference shares.

**Trading**

A stock exchange is an organization that provides a marketplace (either physical or virtual) for trading shares, where investors (represented by stock brokers) may buy and sell shares in a wide range of companies. A given company will usually list its shares in only one exchange by meeting and maintaining the listing requirements of that particular stock exchange.
Buying

There are various methods of buying and financing stocks. The most common means is through a stock broker. Whether they are a full service or discount broker, they are all doing one thing—arranging the transfer of stock from a seller to a buyer. Most of the trades are actually done through brokers listed with a stock exchange.

There are many different stock brokers from which to choose such as full service brokers or discount brokers. The full service brokers usually charge more per trade, but give investment advice or more personal service; the discount brokers offer little or no investment advice but charge less for trades. Another type of broker would be a bank or credit union that may have a deal set up with either a full service or discount broker.

There are other ways of buying stock besides through a broker. One way is directly from the company itself. If at least one share is owned, most companies will allow the purchase of shares directly from the company through their investor's relations departments. However, the initial share of stock in the company will have to be obtained through a regular stock broker. Another way to buy stock in companies is through Direct Public Offerings which are usually sold by the company itself. A direct public offering is an initial public
offering in which the stock is purchased directly from the company, usually without the aid of brokers.

When it comes to financing a purchase of stocks there are two ways: Purchasing stock with money that is currently in the buyer's ownership or by buying stock on margin. Buying stock on margin means buying stock with money borrowed against the stocks in the same account. These stocks, or collateral, guarantee that the buyer can repay the loan; otherwise, the stockbroker has the right to sell the stocks (collateral) to repay the borrowed money. He can sell if the share price drops below the margin requirement, at least 50 percent of the value of the stocks in the account. Buying on margin works the same way as borrowing money to buy a car or a house using the car or house as collateral. Moreover, borrowing is not free; the broker usually charges 8-10 percent interest.

Selling

Selling stock is procedurally similar to buying stock. Generally, the investor wants to buy low and sell high, if not in that order (short selling); although a number of reasons may induce an investor to sell at a loss. As with buying a stock, there is a transaction fee for the broker's efforts in arranging the transfer of stock from a seller to a buyer.
Stock Price Fluctuation

The price of a stock fluctuates fundamentally due to the law of Supply and demand. Like all commodities in the Market, the price of a stock is directly proportional to the demand. However, there are many factors on basis of which the demand for a particular stock may increase or decrease. These factors are studied using methods of Fundamental analysis and Technical analysis to predict the changes in the stock price.

Debentures

A company may raise long – term finance through public borrowings. These loans are raised by the issue of debentures. A debenture is an acknowledgement of a debt. According to Thomas Evelyn, “A debenture is a document under the company’s seal which provides for the payment of a principal sum and interest thereon at regular intervals, which is usually secured by a fixed or floating charge on the company’s property or undertaking and which acknowledges a loan to the company’s property or undertaking and which acknowledges a loan to the company”. A debenture holder is a creditor of the company. A fixed rate of interest is paid on debentures. The interest on debentures is a charge on the profit and loss account of the company. The debentures are generally given a floating charge over the assets of the company. When the debentures
are secured, they are paid on priority in comparison to all other creditors\textsuperscript{31}.

**Bonds**

Bonds are negotiable promissory notes that can be used by individuals, business firms, governments or government agencies. Bonds issued by the government or public sector companies in India are generally secured. Private sector companies may issue secured or unsecured bonds. In case of the bond, the rate of interest is fixed and known to investors. A bond is redeemable after a specific period. The expected cash flows consist of annual interest payments plus repayment of principal. A bond is generally issued at face value or par value which is usually Rs.100 and may sometimes be Rs.1000. A bond carries a specific rate of interest which is also called the coupon rate. The interest rate payable is simply the par value of the bond x coupon rate. Interest paid on a bond is tax deductible. A bond is issued for a specific period of time. It is repaid on maturity. Typically corporate bonds have a maturity period of 7 – 10 years whereas government bonds have maturity period up to 20 – 25 years. The value which a bondholder gets on maturity is called redemption value. A bond may be redeemed at par, at premium or at discount.

A bond may be traded in a stock exchange. Market value is the price at which the bond is usually bought or sold. Market value may be different from par value or redemption value. Tax-Saving Bonds are those bonds that have a special provision that allows the investor to save on tax. Examples of such bonds are:

A) **Infrastructure Bonds**: Under Section 88 of the Income Tax Act, 1961. Infrastructure bonds are available through issues of ICICI Bank and IDBI, brought out in the name of ICICI Safety Bonds and IDBI Flexibond’s.

B) **Capital Gains Bonds** (REC BONDS, NABARD BONDS etc.): Under Section 54EC of the Income Tax Act, 1961. Investments in bonds issued by the National Bank for Agriculture and Rural Development (NABARD), National Highway Authority of India (NHAI), and Rural Electrification Corporation (REC) are at present eligible for capital gains tax savings.

C) **RBI Tax Relief Bonds** : RBI Savings Bonds are instruments that are issued by the RBI, and currently has two options – one carrying an 8% rate of interest p.a., which is taxable and the other one carries a 6.5% (tax-free) interest p.a. The interest is compounded half-yearly and **there is no maximum limit for investment in these bonds.** The maturity period of the 8%(taxable) bond is 6 years and that of the 6.5%(tax-free) bond is 5 years. Application forms for RBI Bonds are
available and accepted at all branches of the Reserve Bank of India, designated branches of the SBI, and designated branches of nationalised banks across the country.

**Derivatives**

In the early 1980s, the word ‘derivative’ was used mainly in chemistry or mathematics. Today, it is most commonly used in the context of financial markets. This is a reflection of the phenomenal speed with which these new financial instruments have evolved since the mid-80s in what can be called the derivatives revolution. Once considered exotic instruments used by the priests of high finance, these have now become essential tools of the finance manager operating in a globalised environment. More and more companies are using – or being forced to use - futures and derivatives to stay competitive in a fast – changing world characterized by both unprecedented opportunities and unprecedented risks.

A derivative security is a security or contract designed in such a way that its price is derived from the price of an underlying asset. The price of the derivative security is not arbitrary; it is linked to the price of the underlying asset. Changes in the price of the underlying asset affect the price of the derivative security in a predictable way. Because of this, transactions in derivatives can be used to offset the risk of price changes in the underlying asset.
The term ‘derivatives’ encompasses a variety of financial instruments. Futures contracts (which were in existence long before the term derivative was coined) are the most important form of derivative in terms of volume of transactions.

**Types of derivatives**

One form of classification of derivatives is between commodity derivatives and financial derivatives. Thus, futures or options on gold, sugar, jute, pepper etc are commodity derivatives, while futures, options or swaps on currencies, gilt- edged securities, stocks and shares, stock market indices, cost of living indices, etc are financial derivatives. The distinction between commodity and financial derivatives is a useful one for descriptive purposes, but it is worth noting that, structurally, futures markets in commodities are more similar to futures markets in financial markets in commodities are more similar to futures markets in financial instruments than to options markets in commodities.

Another way of classifying the large and growing array of derivative is into basic and complex derivatives. Basic derivatives are forward/futures contracts and options contracts. Other derivatives, such as swaps, are complex derivatives, because they are built up from either forward/futures contracts or options contracts or
both. In fact many of the latest complex derivatives are effectively derivatives of derivatives.

**Forwards**

A forward is an agreement to trade in a thing or security at a predetermined future date for an agreed price. It is a contract between two entities. Come across this type of derivatives usually in foreign exchange transactions, which involves the purchase or sale of foreign exchange at a predetermined date for a decided premium. The fluctuations in exchange rates will have an impact on the values of assets or liabilities, which are valued in a foreign currency and to overcome the inherent risk in foreign exchange transactions, business entities take the shelter of forward contracts or forward covers. Forward contracts are also fairly familiar in merchandise and can be made useful either for speculation or for hedging.

**Futures**

Like a forward contract, futures are an agreement between two entities to buy or sell an asset at a specified date in the future for an agreed price. As such, futures are treated as a distinctive type of forward contract and forward contracts are essentially foreign exchange contracts. Futures are mostly operated in organized and well-structured markets.
Options

The contracts of options can be segregated into call options and put options. Call option is a financial contract that gives the buyer the right and it does not result in an obligation to the buyer to buy a particular quantity of the original asset at an agreed price on or before a specified future date. The party exercising the call option will exercise it only when he/she is in the money, that is, only when he is certain of gaining by exercising the option. On the other hand, put option gives the buyer the right, and is not bound to sell an agreed quantity of the original asset at a prearranged price on or before a known date. Thus, a call option is an option to call, that is, obtain a specific quantity and/or at a certain strike price, whereas a put option is the option to put or sell a certain quantity and/or at a particular strike price. The fundamental objective behind options is to provide insurance to the parties concerned.

The tenure of the contracts of options is generally for a period of one year and it is said that most of these contracts are terminated and settled with a maximum tenure of around nine months. The contracts of options with a longer tenure are called warrants and the trading of these contracts takes place generally over – the – counter. The contracts of options having a term upto three years are known as LEAPS, the very name itself signifies that they are for long-term –
Long Term Equity Anticipation Securities. The contracts of options, which are on baskets of underlying assets, are known as Baskets. Equity index options are citing examples of this type of options.

**SWAPS**

These are private agreements entered into by two entities with an intention of exchanging cash flows on a predetermined date in the future based on an agreed formula. In a contract of swap, both the parties trade persistent payments with an intention of exchanging one type of cash flows for another. The swaps which entail the parties’ protection from interest rate risk and which facilitates the contract in the same currency are known as “interest rate swaps”. Banks and financial institutions countenance the risk of fluctuations in interest rates. If a bank has deposits carrying floating interest rates and deploys these deposits in the form of various assets at an arrangement of fixed interest rates, it is exposed to the risk of an adverse movement, in the event of a decline in interest rates. This possibility of unfavorable movement in the values can be protected by entering into an interest rate swap by swapping the floating interest rates for fixed interest rates.

An option on a forward swap is a swaption. It facilitates the holder to enter into a swap agreement at a predetermined future date on particular terms. This derivative enjoys the characteristics of an
option and a swap. These are contracts of options, which facilitate the buying of selling of a swap that becomes effective at the termination of the option. With the onset of weather derivatives; risk, even in respect of the changes in weather, can be transferred.\[32\]

**DERIVATIVES IN A LIBERALISED INDIA**

For better or for worse, the Indian economy has entered an era in which Indian Companies cannot ignore global markets. In the old era, many prices were controlled. Others, though not controlled, were largely based on controlled prices of inputs. This meant limited uncertainty and hence limited volatility of prices. Deregulation, freeing of the exchange rate and removal of price and trade controls are measures that are increasing the volatility of prices of various goods and services in India to producers and consumers alike. Gyrations of stock market prices and market determined exchange and interest rates also create instability in portfolio values for mutual funds and unit trusts. Hedging, through derivatives, can mitigate these risks.\[33\]

NSE commenced trading in index futures on June 12, 2000 and introduced trading in index options on June 4, 2001. There are a total

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of 51 individual stocks and 2 indices approved by the SEBI for which futures are traded. Following are the specified Individual Securities for Futures and Options:

<table>
<thead>
<tr>
<th>Associated Cement Co. Ltd</th>
<th>Andhra Bank</th>
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<td>Arvind Mills Ltd.</td>
<td>Bajaj Auto Ltd.</td>
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<td>Bharat Electronics Ltd</td>
<td>Bharat Heavy Electricals Ltd.</td>
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<td>Canara Bank</td>
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<td>Dr. Reddy’s Laboratories Ltd.</td>
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<td>Gas Authority of India Ltd.</td>
<td>Grasim Industries Ltd</td>
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<td>Gujarat Ambuja Cement Ltd.</td>
<td>HCL Technologies Ltd.</td>
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<td>Housing Development Finance Corporation Ltd</td>
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<td>Hero Honda Motors Ltd.</td>
<td>Hindalco Industries Ltd.</td>
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<td>Hindustan Petroleum Corporation Ltd.</td>
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<td>ICICI Bank Ltd.</td>
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<td>Indian Petrochemicals Corp Ltd</td>
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<td>Mahanagar Telephone Nigam Ltd.</td>
<td>Mahindra &amp; Mahindra Ltd.</td>
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<td>Maruti Udyog Ltd.</td>
<td>Mastek Ltd.</td>
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<td>National Aluminium Co. Ltd.</td>
<td>Oil &amp; Natural Gas Corp. Ltd</td>
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<td>Oriental Bank of Commerce</td>
<td>Polaris Software Lab Ltd.</td>
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<td>Punjab National Bank</td>
<td>Ranbaxy Laboratories Ltd.</td>
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<td>Reliance Industries Ltd.</td>
<td>Reliance Energy Ltd.</td>
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<tr>
<td>Shipping Corporation of India Ltd.</td>
<td>Syndicate Bank</td>
</tr>
<tr>
<td>Tata Consultancy Services Ltd.</td>
<td>Tata Power Co. Ltd</td>
</tr>
<tr>
<td>Tata Tea Ltd.</td>
<td>Tata Motors</td>
</tr>
<tr>
<td>Tata Iron and Steel Co. Ltd</td>
<td>Union Bank of India</td>
</tr>
<tr>
<td>Wipro Ltd.</td>
<td></td>
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</tbody>
</table>


**Mutual Funds**

The Indian equity market has gained significantly during the last one year and mutual funds are not left far behind. Both the avenues have created wealth for the investors. But the equity market has attracted much more attention than the mutual funds market. The reason behind this is that in India investment in the equity market has been there since long but the mutual fund market is still growing. For the creation of wealth through this avenue a proper understanding of mutual funds is a must.

A mutual fund is a trust that pools the savings of a number of investors who share a common financial goal. The term “mutual” means that investors contribute to the pool and also benefit from the pool. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. The
income earned through these investments and the capital appreciation realized is shared by its unit holders in proportion to the number of units owned by them.

Thus a mutual fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at a relatively low cost\textsuperscript{34}.

Till 1986 the Unit Trust of India was the only mutual in India. In 1963, the government of India took the initiative by passing the UTI Act, under which the Unit Trust of India was set up as a statutory body. UTI’s first scheme called the US – 64 was launched in 1964. It subsequently launched a number of schemes to suit the differing needs of the investors. In 1987, the public sector institutions like banks, financial institutions and insurance companies started establishing mutual funds, following the government’s decision to allow them to do so. State Bank of India became the second one to launch a mutual fund when it launched the SBI mutual fund in November, 1987. It was followed by Canbank Mutual Fund, LIC Mutual Fund, etc\textsuperscript{35}.

\textsuperscript{34} \textit{www.amfiindia.com}

\textsuperscript{35} \textit{Portfolio Management, ICFAI press, April 2004, p.597.}
From 1992 onwards the mutual fund industry was opened to the private sector. In response, a number of private sector mutual funds such as Alliance Capital Mutual Fund, Birla Mutual Fund, DSP Merrill Lynch Mutual Fund, HDFC Mutual Fund, IDBI – Principal Mutual Fund, JM Mutual fund, Pioneer ITI Mutual Fund, Prudential ICICI Mutual Fund, Reliance Mutual Fund, Standard Chartered Mutual Fund, Tata Mutual Fund, Templeton India Mutual Fund and Zurich India Mutual Fund have been set up. Though the mutual fund industry in India has registered a healthy growth over the last 15 years, it still is very small in relation to other intermediaries like banks and insurance companies. In India, three entities are central to a mutual fund operation: the sponsor, the mutual fund, and the asset management company. The sponsor establishes the mutual fund and the asset management company. For example, Templeton International (sponsor) set up the Templeton Mutual Fund which has been constituted as a trust under the Indian Trusts Act, 1882 and registered with SEBI.

The Mutual Fund is, in a way, an umbrella organization that floats various schemes in which investors participate. The asset management company, organized as a separate joint stock company, manages the funds of mutual fund under its various schemes. For example, Templeton Asset Management (India) pvt. Ltd., the asset
management company set up by Templeton International manages the various schemes of Templeton Mutual Fund\textsuperscript{36}.

The advantages of investing in a mutual fund are:

- Professional Management
- Diversification
- Convenient administration
- Return Potential
- Low costs
- Liquidity
- Transparency
- Flexibility
- Choice of schemes
- Tax benefits
- Well regulated

**Categories of mutual fund scheme**

Mutual Fund schemes can be categorized by their structure, investment objectives and other special schemes.

By structure

Open – ended Fund

These funds do not have a fixed date of redemption. Generally they are open for subscription and redemption throughout the year. Their prices are linked to the daily Net Asset Value (NAV). From the investors’ perspective, they are much more liquid than close – ended funds. Investors are permitted to join or withdraw from the fund after an initial lock-in period.

Close – ended Funds

These funds are open initially for entry during the Initial Public Offering (IPO) and thereafter closed for entry as well as exit. These funds have a fixed date of redemption. One of the characteristics of the close – ended schemes is that they are generally traded at a discount to NAV, but the discount narrows as maturity nears. These funds are open for subscription only once and can be redeemed only on the fixed date of redemption. The units of these funds are listed (with certain exceptions), are tradable and the subscribers to the fund would be able to exit from the fund at any time through the secondary market.
Interval Funds

These funds combine the features of open – ended and close ended funds wherein the fund is close – ended for the first couple of years and open – ended thereafter.

Following are the various schemes offered by the Mutual Funds

Equity Diversified Funds

These schemes achieve the benefits of diversification of investing in the stocks of companies across a large number of sectors. As a result, it minimizes the risk of exposure to a single company or sector.

Balance Funds

The balance funds invest in a combination of stocks and bonds; a typical mix is 60:40 in favor of stocks. Returns from balanced funds are normally lower than pure equity mutual funds when markets are rising, however if the market declines, the losses are also normally lower. Balanced funds are best suited for investors who do not plan their asset allocation and yet want to invest in equities.

Money Market Mutual Funds (MMMF)

These funds generally invest in the money market instruments such as call money, Treasury bills, Re-discounted bills, GOI
securities and certificates of deposits and commercial papers with pre–determined ratings.

**Equity Linked Savings Schemes (ELSS)**

These schemes offer tax rebates to the investors under specific provisions of the Income Tax Act, 1961 as the government offers tax incentives for investment in specified avenues.

**Gilt Funds**

Generally the objective of such scheme is to generate optimal credit risk–free returns by investing in a portfolio of securities issued and guaranteed by the central government and state government.

**Debt Funds**

Debt funds invest only in debt instruments such as corporate Bonds, Government securities and money market instruments either completely avoiding any investments in the stock markets as in Income Funds or Gilt Funds or having a small exposure to equities as in Monthly Income Plans or Children’s Plan. Hence they are safer than equity funds. Such investments are advisable for the risk–averse investor and as a part of the investment portfolio for other investors.
**Equity Indexed Funds**

These are the index-based funds, which are aligned to the movements of the Sensex and the Nifty. These funds charge nil or very low entry and exit loads. Though the short term outlook is volatile, in the long-term the Sensex and the Nifty could do well with improving economic conditions.

**Tax aspect of the mutual fund investment**

Since April, 2003, all dividends, declared by debt-oriented mutual funds (i.e., mutual funds with less than 50% of assets in equities), are tax-free in the hands of the investor. A dividend distribution tax of 12.5% (including surcharge) is to be paid by the mutual fund house on the dividends declared by the fund. Long-term debt funds, government securities funds, monthly income plans are examples of debt-oriented funds. Dividends declared by equity-oriented funds (i.e. mutual funds with more than 50% of assets in equities) are tax free in the hands of the investor. There is also no dividend distribution tax applicable on these funds under section 115 (R). Diversified equity funds, sector funds, balanced funds are examples of equity-oriented funds.
List of Mutual fund houses in India

NAMES OF SEBI REGISTERED MUTUAL FUNDS

1. ABN AMRO Mutual Fund
2. Alliance Capital Mutual Fund,
3. Benchmark Mutual Fund,
4. BOB Mutual Fund,
5. Birla Mutual Fund
6. BOI Mutual Fund
7. Canbank Mutual Fund
8. CRB Mutual Fund (Suspended)
9. Chola Mutual Fund,
10. Deutsche Mutual Fund
11. DSP Merrill Lynch Mutual Fund,
12. Escorts Mutual Fund,
13. Fidelity Mutual Fund
14. GIC Mutual Fund
15. HDFC Mutual Fund,
16. HSBC Mutual Fund,
17. ICICI Securities Fund,
18. IL & FS Mutual Fund,
19. ING Vysya Mutual Fund,
21. Kotak Mahindra Mutual Fund,
22. KJMC Mutual Fund,
23. LIC Mutual Fund
24. Morgan Stanley Mutual Fund
25. PNB Mutual Fund
26. Principal Mutual Fund
27. Prudential ICICI Mutual Fund
28. Reliance Mutual Fund
29. Sahara Mutual Fund,
30. SBI Mutual Fund
31. Shriram Mutual Fund
32. Standard Chartered Mutual Fund,
33. Sundaram Mutual Fund,
34. Taurus Mutual Fund
35. Tata Mutual Fund,
36. Franklin Templeton Mutual Fund
37. UTI Mutual Fund
38. Quantum Mutual Fund,

Source: www.amfiindia.com
1.2 THEORETICAL FRAMEWORK

Individual Investors

Individuals can be defined in a variety of ways based on the level of their confidence, aggression, their attitude towards people, their sense of optimism or pessimism, etc. Individuals define risk as “losing money” or sometimes “doing something which may make them feel uncomfortable”. Individuals can be financially strong by their possession of wealth and financial goals they have. An individual may be subjected to income taxes and estate taxes. Thus, we see that the individual investor can be defined in a variety of ways according to convenience.

When an individual decides to invest, he can be either risk-prone and go in for investment in high-tech stocks or he may be risk averse and choose a diversified portfolio, though, most of the individual investors prefer investing in diversified portfolio.

Classification Models of Individual Investors\(^{37}\)

Psychographics deals with the psychological framework of the individual. It is a well-known fact that no two individual investors will have similar investment objectives and goals.

\(^{37}\)“Managing Investment Portfolios, A Dynamic Process” Edited by John L Maginn and Donald L Tuttle
Individual investors lack awareness regarding investments and risks and are generally swayed by fear and other emotions. There are many models to classify investors into different categories, with relatively more homogeneous characteristics.

They are:

- The Barnewall Two – way Model
- The Bielard, Biehl and Kaiser Five – Way Model
- The Life Cycle Model

**The Barnewall Two – Way Model**

This method was developed by Marilyn MacGruder Barnewall of MacGruder Agency Inc., after extensive research on various groups of investors for a span of 13 years. The model appears simple, but is profound. According to this model, all investors can be classified as either passive investors or active investors.

Passive investors are those who have acquired their wealth passively, that is, without any great effort for earning it or undertaking risks. People who have inherited a lot of wealth, executives of wealthy corporations, lawyers and accountants with large and reputed firms, medical and dental practitioners, politicians, bankers and journalists generally fall in this category. These people
prefer to make safe investments. That is, their risk tolerance is low. But, there are also people who do not fall into any of the above descriptions, but are passive investors – people with limited savings to invest. Lower the amount available for investment, the higher is the emphasis on the safety of the principal. Therefore, the entire middle class falls into the category of passive investors.

Active investors, in contrast, are those who have earned their fortunes all by themselves. They are the people who have come up the hard way and are used to risk their fortunes and life on something new. They are characterized by the confidence that losses can be made good sooner or later and the feeling that life need not necessarily be a bed of roses. These people are, therefore, willing to generally take a lot of interest in the management of their portfolio.

**The Bielard, Biehl and Kaiser Five way model**

This model is more sophisticated than the Barnewall Two – Way Model. This model classifies investors into five categories based on two factors – the level of confidence and the method of action. The combinations of the two factors considered and the names given to each category of investors are given as follows:
<table>
<thead>
<tr>
<th>CONFIDENCE</th>
<th>MODE OF ACTION</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Careful</td>
<td>Individualist</td>
</tr>
<tr>
<td>High</td>
<td>Impetuous</td>
<td>Adventurer</td>
</tr>
<tr>
<td>Low (Anxious)</td>
<td>Careful</td>
<td>Guardian</td>
</tr>
<tr>
<td>Low (Anxious)</td>
<td>Impetuous</td>
<td>Celebrity</td>
</tr>
<tr>
<td>At the middle</td>
<td>At the middle</td>
<td>Straight Arrow</td>
</tr>
</tbody>
</table>

**Individualist:** These are the confident and careful type. They generally do not go to a consultant to manage their investments but do it by themselves, if they find enough time. But the world of investments is changing so fast that they may also be eventually compelled to seek help from investment counsels.

**Adventurers:** Adventurers generally go for only big bets. They have the resources to do so and are willing to take risks. The investments made by this type of investors are generally focused and not diversified. Since they are confident of what they do, they too generally do not go to investment counsels for help.

**Celebrities:** Celebrities are those that are swayed too much by the trend and do not have any expertise or opinion about investments. They are, most of the time, worried about being left out when everyone else is making profits. They, therefore, insist that the portfolio manager should put their investment into what is popular.
now. They refuse to understand that what is now popular has already realized its potential and does not offer scope for substantial profits in the future. Therefore, it can be very difficult for the investment counsel to convince them about the potential of good investments that are now not popular. But, not having the expertise and the confidence required to manage the portfolio, on their own, they approach investment managers frequently.

**Guardians:** Guardians are both anxious and careful. Lacking confidence in themselves, they approach investment counsels. They generally emphasize on safety of the capital while making investments and a significant proportion of their investments is generally devoted to government securities and guaranteed return investments. They choose their investment advisor with great care. They generally stay with the advisor for the rest of their lives unless this performance is too disappointing.

**Straight Arrows:** These are halfway between complete confidence and anxiety, and extreme carefulness and impetuousness. They can be aptly described as the average investors. While those exactly in the middle are potential clients for portfolio managers, those who are significantly inclined towards impetuousness or confidence are not.
The Life Cycle Model

Demographics of the individual investor Life Cycle View

The life cycle view is more concerned about the demographics of age, or more appropriately of various stages in the individual’s life cycle. Their view of investment shows that younger individuals who are just beginning to earn money and accumulate assets, expect higher returns and at the same time can take higher risks. On the other hand, older individuals expect lesser returns and are also less risk takers.

Phase

Accumulation Phase

This phase occurs in early career situations, where the liabilities exceed the total worth of assets held by an individual. The assets held may be in the form of illiquid assets and the portfolio consisting of undiversified stocks. The priorities at these stages are mainly liquidity, education of children old age protection schemes, or even a larger home. But it has to be remembered that the investor is willing to go in for a high-risk, high-return investment because his investment horizon is long-term and he has a growing stream of cash inflow.
Consolidation Phase

This stage is featured by excess income over expenses. This may happen either due to a drastic increase in income or a steep fall in the expenses. Thus, the stage features the accumulation of an investment portfolio.

Spending Phase

This stage is experienced by an individual when he is finally independent. i.e., to say he does not depend on his earning income for his living but the money comes from his investments and assets. Thus, at this stage, the individual’s focus is more on his assets which have secured values, from which he can derive dividend income, interest and rental incomes.

Gifting Phase

When an individual realizes that he has enough not only for his survival but even for lavish living, he passes through the gifting phase. At this stage he can spend for charitable cause or even build a house for his heir. This model is based on the fact that the risk tolerance of an individual and his investment – able surplus keep changing during his life. The stages in the life are described as accumulation phase, consolidation phase, spending phase and gifting phase. The accumulation phase is the first. It is the phase immediately following the start of inflow of income to the
individual, that is, the beginning of his career. During this phase, the liabilities are more than his net worth, basically due to a large housing loan. Investments are made for a very long-term because the individual is young, and can hope to live long. Instruments are generally made in high-return, high-risk, capital gain oriented instruments. The middle and late career phase of the individual is called the consolidation phase. During this phase, the income of the individual is higher than the needs, either because the income has increased much more than the expenses or because the children have started earning on their own and have left home. While the retirement of the individual is quite far off, yet it is not so far off to justify investments risking loss of capital. Therefore, the investment portfolio of the individual at this stage consists of low-risk investments to a significant extent.

During the spending phase, the individual has lot of surplus funds that can be put to use. They are generally invested insecure assets such as real estate, with emphasis on generating interest, dividend and rental income rather than capital appreciation. The situation is that the individual does not need to earn all lot of money, but should keep what he already has, to see him through the rest of his life. During the gifting phase, which is the last, the individual is very old, and has a short time horizon. In this phase, the individual
is very old, and has a short time horizon. In this phase, the individual has more assets than he may possibly need during his lifetime. He, therefore, spends money on charities and in providing a house or business capital for his heirs.

It is likely that a person may fit into more than one of the above phases at the same time. For example, a person may gift a part of his property to his children while he is still in the spending stage. Another fact which should be borne in mind while using the above classification is that the behavior of a person is, at any stage of life cycle, influenced significantly by his personality. Finally, the change from one phase to another is very gradual and takes many years. The disposition of a person in transition should be evaluated carefully. Particular care should be exercised in determining the time horizon of his investments.

**Tax considerations in Investing**

The growing popularity of investment related taxes has been mainly due to the growth of the high net worth individuals’ market which developed in the 1980s. The taxes that are imposed on dividends and interest incomes are of much significance to an investor, as he has very limited scope to control them. But there are two exceptions to this fact. The first exception is - buy low or zero yielding stock and thus minimize the portfolio return, though this
may not be a very viable option for the investor. The second exception is buy tax-exempt fixed income securities. It is interesting to note that between the taxable and non-taxable fixed income securities, the one to be preferred would be the one with higher after tax return as provided by the tax-exempt fixed income security.

The main problem concerning taxes arises as a result of capital gains tax rather than tax on dividend income. Studies have revealed that the magnitude of capital gains tax is always more than that of dividends except for lower levels of turnovers. This is ironical to the fact that the tax rates on capital gains for individuals are always less than those on dividends. The explanation to this is pretty simple. The higher tax rate on dividend income actually applies to a small percentage of the portfolio, i.e. yield; on the other hand, the lower tax rate on capital gains applies to the entire portfolio depending on the turnover. The capital gains tax curve is in the shape of a hockey stick. The marginal impact of an increase in the turnover is extreme at the outset and declines gradually and rapidly thereafter to a particular turnover level, where any further additions in turnover have little additional effect on the turnover.

How can capital gains taxes be minimized? One way of doing so is by realizing the losses on the portfolio when they become so
large that the saving on taxes is not offset by the transaction costs incurred on the sale. However, there may be other limitations imposed by the tax authorities. One of the mistakes committed by taxable investors is to wait until the year end to realize losses. But this has certain related problems like the value of money, saved at the beginning of a year, might be as valuable as at the end of the year. Secondly, the opportunity to save money at the beginning of the year may not be there at the end of the year. Third is that as everyone defers the payment of taxes, recently bought stocks tend to trade more cheaply than the stocks now available for purchase, which implies a “sell cheap, buy dear” transaction.  

The Securities Transaction Tax (STT) has been hiked by 25 per cent, from 0.1 per cent to 0.125 per cent for delivery-based transactions. For non-delivery-based transactions, the STT has gone up from 0.02 per cent to 0.025 per cent. This will ensure the government can generate substantial revenue without making waves. That’s because investors consider the STT a small cost, compared to the gains they can make in a rising market.

Exemptions: Under Section 80C, you can invest up to Rs 1 lakh in specified securities and claim deduction from computation of taxable

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38 Robert H Jeffrey. “The portable MBA in Investment”, Peter L Bernstein, Publisher: John Wiley and sons
income. This year, the list of such securities includes bank deposits with a minimum period of five years. However, the five-year tenure seems unreasonable and the government should reconsider this.

Under Section 80CCC, you can contribute up to Rs 10,000 to a pension fund and claim exemption. This limit has now been raised to Rs 1 lakh, which means pension funds have been added to the list of approved securities that qualify for deduction u/s 80C.\(^{39}\)

**Psychology of Risk**

The concept of risk itself is considered to be complex. Successful investment does not come so easily. One needs to understand the various political, economic and institutional issues that play an important role in deciding the benefits of any investment. Human psychology indeed plays a very crucial role in investment decisions.

Risk aversion implies that people prefer less risk for the same expected return. Rational expectations imply that people take rational decisions and their decisions are based on unbiased forecasts. In other words, in the absence of insider information, all investors have a unanimous opinion on the future value of any security.

\(^{39}\) www.bcasonline.org
Research on behavioral studies has revealed that investors’ decisions are always rational and they are affected by uncontrollable emotional constraints. This concept is referred to as “bounded rationality”.

Risk aversion assumption also does not hold good always. Investors may face loss aversion instead. One should be able to distinguish between risk aversion and loss aversion. Preference of a sure gain to an uncertain event with the same expected value as that of a sure outcome is referred to as risk aversion. Similarly, if the investor has to choose between a sure loss and an uncertain loss then he/she would opt for an uncertain loss because of loss aversion attitude. Thus, we can observe that risk aversion holds good for gains and loss aversion for losses. Human perceptions and judgments are based on their sensitivity to changes. It is a common observation that people are much more sensitive to changes. It is a common observation that people are much more sensitive to negative than to positive results. Therefore, it is evident that there is asymmetry between gains and losses.\(^{40}\)

\(^{40}\) Amos Tversky, “Quantifying the market risk premium phenomenon for investment decision-making”
Other Avenues

Gold

Throughout history, gold has been a highly valued substance. It is unique properties and relative scarcity caused almost every world culture to use it as a form of money, as well as a way to “store” value. Although it has lost much of its importance as a form of currency, gold investments still provide a great way to protect your money and diversify a portfolio.

Over the past few years, gold prices have been steadily rising. There is a very good chance this trend will continue over the long-term, making it a good idea to put some money into gold investments now. Also, buying gold is a great way to hedge against other investments. Due to uncertainty in the stock market and the value of the US dollar, it’s a good idea to put 10-20% of your money into a hedge fund in order to protect yourself. Gold and silver have always been considered to be among the best forms of hedge investments because they have relatively stable values. The global market for gems and jewelry today is pegged at US$ 85 billion with key markets having registered an average compounded annual growth rate (CAGR) of 5-10 per cent in the last decade. The global market for Gold is estimated at 3300 tons.
South Africa is the world’s largest producer of gold, followed by U.S.A and Australia. Together, these countries account for 45 per cent of the world’s total gold production. India is the largest consumer of gold, followed by the U.S.A. In the production of Silver, the Americans have near monopoly - Mexico, Peru and the United States are the top three silver producing countries. Platinum is an extremely rare precious metal. More than 90 per cent of all platinum supplies come from South Africa and Russia. With increased economic development, the demand for the metal has grown at a faster pace than it is being mined. The United States is the world’s leading consumer of platinum overall, while China has emerged as the leading consumer of platinum jewelry. Jewelry manufacturing is traditionally dominated by players from the gems and jewelry industry occupies an important position in the Indian Economy. It is a leading foreign exchange earner and also one of the fastest growing industries in the country.

The two major segments of the sector in India are gold jewelry and diamonds. Gold jewelry forms around 80 per cent of the Indian jewelry market, with the balance comprising fabricated studded jewelry that includes diamond studded as well as gemstone studded jewelry. A predominant portion of gold jewelry manufactured in India is consumed in the domestic market. In diamonds, however, a
major portion of rough, uncut diamonds processed in India is exported, either in the form of polished diamonds or finished diamond jewelry. Besides being the largest consumer of gold, India is also the leading diamond cutting nation in the world\textsuperscript{41}.

**Real Estate\textsuperscript{42}**

The real estate sector in India today is witnessing a wide spectrum of changes and is certainly a preferred destination for the investors. Property has always been looked upon as a lucrative investment. According to industry experts and analysts, investment in the real estate is expected to yield between 13\% and 16\% returns. The investment in gold and bank has been generating 5 – 8 \% during the last one year. The boom in the real estate is also due to the strong economic growth in the past three years. The Indian economy has registered a growth rate of 7.5\% during 2004 – 05 and is estimated to register a growth rate of 8.1\% for the present fiscal year. The ‘financing, insurance, real estate and business services’ sector alone is expected to show a growth rate of 9.5\% during 2005 – 06.

There are many reasons to invest in real estate. Primary reasons are:

1. Higher risk adjusted returns as compared to various asset classes over a period of time.

\textsuperscript{41} http://www.gold-bullion-guide.com

\textsuperscript{42} www.ibef.org.
2. Assured regular income.

3. Capital appreciation.

4. Inflation hedge.

5. Portfolio diversification.

However, analyst caution about the risks in the investment. They warn that real estate markets may not be as transparent and that Indian real estate capital market is not as mature and sophisticated when compared to global markets like the US. Tax policy is one of the concerns for the investors in Indian real estate markets. The stamp duty varies from state to state and also the registration charges are subject to changes in government policies. However considering the viable opportunities, real estate funds are now catering to high net worth investors, the retail investors can go for the fund options when the opportunity arises.

**Investment Objective**

In India there are 22 fund houses and more than 100 schemes are available to the investors. In India we generally find two types of open – ended funds namely funds with growth option and divided option. In the growth option, an investor can redeem his holding at the prevailing NAV on a particular day to the mutual fund company. This option does not provide any intermediate returns to the holder. The main objective of this option is to achieve growth. In case of
dividend option the investor gets periodic dividend. Dividend payment is made on the discretion of the mutual fund company. Another option available to the investor is of dividend reinvestment. In this case the dividend declared is invested back in the same scheme. Consequently, the investor has more units every time when the dividend is declared, but the NAV depreciates.

QUALITIES FOR SUCCESSFUL INVESTING

The game of investment, as any other game, requires certain qualities and virtues on the part investors, to be successful in the long run. What are these qualities? While the lists prescribed by various commentators tend to vary, the following qualities are found in most of the lists.

- Contrary thinking
- Patience
- Composure
- Flexibility and openness
- Decisiveness

Cultivating these qualities distinctly improves the odds of superior performance but does not guarantee it.
Contrary Thinking

Investors tend to have a herd mentality and follow the crowd. Two factors explain this behaviour. First, there is a natural desire on the part of human beings to be part of a group. Second, in a complex field like investment, most people do not have enough confidence in their own judgment. This impels them to substitute other’s opinion for their own.

Given the risk of imitating others and joining the crowd, you must cultivate the habit of contrary thinking. Perhaps the best way to resist such a tendency is to recognize that investment requires a different mode of thinking than what is appropriate to everyday living. As James Gipson said: “Being a joiner is fine when it comes to team sports, fashionable clothes, and trendy restaurants. When it comes to investing, however, the investor must remain aloof and suppress social tendencies. When it comes to making money and keeping it, the majority is always wrong.”

The suggestion to cultivate ‘contrary thinking’ should not, of course, be literally interpreted to mean that you should always go against the prevailing market sentiment. If you do so, you will miss many opportunities presented by the market swings. A more sensible interpretation of the contrarian philosophy is this: Go with market during incipient and intermediate phases of bullishness and
bearishness but go against the market when it moves towards the extremes.

**Patience**

As a virtue, patience is strangely distributed among investors. Young investors, with all the time in the world to reap the benefits of patient and diligent investing, seem to be the most impatient. They look for instantaneous results and often check prices on a daily basis. Old investors, on the other hand, display a high degree of patience even though they have little chance of enjoying the fruits of patience. Whatever may be the temperamental basis for the young to be impatient, in the field of investment there are compelling reasons for cultivating patience. Greed and fear are far more powerful forces than reason in influencing investment decisions. Rarely does one come across an investor who is immune to these emotions that are so pervasive in the marketplace. Greed and fear tend to be insidiously contagious. In one’s attempt to overcome them, one may find the following suggestions helpful.

- Maintain a certain distance from the market place. One’s vulnerability to the contagious influences of greed and fear diminishes, if one’s contact with others caught in the whirlpool of market psychology decreases.
Rely more on hard numbers and less on judgment, which is more prone to be influenced by the emotions of greed and fear. This is the advice given by Benjamin Graham, widely regarded as the father of security analysis.

**Flexibility and openness**

Nothing is more certain than change in the world of investments. Macroeconomic conditions change, new technologies and industries emerge, consumer tastes and preferences shift, investment habits alter, and so on. All these developments have a bearing on industry and company prospects on the one hand and investor expectations on the other. Since an open mind, not blocked by prejudices and biases, is crucial for success in investing, conscious and deliberate efforts should be made to re-examine old premises, assimilate new information, and cultivate mental flexibility. Barton M. Briggs put it this way: “Flexibility of thinking and willingness to change is required for the successful investor.”

**Decisiveness**

An investor often has to act in face of imperfect information and ambiguous signals. Investment decisions generally call for reaching conclusions on the basis of inadequate premises. To succeed the investor should be decisive. Decisiveness does not mean rashness. Rather, it refers to an ability to quickly weigh and balance
a variety of factors, form a basic judgment and act promptly. The most successful investor tends to be those who are willing to make bold decisions consistent with their convictions\textsuperscript{43}.

1.3 Statement of the problem

Investor’s behaviour is influenced by many factors including social and psychological factors. It is an acceptable fact that the investors are focal point to the security market. Behaviour of investor is not a static one. It varies from place to place. It is individual act to obtain and use money and benefits include in the decision process.

It has been long since small investors have forgotten to go through the primary market. New issues from corporate have virtually come to standstill over the last two years due to the adverse condition of the world economy. Due to the continuous fall in the interest rates all the savings scheme in banks, post offices, non banking finance companies and provident funds. The hard earned money of the people is being eaten away by inflation.

But the stock/commodity markets are the place next to direct business where erosion of money due to inflation can be avoided, if

prudent investment decisions are taken. It is true that money can be doubled/tripled in the stock/commodity markets and another hand it is not easy particularly who are not fully aware of the trading system in the particular avenues.

Investing has been an activity confined to the rich and business class in the past. But today it has become household word and is very popular with the people from all walks of life. In today’s era the person must think about future life. Even the individual must leaving with planning of finance for make their life become comfortable. Today’s man is also good investor because market gives him a lot of opportunities of investment. So it is important to study about the individual investors, the factors influencing the behaviour of investor and the avenues attracted. So the researcher takes a topic “A Study on Factors Influencing Investment Decision with Special Reference to Individual Investors in Tiruchirappalli District”.

**Importance of the Study**

There are many factors which influences the individual in deciding his/her investment behaviour. The reason for an individual to invest may differ from individual to individual. There might not be any single reason for an investor to invest and at the same time there might be many reasons for an investor to choose a particular
investment avenue. In order to find out the reasons for an individual to investment and his/her priority of those reasons and also to identify the reasons of an individual to choose an investment avenue is an important one.

Relevance of the study

The investor behavior has changed tremendously after the recession effect. Through India was not directly affected with the sub-prime crisis effects. Fear has struck the minds of the investors heavily and spending lavishly has lost its energy as software people have started investing more than spending. They are now looking for safety rather than a luxurious life. This was never guessed the business must always be proactive to match up the changes that are taking place in the minds of the customer but at times it must also be reactive. So it is the time to study the behaviour of an investor and to understand his feelings, his anticipations and perceptions that are related to an investment that he/she is making. This can help the financing firms in not just growing the business and also in developing the customer value.

Need of the study

If a financing firm understanding the logic behind the survey on investor behaviour it can easily frame up strategies for a nearby
future and can even encourage the investor to invest in such an investment which is close to their mindset and ideology where it can cut the costs on promoting their to grab a product of the company which is away from his view. This study is much helpful to those financing firms which are into the operations of portfolio management. If a portfolio that is being offered by the firm matches with the ideology of a customer then they easily aggress to invest in that portfolio without any hesitation. Any operation hat is done by the company losses it credibility if it is not customer friendly or if it is rejected by the customer. So this study helps the companies build such products to its investors which are in reach of their mindset and thinking.

1.4 Scope of the study

The study covers only the investors of the Tiruchirappalli city. Next, the study focused on the factors like objective factors, sources of information factors, economic/market factors, industry factors, company qualitative factors, company quantitative factors only. These are the scope of the study.
1.5 Research Objectives

1. To study the demographic factors of the individual investors in the concerned study area.

2. To analyze the relationship of the demographic factors on the overall influencing factors of investment decision.

3. To identify the most important factor that influences the investment behaviour.

4. To understand the relationship among the six composite factors which influence the investment decision.

5. To find out the various investment avenues selected by the investors.

1.6 Review of Literature

The understanding of any subject depends on a good knowledge of related literature. A good knowledge of literature helps not only to identify the scope of the subject but also facilitates the study design in an enhanced manner. Hence a review of the available studies in the field or related field of investment, factors influencing investments are provided under here.

_Dunham (1984)⁴⁴_ admits that although personality factors can change an extended period of time, the process is slow and tends to

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be stable from one situation to another. Therefore, these factors are expected to influence the decision making behaviour of an individual.

**Barnwell (1987)**\(^{45}\) finds that an individual investor can be found by lifestyle characteristics, risk aversion, control orientation and occupation. And he suggest the use of psychographics as the basis of determining an individual’s financial services needs and takes one closer to the truth from the customer’s perspective of need to build a marketing program.

**Statman (1988)**\(^{46}\) observed that people trade for both cognitive and emotional reasons. They trade because they think they have information, when in reality they make nothing but noise and trade only because trading brings them joy and pride. Trading brings pride when decisions made are profitable, but it brings regrets when they are not. Investors try to avoid the pain of regret by avoiding realization of losses, employing investment advisors as scapegoats and avoiding stocks of companies with low reputations.


Harlow and Brown (1990)\(^{47}\) observe that psychologists tend to believe that an individual’s choice is primarily determined by factors unique to the particular decision setting. Whereas economists assume that there is some individual specific mechanism playing a common role in all economic decisions.

Ippolito (1992)\(^{48}\) “Behavioural Finance” studies are very few and very little information is available about investor perceptions, preferences, attitudes and behaviour. All efforts in this direction are fragmented.

Kannadhasan (1994)\(^{49}\) stated that the decision making is a complex activity. Decisions can never be made in a vacuum by relying on the personal resources and complex models, which do not take into consideration the situation. Analysis of the variables of the problem in which it occurs is mediated by the cognitive psychology of the manager. They found that decision making is an activity that follows after proper evaluation of all the alternatives.


Gupta (1994)\textsuperscript{50} made a household investor survey with the objective to provide data on the investor preferences on Mutual Funds and other financial assets. The findings of the study were more appropriate, at that time, to the policy makers and mutual funds to design the financial products for the future.

Sujit Sikidar and Amrit Pal Singh (1996)\textsuperscript{51} carried out a survey with an objective to understand the behavioural aspects of the investors of the North Eastern region towards equity and mutual funds investment portfolio. The survey revealed that the salaried and self employed formed the major investors in mutual fund primarily due to tax concessions. UTI and SBI schemes were popular in that part of the country then and other funds had not proved to be a big hit during the time when survey was done.

Syama Sunder (1998)\textsuperscript{52} conducted a survey to get an insight into the mutual fund operations of private institutions with special reference to Kothari Pioneer. The survey revealed that awareness about Mutual Fund concept was poor during that time in small cities like

\textsuperscript{50} Gupta, L.C., 1994, Mutual Fund and Asset Preference, Society for Capital market Research and Development, Delhi.


Visakapatnam. Agents play a vital role in spreading the Mutual Fund Culture.

**Alastair Adair, Jim Berry and Stanley McGreal (1999)**\(^{53}\) utilizing the results of a behavioural survey, analyses at the motivations of investors and their perception across a range of regeneration initiatives. The financing of urban regeneration and levering of private-sector investment remains a major policy issue. The pattern of investment activity over the market cycle, reasons for holding an urban regeneration portfolio, evaluative factors and perspectives concerning the attraction of private finance.

**Barber and Odean (2000)**\(^{54}\) explored the impact thinking on investment preference to study the experience of actual investors. The ET Retail Equity Investor Survey in the secondary market identified different categories of investors based on their characteristics and attitude towards secondary market investments. A study on 245 Kuala Lumpur Stock Exchange individual investors from Kula Lumpur and Petaling Jaya, reveal that there are some differences between active and passive investors in terms of demographic and psychographics investment characteristics as well as investment behaviour.

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Brad M. Barber, Terrance Odean and LuZheng (2000)\textsuperscript{55} analyze the mutual fund purchase and sale decisions of over 30,000 households with accounts at a large U.S discount broker for the six years ending in 1996. They argue that the representative heuristic leads investors to buy past winners, the disposition effect renders investors reluctant to sell their losers, and framing effects cause investors to react differently to various forms of fund expenses.

Shunmugham (2000)\textsuperscript{56} conducted a survey of 201 individual investors to study information sourcing by investors, their perceptions of various investment strategy dimensions and the factors motivating share investment decision and reports that among the various factors, psychological and sociological factors dominated the economic factors in share investment decisions.

William N. Goetzmann (2000)\textsuperscript{57} use a two-year panel of individual accounts in an S&P 500 index mutual fund to examine the trading and investment behaviour of more than 91 thousand investors who have chosen a low-cost passively managed vehicle for savings. This allows us to characterize investors’ heterogeneity in terms of their

\textsuperscript{55} Brad M. Barber, The behaviour of Mutual fund investors, paper presented to University of Michigan, Ann Arbor, September 20, 2000.
\textsuperscript{57} William N. Goetzmann, Daily momentum and contrarian behaviour of index fund investors, NBER working paper series, National Bureau or Economic Research, February 2000.
investment patterns. They found that more frequent traders are typically constrains, while infrequent traders are more typically momentum investors.

Karthikeyan (2001)\textsuperscript{58} has conducted research on Small Investors Perception on Post Office Saving Schemes and found that there was significant difference among the four age groups, in the level of awareness for Kisan Vikas Patara (KVP), National Savings Scheme (NSS) and Deposit Scheme for Retired Employees (DSRE) and the Overall Score confirmed that the level of awareness among investors in the old age group was higher than in those of young age group. No differences were observed among male and female investors except for NSS and KVP.

Haisashi Kaneko (2002)\textsuperscript{59} stated that although institutional aspects in Japan have been improved to encourage the holding of investment trusts by individual investors, it cannot yet be said that investment trusts have permeated the individual investor market. One reason for this is that the improvement of related systems was conducted without sufficient understanding of the reasons behind the investment behaviour of individual investor. By focusing on the


buying and selling of investment trusts by the individual investors and examining such behaviour from a behavioral finance perspective, phenomena such as “realize profits quickly when in the black, but defer taking losses when in the red” and “selecting funds based on the level of unit price” can be observed.

Gaston Gelos and Shang Jin Wei (2002)\(^{60}\) examine the country “transparency” affect international portfolio investment? and related questions using a unique micro dataset on international portfolio holdings. They employ various indices of government and corporate transparency, focusing on the availability and quality of information. They found that emerging market equity funds hold fewer assets in less transparent countries.

Masahiro Watanabe (2002)\(^{61}\) studies on overlapping generations model with multiple securities and heterogeneously informed agents. The model produces multiple equilibria, including high volatile equilibria that can exhibit strong or weak correlations between asset returns – even when asset supplies and futures dividends uncorrelated across assets. Less informed agents rationally behave like trend-followers, while better informed agents follow contrarian


strategies. Trading volume has a hump-shaped relation with information precision and is positively correlated with absolute price change.

**Malena Johnson, Henrik Lindblom, Peter Platan (2002)**\(^ {62}\) conducts a research on how private as well as institutional investors have changed their investment behaviour as a consequence of the speculative bubble during the period from all 1998 to March 2000. Their purpose is established what factors lie behind the speculative bubble and further investigate whether the investment objectives and factors influencing investment decision making are different today than during the speculative bubble. They suggest that the behaviour of market participants during the speculative bubble was to some extent irrational and that the composition of investments has changed as a consequence of the speculative bubble.

**Michael Chui, Simon Hall and Ashley Taylor (2002)**\(^ {63}\) stress the joint importance of intra–Emerging Market Economy (EME) linkages, related country-specific vulnerabilities and investor behaviour. This frame work provides insights into the reasons for

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different spillovers in two case studies (i) Asia 1997.1998 and Argentina 2001/2002. It also highlights the need for further analysis of the less easily measurable elements of the framework in particular changes in investor behaviour.

Josef Laknoishok, Inmoo Lee, Allen M. Potesiman (2004)\textsuperscript{64} investigates the behaviour of investors in the equity option market using a unique and detailed dataset of open interest and volume for all contracts listed on the Chicago Board Options Exchange over the 1990 through 2001 period. They found out that non market maker investors have about four times more long call than long put open interest, these investors have more short than long open interest in both calls and puts, each type of investors purchase more calls to open brand new positions when the return on underlying stocks are higher over horizons ranging from one week to two years into the past.

Gavin C. Reid and Julia A Smith (2004)\textsuperscript{65} empirical investigation into the ways in which venture capitalists value high technology firms, focusing on financial reporting, risk disclosure and intangible assets. It is based on questionnaire returns from UK investors in


\textsuperscript{65} Gavu C. Reid and Julia A Smith, Venture capital investor behaviour in the backing of UK high technology firms: Financial reporting and the level of investment, Paper presented to University of St. Andrews, available on www.cf.ac.uk.
diverse sectors, ranging from biotechnology, through software/computer services to communications and medical services.

Mark Loewenstein and Gregory A. Willard (2005) stated that many models use noise trader risk and corresponding violations of the Law of One Price to explain pricing anomalies, but include a storage technology in perfectly elastic supply or unlimited asset liability. Storage allows aggregate consumption risk to differ from exogenous fundamental risk, but using aggregate consumption as a factor for asset returns can make noise trader risk superfluous. They found use only budget equations and market clearing and require virtually no assumptions about behaviour.

Michael Dowling (2005) surveys the research on the influence of investor feelings on equity pricing and also develops a theoretical basis with which to understand the emerging findings of this area. The theoretical basis is developed with reference to research in the fields of economic psychology and decision making. The paper concludes by suggesting a number of directions for future empirical and theoretical research.

66 Mark Loewenstein and et al., The limits of Investor Behaviour, Paper presented in Smith School of Business, University of Maryland, August, 2005.
Reid, Gavin C and Smith Julia (2005) is an empirical investigation into the ways in which venture capitalists value high techno focusing on financial reporting, risk disclosure and intangible assets. It is based on questionnaire returns from diverse sectors, ranging from biotechnology, through, software/computer services, to communications and meet. This evidence is used to examine the usefulness of financial accounts, the implications technopole, the extent of investor control over the investee’s AIS and the role of investor opinion in determining the level of equity provision.

Joshua D. Covan and Tyler Shumway (2005) documents strong evidence for behavioural biases among Chicago Board of Trade proprietary traders and investigate the effect these biases have on prices. Traders appear highly loss averse, regularly assuming above average afternoon risk to recover from morning losses. This behaviour has important short term consequences for afternoon prices, as losing traders actively purchase contracts at higher prices and sell contracts at lower prices than those that prevailed previously.

68 Reid, Gavin C and Smith Julia A (2005), Venture capital investor behaviour in the backing of UK high techno financial reporting and the level of investment, Discussion paper, Centre for Research into industry, Enterprise the Firm (CRIEFF), St. Andrews, UK.
Nicolas P.B Bollen (2006)\textsuperscript{70} studies the dynamics of investor cash flows in socially responsible mutual funds. Consistent with anecdotal evidence of loyalty, the monthly volatility of investor cash flows is lower in socially responsible funds than conventional funds. He finds strong evidence that cash flows into socially responsible funds are more sensitive to lagged positive returns than cash flows into conventional funds and weaker evidence that cash outflows from socially responsible funds are less sensitive to lagged negative return. These results indicate that investors derive utility from the socially responsible attribute, especially when returns and positive.

Min Deng (2006)\textsuperscript{71} highlights the stock price behaviour along with the investor behaviour. Through methodology, the paper provides a detailed exposition on the root cause leading to the inadequacies of the scientific quintessence of technical analysis and low scientific level of the prevailing technical analysis theories. And further analyzes whether Efficient Market Hypothesis (EMH) is scientific or not. In addition this paper also provides brief comments on the mistakes associated with the Theory of Portfolio Selection, Capital Asset Pricing Model and Behavioural Finance.


Baba Shiv, George Loewenstein, Antoine Bechara, Hanna Damassio and Antonio R. Damasio (2006)\textsuperscript{72} investigated how normal participants, patients with stable focal lesions in brain regions related to emotion made 20 rounds of investment decisions. Target patients made more advantageous decisions and ultimately earned more money from their investments than the normal participants and control patients. When normal participants and control patients either won or lost money on an investment round, they adopted a conservative strategy and became more reluctant to invest on the subsequent round and these result suggest that they were more affected than target patients by the outcomes of decisions made in the previous rounds.

\textbf{Avanidhar Subrahmanyam (2007)}\textsuperscript{73} provides a synthesis of behavioural finance literature over the past two decades. He review the literature in three parts namely (i) empirical and theoretical analyses of patterns in the cross-section of average stock returns, (ii) studies on trading activity and (iii) research in corporate finance. Behavioural finance is an exciting new field because it presents a number of normative implications for both individual investors and

\textsuperscript{72} Baba Shir and etal, Investment behavior and the negative side of emotion, Psychological science, Vol.16, Number 6, 2006, p. 435.

CEOs and this paper reviewed here allow us to learn more about these specific implications.

Petri Kyrolainen (2007)\textsuperscript{74} investigates a set of equity market phenomena associated with investors’ trading activity using a comprehensive Finnish Central Securities Depository (FCSD) database that records practically all trades by Finnish investors. This database enables us to classify a large number of heterogeneous investors using both economic and institutional characteristics. He found that both sign and magnitude of prone to sell when they are carrying losses rather than gains.

Dimitrios I Maditinos, Zeljko sevic, Nikolaos G. Theriou (2007)\textsuperscript{75} investigate the various methods and techniques used by Greek investors both professional and individual when evaluating potential additions to their investment portfolios. The results indicate ININ rely more on newspapers/media and noise in the market when making their investment decisions, while professional investors rely more on fundamental and technical analysis and less on portfolio analysis. The paper is the first study of the methods used by different classes of investors in the relatively underdeveloped capital market of Greece.

\textsuperscript{74} Petri Kyrolainen, Essays on investor behaviour and trading activity, dissertation to be presented with the assent of the University of Oulu, 2007.

James J. Choi, David Laibson, Brigitte.C. Madrian and Andrew Metrick (2007)\textsuperscript{76} presents evidence that when there is no salient reference purchase price – investors tend to be return chasers and variance avoiders with respect to their idiosyncratic history with the asset. Using administrative panel data on 25,000 401(k) accounts at five firms they found that an investor’s 401(k) contribution rate increases more if she has recently experienced a higher 401(k) portfolio return and/or a lower 401(k) return variance. Consistent with reinforcement learning’s Power Law of Practice, return chasing and variance avoidance diminish with age.

Guven Sevil, Mehmet Sen and Abdullah Yalama (2007)\textsuperscript{77} investigate the decision process of small investors on the Istanbul Stock Exchange Markets. Survey research method used for analyzing the attitude of investors about the efficiency of the market. The survey was sent to 201 individuals identified for small investors in Turkey. As a result of descriptive statistic analysis the investors are not totally rational figures as assumed by the tradition theory.


Rohit Kishore (2007) stated that behavioural finance is part of finance that seeks to understand and explain the systematic financial market implications of psychological decision process. It utilizes knowledge psychology, social sciences and anthropology to explain irrational investor behaviour that is not being captured by the traditional rational based models. This paper analyzes the development of behavioural finance, reviews stock market and property market behavioural literature and identifies issues in the property market that can be better understand and explained using behavioural models.

Dipo T. Busari and Phillip C. Omode (2008) stated that as part of the effort by many African countries to regain economic and financial balance, government officials have increasingly turned their attention to improving trade policies. This includes actions on the exchange rate, import licensing, tariffs on imports, taxes or subsidies on exports and institutional export promotion measures. These changes affect private investment is an interesting question for many African Countries. These findings, which appear to be at odds with the results of cross-country comparisons of growth and investment, form the main motivation for this study.

78 Rohit Kishore, Theory of behavioural finance and its application to property market: A change in paradigm, paper presented to University of Western Australia, 12th annual Pacific Rim Real Estate Society Conference, January 22-25.
**Krishna Prasanna (2008)**\(^8^0\) examines the contribution of foreign institutional investment particularly among companies included in sensitivity Index (Senses) Bombay Stock Exchange. Also examined is the relationship between foreign institutional investment and firm specific characteristics in terms of ownership structure, financial performance and stock performance. It is observed that foreign investors invested more than in companies with a higher volume of shares owed by the general public.

**Richard L. Peterson, (2008)**\(^8^1\) demonstrate a relationship between investor psychology and security pricing around anticipated events. Taking a multidisciplinary approach, they pull together research in the finance, psychology and neuroscience literature. Event-studies in the finance literature demonstrate anomalous security price movements around the dates of anticipated security related events. They briefly outlined that an investment strategy for exploiting the event-related security price pattern described by the trading strategy, “buy on the rumor and sell” on the news”.

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\(^8^1\) Richard L. Peterson, “Buy on the Rumor:” Anticipatory affect and investor behaviour, available on www.marketpsych.com
Saurab Joshi (2009)\textsuperscript{82} investigate the trading behaviour of five major investor groups in the Norwegian stock exchange namely governments, individuals, financial firms, non-financial firms and foreign investors. Previous research indicates that some investor types move prices towards fundamentals. This result is consistent with the hypothesis that these investors are better equipped or informed than others which might lead them to reap greater payoffs in the long run.

Sophie Shive (2009)\textsuperscript{83} test whether social influence affects individual investor’s trading and stock returns. In each of the 20 most active stocks in Finland over nine years, the number of owners in a municipality multiplied by the number of investors who do not own a stock a measure of the rate of transmission of diseases and rumors through social contact predicts individual investor trading.

George Horia Ionescu, Dragos Mihai Unguream, Ruxanra Dana Vilag and Florian Bogdan Stoian (2009)\textsuperscript{84} stated that International capital markets, in general seem to be volatile markets, influenced by many factors, a phenomenon that affects both developed markets

\textsuperscript{82} Saurab Joshi, Ownership structure and investor behaviour, GRA 19001, Master Thesis, BI Norwegian School of Management, September 2009.
\textsuperscript{83} Sophie Shive, An epidemic model of investor behaviour, paper presented to Stockhold School of Economics, 2008.
\textsuperscript{84} George Horia Ionescu and etal, Financial contagion and investors behaviour, Amales University Apulensis Series, Oeconomica, Vol.11, Iss:1, 2009, p. 536.
as well as least developed with emerging market economies suffering most because of this. It is clear, however, that volatility will remain for as long as it is delayed the adoption of specific measures at national and International financial architecture level, measures that may be necessary to reduce these risks, to limit their impact and that the question financial market can relapse in a manner as efficiency as possible.

**Amir Barnea, Henrik Cornqvist and Stephan Siegel (2009)** examine the foundations of investor behaviour. Using data on identical and non-identical twins matched with their complete portfolios, they decompose the cross sectional heterogeneity in key measures of investment behaviour into genetic and environmental influences. And they found that up to 45 per cent of the variation in stock market participation, asset allocation and portfolio risk choices is explained by a genetic component.

**Graciela Kaminsky, Richard Lyons and Sergio Schmukler (2009)** examine the role of mutual funds and mutual investors in spreading crises. It focuses on whether funds flows are linked to emerging economies’ degree of fragility, their capital market

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openness and liquidity and their level of country risk. They also examine in particular detail the behaviour of U.S based Latin American mutual funds, with special attention to the effects of redemptions on funds’ management of their liquid positions. They found that economic fragility is not the only factor that triggers withdrawals. Liquidity also important, in particular faced by investor redemptions, mutual fund managers tend to liquidate their most liquid positions.

Rajeswari, T.R & Ramamoorthy (2009)\(^87\) explains that mutual fund is a product designed to target small investors, salaried people and others who are intimidated by the mysteries of stock market but, nevertheless, like to reap the benefits of stock market investing. At the retail investors are unique and are highly heterogeneous groups. Hence, their fund/scheme selection also widely differs. This paper discusses the survey findings. It is hoped that it will have some useful managerial implication for the Assets Management Companies (AMCs) in their product designing and marketing.

Seth L. Elan (2010)\(^88\) stated that according to statistical evidence presented in academic studies, patterns of investor behaviour are


often counter productive. Drawing on a comprehensive review of academic journal articles, reporting research in the relatively new field of behavioural finance ad this paper examines patterns of investor behaviour as well as reasons that individuals are reluctant to invest in the first place.

Sohan Patidar (2010)\textsuperscript{89} studies the behaviour of investors towards share market in the Dhar district and to analyze attitude of investors in study area. The purpose of this research paper is to study the decision process of investors. Investments are the amounts which are invested as capital or some securities of public or private sector for earning income. The amounts which are invested without the project of earning money, are either donation or assistance.

Pavani Ch & Anirudh P. (2010)\textsuperscript{90} stated that invested behaviour analysis is a study made on the demographics and psychographics of the investor considering the parameters like age, gender and income groups and also some psychological parameters that will attract the investor towards that particular investment. This analysis describes why an investor will opt a particular investment and the motive behind the investment and other objectives of investment.

Arvid O.I. Hoffmann, Thomas Post and Joost M.E Pennings (2010) study how during the financial crisis individual investor perceptions change, impact trading and risk-taking behaviour and explain performance. Based on monthly survey data and matching brokerage records from April 2008 to March 2009 and find that successful investors had higher return expectation and higher risk aversion. Afterward however they became less averse, were no longer less likely to trade and no longer outperformed, suggestion that their success made them overconfident.

Shyan-Rong Chou, Gow-Liang Huand, Hui-Lin Hsu (2010) attempts to establish a model by which to measure attitudes and behaviour towards investment risk. A sample of Taiwanese investors are surveyed to determine their past investment experience as an anchor and to record their responses when exposed to economic signals. This was implemented to form a framework for interpretation of heir respective attitudes and behaviours. Empirical results found no difference by gender to investor propensity to take risk, nor in cognitive perception of such. However, higher and lower

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perceptions of risk were indicated by investors according to their personal investment experience.

Stephen Chen, Brenda Spotton Visano, Michael Lui and Chahui Lu (2010)\textsuperscript{93} describes market bubbles often occur around the same time that new means of investing become available to enable increased market participation. An important aspect of increased market participation is the possible introduction of new investors who behave differently from existing traditional investors. Preliminary evidence from a new data set constructed from publicly available information suggests that these new investors display social referencing behaviour – their investment decisions are based more on social information and less on typical financial information.

Preeti Singh and Harpreet Singh Bedi (2011)\textsuperscript{94} stated that India is one of the countries which are concentrating towards its share market and investment sector because a country’s growth is totally dependent upon the growth of its financial market. The study helps to understand about the various viewpoints of the investors which ultimately help the Stock Exchanges/ SEBI to find out the areas where it is exactly lagging behind in investor’s expectations and

\textsuperscript{93} Stephen Chen and etal., Evidence and Effects of social referencing investor behaviour during market bubbles, IAENG International Journal of Computer Science, 37:4, IJCS-37-4-5.

concluded that though there is some strength but still there are areas in which the Stock Exchange/SEBI needs to improve upon.

**Abhijeet, Chandra and Ravinder Kumar (2011)**\(^95\) consider this theory of irrationality of individual investors and investigate into their behaviour relating to investment decisions. They examine whether some psychological and contextual factors affect individual investor behaviour and if yes which factors influences most. The study provides five major factors can influence individual investor behaviour in Indian stock market. The findings can be useful in profiling individual investors and designing appropriate investment strategies according to their personal characteristics, thereby enabling them optimum return on their investments.

**Anil B. Kalkundarikar and Arifur RehmanShaikh (2011)**\(^96\) access the behaviour of retail investors in Belgaum district of Karnataka state and it reveals that knowledge level significantly leverages the returns on the investments and there is a negative correlation between the occupation of retail investor and the level of risk. This has been identified on the basis of cross analysis by applying correlation analysis and found out that most of the retail investors’ primary objective of investment is to earn regular income and

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expected rate of return differs from individual to individual based on their level of market knowledge and risk taking ability.

**Haroon Safi, Muhammad Akram (2011)**\(^97\) attempts to explore that how the perception of an investor who is also the employee of that organization differs from other investors. Findings of this study suggested that employees risk perception is directly related with investment behaviour and there is strong relationship between them. This can help the management to make special offers of shares to employees, this will further strength the bond of employees with the organization.

### 1.7 Hypotheses Formulation

The following hypotheses have been framed to facilitate the accomplishment of objectives mentioned above with a view to provide necessary impetus to analyze data in such a way that interpretations bring in meaningful ending to the study.

H1: There is a significant difference between period of investment of the respondents and their overall influencing factors of investment.

H2: There is a significant association between type of investors of the respondents and their overall influencing factors of investment.

H3: There is a significant association between age of the respondents and their overall influencing factors of investment.

H4: There is a significant difference between gender of the respondents and their overall influencing factors of investment.

H5: There is a significant difference between marital status of the respondents and their overall influencing factors of investment.

H6: There is a significant difference between educational qualification of the respondents and their overall influencing factors of investment.

H7: There is a significant association between occupation of the respondents and their overall influencing factors of investment.

H8: There is a significant difference between annual income of the respondents and their overall influencing factors of investment.

H9: There is a significant difference between investment amount of the respondents and their overall influencing factors of investment.

H10: There is a significant difference between residence of the respondents and their overall influencing factors of investment.

H11: There is a rank-order relation among the six composite factors in influencing the investment decision.

H12: There is a highly significant relationship among the six composite factors influencing investment decision.

H13: There is a significant difference between investment type preferred by the respondents and their overall influencing factors of investment.
1.8 Research Model

Objective Factors

Source of Information

Demographic Information

Fundamental Factors

Economic/Market Factors

Industry Factors

Company Factors

Qualitative Factors

Quantitative Factors

Investor

Stock Analysis

Stock Investment Decision
1.9 Research Methodology

A research is conducted with the main purpose of contribution of something new and unique to the prevailing stock of knowledge in any field by developing a new concept or effecting advancement in the connotation of existing concepts. It can be properly accomplished through any study only through preplanned and well defined steps applying perfectly applicable methods in each steps there by facilitating the collection, analysis, and drawing conclusion smoothly and meaningfully. With a view to effectively carry out the study conceptually and methodologically structured research design is a must.

Research Design

As the study is descriptive and analytical in nature, it is important to obtain conceptual clarity through explanation given in various books and contributions made by various research studies pertaining to the topic of the present study that concentrates on establishing the factors influencing investment. As the first step, literatures relevant to the concepts are reviewed then objectives are formulated and hypotheses are framed. Based on the objectives questionnaire is formulated for the collection of primary data which is paramount for the study. Primary data is collected by distributing questionnaire to the sample population. Collected primary data are
rigorously analyzed using suitable techniques to obtain true and reliable results which are interpreted to depict significant findings, offer valid suggestions and draw into an appropriate conclusion. Hypotheses are framed and tested using suitable statistical tools.

**Universe**

The Investors of the Tiruchirappalli District is the Universe of the study.

**Sampling**

In statistics and survey methodology, sampling is concerned with the selection of a subset of individuals from within a population to estimate characteristics of the whole population. Researchers rarely survey the entire population because the cost of a census is too high. The three main advantages of sampling are that the cost is lower, data collection is faster, and since the data set is smaller it is possible to ensure homogeneity and to improve the accuracy and quality of the data. Each observation measures one or more properties (such as weight, location, color) of observable bodies distinguished as independent objects or individuals. In survey sampling, weights can be applied to the data to adjust for the sample design, particularly stratified sampling (blocking). Results from probability theory and statistical theory are employed to guide
practice. In business and medical research, sampling is widely used for gathering information about a population.

**Sampling Techniques**

There are several sampling techniques for getting samples from the universe. For this study convenient sampling technique is used to get samples from the universe. Here from the universe the information about the respondents can be gathered from the share trading centers, share brokers and commodity centers which are situated in the Tiruchirappalli city.

Tiruchirappalli city municipal corporation has formerly 60 wards. But currently the corporation limit was extended up to Thiruverumbur and the total number of wards is increased to 65. For this study, the researcher has taken the old Tiruchirappalli city municipal corporation which is 60 wards and each ward has been given equal weightage of 10 investors. The total sample selected for this study was 600 respondents.

The addresses of the investors were collected from the share trading centers, brokers and commodity centers by their residential area. (i.e., according their wards) and from each ward 10 investors was selected through convenience sampling method.
Sample Size

The total sampling size of the study is (60x10) 600 samples. The sample size was arrived based on the following equation through the Standard Deviation from the Pilot Study.

Sample Size \( (n) = \left( \frac{Z s}{e} \right)^2 \)

- \( Z \) is the confidence level which is 1.96
- \( S \) is the Standard Deviation from Pilot study which is 0.625
- \( e \) is the margin of error which is 0.05

Therefore Sample Size \( (n) = (1.96*0.625/0.05)^2 \)

\[ n = 600 \]

The researcher personally met the respondents and gave the questionnaire and the filled questionnaires were received by personally and through postal, email etc.

Response Rate

The researcher has distributed around 650 questionnaires to the respondents. Out of that the researcher received only 625 questionnaires. After omitting the incomplete questionnaires, a total of 600 questionnaires were taken for the analysis of the study.

Data sources

Since the present study is an analytical and descriptive type of analysis to survey the factors influencing investors and the required data are collected from both the primary and secondary sources. The
secondary data were collected from various sources such as Journals, magazines, websites and dissertations from libraries of reputed educational institutions. The primary data which is the centric point of the study is collected through well-defined and pre tested questionnaire which is supplied.

**Pilot Study**

Prior to final data collection, the researcher conducted a pilot study from 175 sample respondents for pre-testing the questionnaire. After the collection of sample data, the researcher scrutinized the questions given in the questionnaire for consistency, reliability and validity. The researcher also tested the consistency of the statements to know the strong views of the respondents on factors influencing investment. After an in-depth analysis and discussion with experts, the researcher finalized the questions to be included in the questionnaire.

**Statistical Tools for Analysis**

In order to accomplish the objectives of the study, the collected data are classified, grouped and presented in the forms of tables. These data are thoroughly analyzed using relevant statistical tools viz percentage analysis, one way ANOVA, t Test, with the help of SPSS package to generate meaningful results. Results are
interpreted to come out with findings and suggestions. Then conclusion is drawn based on the findings and suggestion offered in the study.

**Analysis of Variance (ANOVA)**

ANOVA allows for the study of a single factor or several factors, but will only measure one variable (*Bray and Monwall 1985, Towncend 2002*). An ANOVA works by measuring the variance of the population in two different ways; the first is by noting the spread of values within the sample; the second is by the spread out of the sample means. If the samples are from identical populations, these methods will give identical results. The basic assumptions for ANOVA are random sampling independent measurements, normal distribution and equal variance (*Towncend, 2002*).

**Chi-square Analysis**

Chi-square association test is a non-parametric test useful to establish an association between two categorical variables. The frequency dumping in each cell of the cross tabs allows identification of the association between two types of heterogeneous groups and also the nature of cases in that particular cell. It also

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exhibits linear by linear relationship, and Crammer’s Phi-statistics to study the relationship.

**T-Tests**

T-tests are used in situations where the research wants to compare two statistics. The basic utility of a t-test is that it produces a straightforward easy to interpret results of significance. In the case of this thesis, two tailed t-tests were used after all other analysis was completed only to note the differences of assumed mean and computed mean directly. The basic assumptions for t-tests- one random sampling, independent measurements, normal distribution and equal variance (*Towncend 2002*). The t-tests were further strengthened by the use of the Bonferroni correction test which uses t-tests to perform pair-wise comparison between group means. It controls overall error rate by setting the error rate for each test, to the experiment-wise error rate divided by the total number of tests. Hence, the observed significance level is adjusted and the multiple comparisons are being made (*SPSS In. 2001*).

**Mann Whitney Test**

In statistics, the Mann–Whitney *U* test is a non-parametric statistical hypothesis test for assessing whether one of two samples of independent observations tends to have larger values than the other. It is one of the most well-known non-parametric significance
tests. It was proposed initially by Gustav Deuchler in 1914 (with a missing term in the variance) and later independently by Frank Wilcoxon in 1945, for equal sample sizes, and extended to arbitrary sample sizes and in other ways by Henry Mann and his student Donald Ransom Whitney in 1947.

**Runs Test**

The runs test can be used to decide if a data set is from a random process. A run is defined as a series of increasing values or a series of decreasing values. The number of increasing, or decreasing, values is the length of the run. In a random data set, the probability that the (I+1)th value is larger or smaller than the Ith value follows a binomial distribution, which forms the basis of the runs test.

**Rank Correlation**

In statistics, a *rank correlation* is the relationship between different rankings of the same set of items. A *rank correlation coefficient* measures the degree of similarity between two rankings, and can be used to assess its significance.

**Period of the study**

The study pertaining about the commodity market covers the period of 4 years are used to gain conceptual knowledge and clarity by referring to the textbooks, study materials, journals, reports and thesis available in various universities and institutions. The final
year is used for the collection and analysis of primary data from the sample population. The study period was 2006-2012.

1.10 Limitations

Any research study always has some limitations under which it has to be undertaken. This one too is not an exception. The limitation can be enlisted as here under:-

- Due to paucity of time and resources, the present study is carried out only among the investors of Tiruchirappalli city municipal corporation.
- Reliability of information collected cannot be maximized to hundred percent in the context of precision as most of the data are collected from various public information sources such as magazines, and website.
- The study is based on the data collected from the sample size of 600 respondents. This sample size may be considered inadequate for broad generalizations when compared to the universe of the study.

In spite of these limitations efforts are made to make the report accurate, genuine, and socially relevant.
Chapter Scheme

The entire thesis is segregated into four chapters for facilitating better understanding and presentation. They are:

Chapter – I: Introduction and Design of the Study: This chapter deals with the introduction part. A brief introduction about the investment process, the factors influencing the investment decision were given along with the theoretical background of the concepts. In the design of the study, statement of the problem, scope of the study methodology, objectives of the study, review of literature, hypotheses to be tested, methodology of the research and limitations are covered.

Chapter – II: Profile of the Study Area: This chapter deals with profile of Tiruchirappalli District which is the study location.

Chapter – III: Analysis of Data and Interpretation: This chapter includes the analysis of collected data and also its interpretation thereof.

Chapter – IV: Findings, Suggestions and Conclusion: This chapter summarizes the findings emerged from the study, suggestions of the researcher, conclusion based on the findings and also a few directions for further research were given.