# Changing Individual Investors' Behaviour at Karachi Stock Exchange: An Evaluation of Relationship between Risk & Return Preferences and Social Structure

## ABSTRACT

The following research was executed in order to analyse the changing individual investors' behaviour at Karachi Stock Exchange; an Evaluation of Relationship between Risk & Return Preferences and Social Structure. For a clear guideline following objectives were designed for the research study; to develop an understanding of investor behaviour under behavioural theory of finance, to identify and explain the key factors that changes individual investor behaviour at KSE, to study the impact of different identified factors on the individual investor behaviour at KSE, to provide suitable recommendations for improving individual investment decision making process at the KSE. In order to achieve the objectives, the researcher collected primary data from different individuals who had experience and were involved in field of investing. Responses were gathered from 558 respondents which were analysed using SPSS by applying the test of correlation to check the relationship between the variables and regression analysis to analyse the impact and also for the acceptation and rejection of research hypothesis. The researcher also collected the secondary data from different online sources including academic and research journals and papers which was also analysed through applying regression.The results of study generated through SPSS shows that there is a significant relationship between the variables chosen including changing behaviour of investors as dependent variable and expected return, risk and social structure as independent variables. Expected Return was measured through risk free return and market risk premium, Risk was measured through credit risk, systematic risk, liquidity risk and risk premium, and lastly social structure was measured through social status and social institutions.The findings also display that the behaviour of investors is influenced by the expected rate of return, risk related to investment and the capital structure of firm.

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# CHAPTER 1: INTRODUCTION

## 1.1 RESEARCH BACKGROUND

Investors play a very vital role in keeping the pace of Stock Exchange higher and also they are the people who take risk and benefit themselves as well as the entire stock market by showing good amount of trading going on. Now this is very important to see that how the behaviour of these investors gets affected by different factors specifically if we talk about the case of the Karachi Stock Exchange. What are the factors that make them invest more and what are the factors that keep them away from investing into the stock market. Considering the importance of this topic we have chosen to research on a specific category of group and individual investors and the factors that influence their behaviour in specific to Karachi Stock Exchange. This study will be very helpful in making the market trends most suitable for the investors specially the factors that will be highlighted in this study. By controlling those factors in the later stage would add on to the market stability and more investment coming on the way.

According to utility theory individual investors select the portfolio that increases their expected utility measured in expected return while decreases the risks or losses. The study on economic theory does not cater to the investor's decisions. Instead it focuses on macroeconomic models that elaborate the mass market behaviour. Both group and individual investors will be focused with the study to take out some better results in order to reach out to few recommendations that can be generalized.Individual investors participate in the stock market by purchasing and selling different stocks and it is very important to identify various economic and behavioural motivations that affect their purchasing decisions. Such factors usually create uncertainty in the minds of these investors due to which the investment is either postponed or cancelled so by studying this phenomenon within this study will help in reducing such factors and making the conditions favourable for the investors.

## 1.2 RESEARCH AIM & OBJECTIVES

This research will focussed on Karachi stock exchange then investors come across the factors which influence their decision. Wealth maximization is based upon the stock purchase decision. Most of the investors' decision is based upon their own will and not based on family and friends references. The basic purpose of the research study was to analyze factors influencing individual investor behavior in the case of the Karachi Stock Exchange. This

research study deals with the decision making process of the changing investor's behavior with the help of various financial indicators. The research will investigate the factors that influence the purchase behaviour of investors in the KSE. The research will aim to develop insights into the behaviour of individual investors to identify factors that influence investors to purchase/sell/hold stocks. Hence, following research objectives will be strived to achieve:

1. To develop an understanding of investor behaviour under behavioural theory of finance.
2. To identify and explain the key factors that changes individual investor behaviour at KSE.
3. To study the impact of different identified factors on the individual investor behaviour at KSE
4. To provide suitable recommendations for improving individual investment decision making process at the KSE.

## 1.3 PROBLEM STATEMENT

The essence of this study is focusing on the investor's changing interest in Pakistan's one of the major stock exchange. The problem statement for this research study focuses on the changing behavior of individual investors in view of their risk and return preferences and also due to the changing social structure of the society. Karachi stock exchange is considered to be having a highly volatile outlook therefore investors' behavior has more reason to change than to remain stable. The market seems to be having attracted more interest of the institutional investors as compared to the individual investors. It is also worth focusing that over the last two decades there has been significant change in the social structure and norms of the society which makes it a very interesting area to explore.

## 1.4 RESEARCH QUESTIONS

This research will focus on few major questions within this study which are as follows:

1. What is the basis of changing investors' behaviour under behavioural theory of finance?
2. What are the key factors that influence individual investor behaviour in KSE?
3. What is the impact of different identified factors on the individual investor behaviour in KSE over the period 1995-2014?

4. What should be the suitable recommendations for improving individual investment decision making process at the KSE?

## 1.5 OUTLINE OF THE STUDY

In the first chapter of the research study, all the introductory aspects were stated along with the research problem and hypothesis. Chapter two of the research involves the literature review which was based on the previous studies and various sections of the literature review will highlight the effect of variables with respect to the past researches in analyzing the impact of various financial indicators on sustainable growth in the economy. In chapter three research methodologies will be stated including methods and techniques. In the fourth and fifth chapter of study, the findings, results and evaluated recommendations will be made on the basis of the data collected and analyzed through various techniques.

### 1.5.1 DEFINITIONS

In this section the definitions of keywords that have been used in this study will be stated which are as follows:

**Individual Investor**

Individual investors are the individual people who spend there savings or money on buying and selling of stocks from stock exchange markets. These are not the firms or group of people who share the risk instead they are individual people who spend there money with all the risks being associated to themselves only.

**Investor Behaviour**

Investor behavior is the type of decisions that an investor makes for his/her investment, like in case of high risk will he be spending money or not, similarly if the returns vary so whether the investor will still be investing or not. Another point is that if a share value is decreasing or increasing in the market so how would an investor react to it and there are many other related factors.

## 2.3 RESEARCH HYPOTHESIS

Hypothesis for this study are as follows:

H1: There is a strong positive relationship between Behavioural Theory of Finance and individual investors' behaviour at KSE.

H2: There is a strong positive relationship between Individual investor's inclination towards investment and social structure of the society.

H3: There is a strong positive relationship between classical wealth maximization theorem and individual investors' behavior at Karachi stock exchange.

H4: There is strong relationship between stock price volatility and individual investor's behavior at Karachi stock exchange.

H5: There is strong relationship between Systematic Risk and changing investor's behavior at Karachi stock exchange.

H6: There is strong relationship between Liquidity Risk and changing investor's behavior at Karachi stock exchange.

H7: There is strong relationship between Credit Risk and changing investor's behavior at Karachi stock exchange.

H8: There is strong relationship between Expected return and changing investor's behavior at Karachi Stock Exchange.

H9: There is strong relationship between Risk free return and changing investors' behavior at Karachi stock exchange.

H10: There is strong relationship between Market Risk premium and changing investors' behavior at Karachi stock exchange.

H11: There is a strong relationship between Social Structureand changing investor's behavior at Karachi stock exchange.

# CHAPTER 2: LITERATURE REVIEW

The second chapter of this research is a literary review which incorporates the information retrieved from the authentic articles, journals and books, etc. This chapter plays an essential role in the study and provides in-depth understanding about all the variables observed in the previous studies. The basic aspect of the study is to analyse the changing individual investors' behaviour at Karachi Stock Exchange with an evaluation of Relationship between risks and return preferences and social structure. The evaluation is based on the evaluation of variables, namely; changing investor behaviour, expected return (risk free return and market risk premium), risk (risk premium, systematic risk, liquidity risk, and credit risk) and social structure (social status and social institutions). The literature review highlights the impact of each variable with respect to changing individual investors' behaviour at Karachi Stock Exchange.

## *2.1 Individual Investor Behaviours*

Individual investment behavior is related to an individual investor making decisions about purchasing a small number of securities from his own account and various decision tools support these investment decisions. Presumably, access to better information sources and market factors carry a huge influence on investors' decisions regarding whether or not to make an investment in a security as well as the expected market outcomes (Jagongo and Mutswenje, 2014). Stock Market performances are unpredictable and so is the investor behaviour. While an investor undertakes investment behaviours, there are a number of factors and prior thoughts that the investor considers before making the final decision. Owing to a lack of general understanding and knowledge regarding investment opportunities and how to

utilize them, research indicates that there is a lot of care and diligence required for making sound investment decisions (Barber and Odean, 2011).

The concept of behaviour finance is relatively new and not all the dimensions of this concept have been studied. According to Dharmaja *et al*. (2012), behaviour finance analyses the root causes behind the decision making patterns adopted by individual investors. Similar to consumer behaviour, behaviour finance argues that investor market behaviours are derived from psychological principles of decision-making to explain why people buy or sell stocks. The aim of the study initiated by Dharmaja *et al*. (2012) was to identify the most prominent investor behaviour and the least prominent individual investment behaviour. The study revealed that accounting information is the most influencing factor for individual investor behaviours while neutral information is the least influencing group of the individual investor behaviours. Certain behaviour traits associated with investment decisions included financial tolerance, emotional risk tolerance and financial literacy which influence the investor's behaviours. These traits are discussed below:

### 2.1.1 Individual Risk or Financial Tolerance

Investors are continuously exposed to risk as some investments pay off well while others do not. Recently, investors have started to manage risk as they feel they should deal with something that is inevitable while making a decision for investment. Financial risk tolerance and financial risk behaviours play an important role in an individual's decision-making process for a potential investment (Barber and Odean, 2011). An individual's tolerance towards risk in terms of a risk-reward trade-off associated with a potential investment needs a careful assessment based on many reasons.

Financial risk tolerance determines an individual's willingness or capacity to endure the negative outcomes that may arise in the value of an investment which might be

completely different than what he expected. Based on continuous market uncertainties, willingness to take risks is considered as one of the foremost factors in wealth accumulation (Jagongo and Mutswenje, 2014). Given the crucial role that financial risk tolerance plays in an optimal decision-making process, various decisions regarding insurance, portfolio allocation, retirement, wealth accumulation and other decisions related to finance and risks entail a primary assessment of the extent to which negative outcomes followed by a finalized decision may be endured. Combining different investors having differing degrees of financial risk tolerance in a pool, financial advisors can help in developing an optimal portfolio (Barber and Odean, 2011).

Kahneman and Tversky (1992) studied risk and return and their work has specifically been targeted at assessing how investors should manage the risk inherent to a decision in investments. According to Kahneman and Tversky (1992), choosing portfolios that are inconsistent with the degree of individual tolerance can lead to stressful situation for the investor who may not be prepared to endure risks. On the contrary, choosing portfolios based on an overestimation of the individualistic risk tolerance while keeping factors such as age and education as constant numerals, can lead to a very aggressive portfolio (Tversky & Kahneman, 1992).

Hence, it is imperative that the correct degree of tolerance needs to be measured and carefully evaluated before portfolio-related decisions are undertaken (Jagongo and Mutswenje, 2014). It was their assessment of behavioural effects that led other researchers to take their thoughts farther and discuss varying perspectives on risk-return expectations. In examining individual risk tolerance levels, it is necessary to assume that financial risk tolerance differs from person to person, and from country to country. It is also to be noted that the financial risk tolerance of investors tends to undergo major changes as they come across different life experiences. However, the measurement of degree of financial risk

tolerance is rather a difficult concept, as it is more subjective than objective (Jagongo and Mutswenje, 2014).

### 2.1.2 Emotional Risk Tolerance

Various research works have been aimed at evaluating the behavioural influences on an individual's emotions in making decisions under risky situations (Collard, 2009). One of the emotions that is most likely to be experienced in case of investment decisions is regret. Decisional regret is a consequence of an investment that did not pay-off as per expectations. Regret in an investment situation, in layman terms, is the sense of loss that is felt when an investor comes across a feeling that he has missed out on joys and achievements related to a successful investment decision (Collard, 2009).

Prospect theory, as stated by El-Sehity *et al.* (2002), explains emotional risk tolerance in a rather elaborative manner that is inconsistent with utility theory. People habitually ponder over their past decisions and make value judgements on its basis. They tend to feel joyous if they recall a past decision that turned out successful and a sense of regret why they undertook a decision that could not succeed. They may think why, in the very first instance, they could not take an alternate route to the investment. Once the decision is undertaken, people think about those moments and ask themselves questions such as "what if I would not have made that decision?", "If only I chose that instead of this…" etc. these thoughts are called counterfactuals since they counter something that had actually happened. Much of the experimental research in the year 1980 dealt with counterfactuals which was largely unknown to have affected investment decision outcomes, earlier than this time (El-Sehity *et al.*, 2002).

There has been a significant impact of counterfactuals resulting from disappointment on prior decisions to the decisions taken in future. Counterfactuals cause a significant impact on the emotional response of an investor as the individual comes across the result of his own

investment decision (El-Sehity *et al.*, 2002). It has also been observed that decisions involving a great risk or intricacy are normally resorted to more disappointment than decisions that are typical. The main idea behind this experience is that while it is easier to do something conventional, a higher level of responsibility entails decisions that deviate from the normal course. In circumstances when an investment decision is perceived to be associated with a negative outcome, counterfactuals are experienced. These counterfactuals give birth to feelings of regret or disappointment since they appear to be more desirable and productive than the actual outcomes of the decision (Duflo and Saez, 2004).

In terms of retirement investment behaviours as well, the influence of counterfactuals play an important role (Duflo and Saez, 2004). While researchers in psychological fields have been coming up with new associations linking decisional outcomes with regret and counterfactuals, it is the individual's responsibility to make informed decisions based on learning about each and every perspective related to the decision. Based on the findings of Duflo and Saez (2004), it was recommended that investors may reduce their emotional anxieties and avoid consequential regret by undertaking following measures:

1. Discipline Management

   Irrational sense of fear arises from short-term emphasis on markets. Investors should rather seek long-term objectives and should have faith that the chosen markets will work. Developing unnecessary fears and anxieties regarding what will happen in future only erupts negative thoughts, and will undermine investor's personal strength and decision-making powers (Byrne and Utkus, 2013).

2. Diversified Portfolios

   As per the traditional finance theory, having a well-balanced, diversified portfolio ensures that risk is not concentrated in any one area, reduces the chances of huge losses and does not engage the brain in an overdrive for no reason. “Do not put all your eggs in one basket” as the old idiom goes, is the best strategy in overcoming unwanted emotional drives (Byrne and Utkus, 2013).

3. Ignoring the Past

   Too much focus on past decisions lead to an undermined capability to focus on present and even on the future. This is very dangerous to the financial stability of an investor. Staying focussed on long-term objectives rather than clinging on short-term failures in the past (called sunk costs), will in turn, hold the investor back from availing underlying investment opportunities (Kelly and Milkman, 2013).

4. Formal Policy Development and Implementation

   A written policy statement is often the best idea to avoid discrepant emotional behaviour at a later stage. Writing down the strategies to adopt along with the ends to achieve will enable an investor in following a predefined and stable pathway while avoiding any emotional baggage that might exist (Duflo and Saez, 2004).

5. Re-positioning

Re-positioning the portfolio consistently will help reduce increasing risk factors while balancing out the probability of inherent risks to predetermined levels (Duflo and Saez, 2004).

### 2.1.3 Financial Literacy

There is a critical need to empower individual investors through financial education and literacy so that their decisions are more logical and informed while based on strong analytical assessment rather than random intuition (Taylor and Wagland, 2013). The governments of Third-world countries need to make efforts in improving their population's skills in financial decision-making and investment analysis. The relative importance of financial literacy is as important and impactful as is normal education to the enlightenment of a human being (Lusardi, 2008). Traditional approaches to financial literacy are somewhat confined to typical realms that do not easily serve the purpose for the contemporary investment behaviors (Kiviat and Morduch, 2012). Economic psychology and behavioral economics give a comprehensive explanation about the effectiveness of financial literacy in improving investors' decision-making ability regarding potential investments. There is a need to have personalized approaches rather than universal ones to improve financial literacy in order to create and enhance effectiveness of investors' investment behaviors (Lusardi and Mitchell, 2013).

The financial environment of a potential individual investor holds more opportunities to control his own finances than ever before hence creating the need to timely identify these opportunities while making the most of it. An unprecedented access to financial services and products has led investors towards a sense of being in control on one hand, while exposing them to new kinds of risks on the other (Taylor and Wagland, 2013). Moreover, the inherent complexities of financial investment market place is more vulnerable to mismanagement and

fraudulent practices than before. It is therefore necessary that potential investors acquire knowledge making good decisions rather than deciding randomly upon a potential opportunity and facing regret afterwards. Under these circumstances, investors' need of making intelligent, logical and analytical judgments is critical than it was earlier (Lusardi, 2008).

For investors, financial literacy and education is linked with welfare-improving behaviors that translates into a more successful wealth accumulation based on more planning and strategic analysis while making an appropriate use of credit (Kelly and Milkman, 2013). This will in turn, lead to the overall greater financial well-being of the investor and will build higher rates of competitiveness in the stock market.

Additionally, from a stock market perspective, better and informed decision-making translates into greater financial well-being that arises from an increased demand for financial products, more competition, increased efficiency and higher transparency (Lusardi, 2008). Financially-secure decisions for investments result from improved financial education which leads to successful reforms in the market as when market operators know their clients will not take mismanagement as an excuse for poor market performance, they tighten their hold on transparent market practices while being more efficient in their deliverance to the public (Kelly and Milkman, 2013).

According to Volpe *et al*. (2002), the online investors are more aware from the current conditions of the stock market and though have more knowledge about the trends as compared to normal investor. The normal investor may sometimes come across with fraudulent acts because of the financial manipulation and misinformation. The researcher has determined the difference among the online investor and normal investor and then evaluated their changing behaviour towards the stock market investments. Form the study it has been viewed that financial literacy varies with the gender, age, income, education and experience

of people. In particular terms women are less literate than men and have same attitude in terms of investments in security markets. The knowledge attained by online users is far high than that of the students or traditional investors. However, the perspective of knowledge is much more dependent upon the level of income. The higher income people have more knowledge about the investment items than that with the lower income and student investors with lower education (Volpe *et al*., 2002).

Based on the three factors discussed above including financial risk tolerance, emotional risk tolerance and literacy, it can be said that an irrational financial decision of an investor can be determined from the behavioural finance which is a combination of different cognitive and behavioural theories. These theories can provide results in terms of financial and economical explanations for the changes in the behaviour of an individual while making financial decisions (Leuz, Nanda and Wysocki, 2003). For evaluating the changes in investor behaviour, most important relationship that effects in decision making is the demographic and financial behavioural factors (Demirel *et al.*,2011). These factors include irrational behaviour, herding, saving perspectives, over reaction, over confidence and people influences.

According to the study of Rekik and Boujelbene (2013), the Tunisian investors do not always exhibit rational behaviour, while investing in the stock markets and taking decisions for investments is also difficult. From the study it was concluded that all the factors of financial and demographic behavioural theories have significant impact on the Tunisian investors and in their decisions. According to Bickhchandani and Sharma (2001), when prices in an efficient market are expected to show the possible information about the investment strategy is not called as the rational behaviour. This can be only made possible with the involvement of past experiences of buying and selling of shares and stocks. However the positive feedback strategy can create high volatility for the investors.

The study conducted by Merilkas *et al*. (2003) was based on the Greek investors and their behaviour in the dealings of stock exchange. The study concluded that the behaviours of Greek investors are dependent upon the economic issues which influence their behaviour and work on diverse variables. The changing behaviour of UAE investors was studied by Tamimi (2006) and it was found that there are six factors which can have significant influence upon their changing behaviour. These are past performances of a company, organized market creations, government holdings, expected corporate earnings, rapid improvement in money and stock marketability.

However there are some factors which have least influencing impact on investors that are opinion from family, minimizing local investments, declining trends of the international financial markets and unexpected situations to economy. Later on, the study conducted by Al-Tamini and Al Anood (2009) found that the literacy rate for financials in UAE is far from the level needed to get aware. The study was basically on the individual investors to evaluate their literacy level and factors to determine which can make their behaviours change from the investment activities. However the investors from UAE are highly knowledgeable towards the benefits based on the diversification and have least knowledge about the financial markets and their types which exist in the UAE financial market. According to Belhoula and Naoui (2011), when there comes difference of opinion and beliefs among investors, then it is highly difficult for the stock markets to manage the equilibrium and collect the beliefs at one forum.

The theory of rational investor has been examined by Somil (2007) which shows that the decision on investment made by an individual is based on the consistent choices, self-interest and maximization principle. Azam and Kumar (2011) concluded that the factors influencing the Karachi Stock Exchange were determined with the changing behaviours of investors. It has been determined from the study that foreign direct investment, earning per share and gross domestic growth have a significant impact on the prices of stock. According

to a survey conducted in Australia by ACNielsen Research (2005) to determine the financial literacy rate among adults, the lower rate of literacy was associated with the people of lower income, unskilled workers, single people, lower educated adults and people with the age profile at their extremes.

Human beings act upon basic instincts which are subjugated in the rationale that any normal individual would try to maximize their wealth and minimize their risks. Based on this premise, an investor would try and come up with a portfolio of investment opportunities which would eventually allow them to earn a respectable amount of profits with the element of risk being minimized. However, in the words of Barber (2011), human beings do not act on the premise mentioned above. Many investors invest in undiversified portfolios when rationale would suggest that the more diversified the portfolio the lesser the risk associated with it. But due to the financial constraints and limited knowledge of a common investor, this does not transpire.

### 2.1.4 Types of Investment Behaviour (Aggression, Moderate, Weak)

There are various investing styles due to the existence of so many investors with different behaviours. These investors therefore fall into one of the three major classifications – conservative or weak, moderate and aggressive (Warne, 2012, 12).

Conservative or weak investors generally feel that they have to safeguard their investments as a top priority. Such investors prefer to avoid risk, especially the potential risk of losing their principal amount or in other words, their original investment, even if they have to settle for modest or weak returns. Portfolios of conservative investors are also majorly made up of bonds such as high rated municipal bonds, treasury notes or cash equivalents such as money market accounts and certificates/deposits. Such investors also do not prefer to invest in stocks which can lose value over the short term (Warne, 2012, 13; García-Crespo et al, 2012, 103). However, if weak investors do invest in stocks, they tend to prefer blue chips

or other such large cap stocks with well established brands as these tend to lose or change value more slowly than other types of stocks and also pay dividend income on a more regular basis.

Moderate investors on the other hand usually wish to increase their portfolio and its value as well as protect their assets from major losses at the same time. For example, moderate investors often use an allocation model which is made on of 10 percent cash equivalents, 30 percent bonds and 60 percent in stocks (García-Crespo et al, 2012, 104). Hence, they also prefer blue chips and other such large cap stocks, they are also willing to invest a modest portion of their original investment in higher risk securities which can include small caps, international stock as well as volatile sector funds as a way of potentially increasing their returns (Anderson, 2015, 5).

Aggressive investors concentrate entirely on investments which have the potential for serious growth and return. These types of investors are usually willing to take the risk of losing their initial investment (at least some of it) based on the expectation/prediction of greater returns. To this end, aggressive investors often dedicate around 70 to 90 percent of their investment portfolios towards stock mutual funds and individual stocks (Warne, 2012, 15). Moreover, small and large cap funds and stocks often form the basis of their portfolios; many aggressive investors usually have significant holdings in more speculative asset allocation which can include sector mutual funds and emerging market funds. Furthermore, aggressive investors are singularly focused on growth and as a result are usually less inclined to hold securities such as bonds which could provide some measure of income security (García-Crespo et al, 2012, 106; Anderson, 2015, 7). Hence, aggressive investing styles are best suited for investors with long terms investing goals – for example of 15 years or more and are also more open to making long term commitments to the stocks that they buy. Additionally, history has illustrated that an aggressive approach to investment combined with

a well-diversified portfolio and the patience to wait for long term returns though a buy and hold investing strategy can lead to the most profits in the long run (Anderson, 2015, 8).

### 2.1.5 Challenges to Changing Investor Behaviour

Financial crisis records have shown that major setbacks are seen in investments during these events with changing perception in investment portfolio. These events have led to grave shocks for investors as they are demotivated to reinvest in stocks, tolerance risks and declining rate of return expectations. The Crisis during 2007-2008 has showed many reasons being dependant on the investors changing behaviours. Such challenges are mainly due to causes of; Regret, Loss Aversion and Herd Behaviour (Lebbe & Rauf, 2014, p.458). The impact seen from above challenges has led many investors to judge their dependency on Financial Institutions, Banks and Company Stock. The attitudes of Investors towards risk-taking trends have seen a downfall and Institutions need to rebuild confidence to attract them into investing more in security markets. Also some studies have concluded that the Regret factor was an increasing phenomenon for shifting away from investments after Financial Crisis by investors. The Financial Institutions should make the market environment more suitable for the investors to avoid their Herd Behavior for complication. The irrationality approach of investors in hasty investments also makes the market more volatile and risk averse as well as decreasing the value of the securities.

### 2.1.6 Disposition Effect

Another phenomenon that has been associated with investor behaviour and the way investors handle their stock portfolio is called, “disposition effect.” According to Kaustia (2010), the disposition effect summarizes the fact that, investors tend to sell of profitable investments soon and hold on to their losing investments. Teachers, finance gurus and

pundits would advise young investors that always reduce losses and try to hold on to the stocks which are doing well for the time being. Yet somehow, due to the disposition effect, budding investors generally try to cash in on winning stock to accumulate wealth in the allure of quick money and somehow end up holding on to the stocks which are, in fact, making a loss for them. Kaustia (2010) further states that due to the disposition, investors do not realize the true value of their investment portfolio, rather such investors normally make decisions on their realized returns.

### 2.1.7 Social and Economic Factors

Kourtidis *et al*., (2011) classified two prominent categorizes when they classify factor affecting the individual investors' investment behaviour, number one being Social factors and second being economic factors. However recent findings have highlighted the importance of social factors over economic factors, in particular behavioural factors. In a similar research conducted by Luong and Ha (2011), the authors tried to find out the correlation between behavioural factors and investment performance in Vietnam. In the research the authors had highlighted five behavioural factors that may impact investment performance, out of the five three factors have shown significant impact on the investment performance. The heuristic behaviours are found to have the highest positive impact on the investment performance while the herding behaviours are reported to influence positively the investment performance at the lower level.

In a separate study conducted by Jagongo and Mutswenje (2014), it was stated that investment decisions are usually derived from the decision tools. Two factors according to the author that impact the investor's decision are information structure market factors. To one person has perfect knowledge about the happenings of the stock market and therefore people take decisions based in the limited information they amass. What is in the hands of the

investors is the quality and reliability of information they gather. As opined by Hussein A. H, (2007) certain elements that investors look into when they try and gather the required information include, expected corporate earnings, past performance of the firm's stock and how marketable the stock is, that is when they plan on reselling the particular stock, will it sell easily in the open market, or due to some unforeseen or unknown reason face difficulty in offloading the stock.

### *2.2 Risk-Return and its Influences of Individual Investment Decisions*

The basic understanding between risk-reward relationships is necessary in the realms of making an informed investment decision. Risk-reward relationship is primarily connected with the consideration that an investment bearing high risk will eventually offer greater rewards as well. To undertake any decision one must first analyse the risks associated to it and then have to calculate the relevant benefits perceived out of that decision. Any venture, either by an individual or a firm, must offer a certain return because rationale thinking dictates that human being are bound to act in a manner where they try to maximize their gains and minimize their risk (Glogger, 2008).

According to Cooray (2003), there are different factors which can affect the decision of an individual for investment which are risk factors, returns on investments, tax factor, and rate of inflation and liquidity on investment etc. (as cited in Shafi, 2014). In the study of Bangladesh by Hussain and Nasrin (2012), there are eight attributes which can have a highly-significant impact upon the investors to get retained. These are people influence, net asset value, opportunities for trading, accounting information, publicity, financial needs, ownership structure, reputation of a firm. These are the factors which can influence the investors to invest in a particular firm.

According to Suman and Dr. Warne (2012), the basic element which can drive an individual for having investment is the saving purpose. The objective of saving influences the person to invest in a particular firm and for that purpose attain knowledge which can be helpful in retrieving essential information for effective decision making. So for that reason annual income and saving is a key perspective of an individual because levels of income can decide the level of savings.

In the present era, people are aware of the stock market position and stability. So the movement in the market is highly affected by the patterns of the investors in the stock market (Suman and Dr. Warne, 2012). In an empirical study conducted by Tseng and Yang (2011), it has been determined that the behaviour of investors in the stock market is dependent upon the past experiences and their relevant outcomes which can directly impact the economic environment of a country. However the study result shows that social perspective cannot create any difference to the stock market participation of an individual in terms of taking risk.

One of the studies incorporates the theory of planned behaviour and risk propensity in order to examine the investment decision making among the students for future investments (Alleyne and Broome, 2010). The involvement of theory of planned behaviour depicts the investment intentions of student based on their long term goals regarding investments. According to Rana, Murtaza, Noor and Rehman (2011), the traditional theory of finance depicts that the prime factor for an investor to invest is the expected risk and return for a particular investment. Based on these two elements, different strategies are developed by the investors so that more return can be attained. The evaluation made for having higher return is the rational behaviour of an investor.

However the study also explores that according to the financial behavioural theory, financial decisions of an investor are dependent upon the internal as well as external behaviour of an individual. In previous years, manipulation in stock markets has been

experienced which shows lack of trust among investors. Such activity has made stock market unpredictable platform for investors as they lack trust which means perception of cheating (Guiso, Sapienza and Zingales, 2008).

According to Ahmad, Ahmad and Khan (2011), Pakistan is ranked lowest among the literate countries about financials. The aspect of risk can be reduced with more awareness and education. The individual investors of Pakistan are risk-averse people who prefer to have capital protection in terms of their profits. The capital protection behaviour has been perceived from the demand of an investor for dividends along with that high equity funds are generated by the Pakistani investors.

According to Kasuya (2003), there are some issues with investors as well at the time of taking risk or getting any advantage. When an investor face loss due to any unseen circumstances of companies, investor put fault to the market and when he attained profit then he credited himself for profit and calculating its own abilities rather than progress of company. The researcher evaluates that decision should be rational and can be done rational with proper consultancy and dealership with the professionals advisors. This is highly difficult scenario in terms of human being and rationality because humans are emotional creatures which cannot stick to one point. In concluding points it can be stated that in the study researcher evaluates the rational behaviour of individual which can positively impact the financial position but when the investor give credits to the performance of financial markets and believe in the power of markets. However negative behaviour can be generated by investors when they perform irrationally without any guidance and come up with herding behaviour (Kasuya, 2003).

Another type of risk associated with investment is called Credit Risk. In the words of Gestel and Baesens (2009), credit risk articulates to the fact that investors have a risk of

losing out on their investment if the institution they invested with defaulted or due to some unforeseen event the brokerage house is unable to pay back to the client.

In article written by Murphy (2012), the concept of systematic risk states that there is a possibility that the entire market system defaults causing a domino or a ripple effect. Basically what this means is that when institutions like a bank or a government may create systematic risk if its absence prevents other firms from using an essential service, called critical functions. Similar fire sales are an indicator of systematic risk. Most of the time systematic risk is triggered under severe speculations or market volatility

One of the most fundamental elements when it comes to associated risk regarding the investment performance is the concept of risk management. According to Berg (2010), risk management encompasses all the procedural process which can benefit an investor manage the impending risk when they make an investment decision. Under risk management, an investor shall first recognize the risk, make relevant assessment regarding whether or not to carry forward with the research, after deciding that the investor shall make subsequent strategies to minimize the risk and maximize the potential profits, and finally the investors shall use resources at hand to initiate the afore mentioned strategies.

According to an article published by Tamris Consultancy (2009), there are three investment risks possible namely, liability risks, performance risks and volatility risks. The definition of risk is contingent upon the person perceiving that risk. For someone, risk maybe the fear of losing a part of their investment due to erroneous decisions or market unpredictability. Yet for a totally different individual, risk may be that their investment did not yield the desired profit levels.

According to a report published by Vanguard (2012), from an investment house stand point, the risk their clients face is multiple, including inflation, profit shortcomings, economic and political issues, and global market upheaval.

Jeremy Hill (2015) in Forbes highlighted six basic stock market risks that every investor should be vary off. Talking in the US context, he stated that the six risk factors that all investors should consider are Interest Rates, Geopolitics, Corporate Earnings, Financial Stability in China, a possible default by Puerto Rico, and the potential exit of Greece from the Euro and European Union.

To make Jeremy Hill's analyses more general, an investor should most definitely be vary and aware of the fluctuations in the interest rates, the second factor that Hill talks about pertains to geopolitics. This can be classified as an extreme case scenario, as international conditions do not deteriorate on a constant basis, however whenever anomalies like the 9-11 terrorist attacks, or when the property bubble burst in USA causing global recessions, do occur the repercussions are drastic. The third point made by hill isolates the biggest economical market for the respective country. If a country's major partner is not doing financially well, the stock market can suffer. And finally the reaming points can be summed up under one heading pertaining to global marketing (Hill, 2015).

In a study conducted by Lee *et al*., (n.d), they tried to figure out the effects of investment behaviour towards investment performance in the Taiwan stock market. This study aims to discuss how investment behaviour and decision factors affect performances of the Taiwan stock market. After using relevant data collection and analysis tools, the authors compiled the following set of conclusion. They highlighted that there was prominent differences on investor decision making, and the markets they selected to invest in. On the other hand, other variables, such as gender, age, marital status, education, career and job lever income, and average amount for quarterly investment appeared not to have significant differences. To conclude the authors mentioned that investor expectations was the lowest variable that affected the performance of the Taiwan stock market.

In the words of Suganya, and Parvathi (2014), the concept of risk tolerance is defined as the willingness of an investor to accept a certain amount of market volatility and uncertainty while making an investment decision. The ability of an investor to tolerate risk is dependent on the age of that person, their financial goals and the desired profits they are looking for.

To understand the risk associated with an investment is both critical for the service provider and the investor himself. The study revealed that more number of respondents belong to the Medium Risk Tolerance Level. It is also revealed from the study that the demographic factors such as Age, Occupation, Annual income, and Portion of income invested in equity are few of the factors associated with the Risk Tolerance Level of Equity investors (Suganya, and Parvathi, 2014).

### 2.2.1. Types of Risks in Pakistan

*2.2.1.1. Inflation risk*

It is a systematic risk which lessens the real return for the stock market because of the decreasing purchasing power of the returns. Usually, inflation have a negative impact over investment, however, in some cases inflation can results in yielding higher returns.

*2.2.1.2. Interest rate risk*

It is the type of risk that lowers down the returns due to the changing prevailing interest rate. It can affect the stock market and securities in different manner. For instance, the price of the shares can vary inversely to intersect the rates of the shares and vice versa.

*2.2.1.3. Model risk*

This risks usually occurs when the pricing models are not accurate, or under the circumstances where the mathematical simulation of risks are not accurate and are misleading.

*2.2.1.4. Tax risk*

It is the types of risk in which the taxing authority changes the taxation laws which have a negative impact over the investments in the stock markets. Higher taxes results in the reduction of investment incomes, and in turn reduces the real return, and lower down the investment prices within the stock market.

*2.2.1.5. Market risk*

It is the risks which occur due to market conditions and it can have a negative impact over the investment returns.

*2.2.16. Foreign exchange rate risk*

It is the type of risk in which the value of the foreign investment has an adverse impact over the changes in the foreign exchange rate, which in turn have a huge impact over the decision of the investors.

### 2.2.2. Determinants of Investment Risks

*2.2.2.1. Past Market Trends*

The past market trends have an impact over investors decisions therefore it is essential to understand how the various asset classes have previously performed before investing in the market.

*2.2.2.2. Investment Horizon*

It is the amount of time for which the investment can be kept in the market, the longer the time horizon for keeping the investment the greater the returns over the period of time. The element of risks reduces by the passage of time.

*2.2.2.3. Investible Surplus*

It plays a vital role in the selection of the various asset classes as the minimum amount for investments in stock market differs in different countries and so does the risk and expected returns.

### *2.3 Expected Returns*

According to Shafi (2014), the main focus of the individual investor is on the expected returns, dividends and the stability of a firm. This analysis is necessary for an investor because it can make it easier to make decisions for both risk takers and risk averse investors. The investors who deal with the capital appreciation cannot go with risk taker act and invest with the criteria of making more profits and returns and work for dividends. Based on the empirical study of Baker, Hargrove and Haslem (1977), the element of risk and return are the basic preferences of investors which can be evaluated on rational basis. This is because risk and return trade-off has to be taken into consideration. The behavioural finance discipline has provided significant factors which can describe the behavioural aspects of investors and may lead to have positive decision making in investments.

The relationship among the risk and return factor has a positive impact on the individual investor. However risk associated with wealth has strong association with each other that is lesser risk and higher return which can improve the wealth of an investor (Zeller and Stanko, 2005). The aspects of risk and return have direct impact upon each other that is

higher risk, higher return and lower risk, lower return. With the involvement of undesirable risk it can be evaluated that there exist a positive relationship between risk and return because it includes the expectations of total profits in result of capital appreciation (Shafi, 2014).

According to the view of numerous researchers, institutional investors are the well informed investors which are capable of providing informational advantages (Dobric, Frahm and Schmid, 2007; Erdogan and Ozlale, 2005). This is based on a fact that many of the investors deals professionally by getting awareness of different trends and activities which are in process currently. They also evaluate the market trends and analyse the status of companies, so that investment made can be profitable and effective. The benefit of institutional investor is that he can plan out its strategies based on the market trends. However, Pakistani investor has lower knowledge towards the informational advantage and financial literacy.

The importance of financial literacy has been stated by Guiso and Spienza (2005) that effective decisions can be made by financial literate person and in depth understanding can be created towards behaviour of stock market. In the diversification portfolio of Pakistan, the basic drawback is the financial literacy. The scenario of market cannot be justified regarding expected returns, current trends, beating element in markets and reaction towards the public information etc. the financial literacy can basically generates the confidences among investors and develops positive attitude among their behaviours (Ahmad, Ahmad and Khan, 2011).

According to Tabassum and Pardhasaradhi (2012), the most critical factor in making a decision process for investment for every investor is to determine the involvement of high risks and uncertain returns. Basically there were 40 attributes which were taken into consideration by the investors at the time of investments and in buying decision process. The higher worth attribute was listed at higher rank for the convenience of the investor. However,

in the study of Tabassum and Pardhasaradhi (2012), which was conducted in India to evaluate their trends and patterns for the investors and their changing behaviours towards investment, the 40 attributes were then reduced to 10 attributes in order to attain effective results. Some of these 10 attributes, which were used to evaluate the current situation of investor's behaviour, are social responsibility, maximization of wealth, accounting information, perception about brand, individual eccentric, and minimization of risk and expectation of financial factors.

One of the major concepts associated with expected return is that of Return on Investment. ROI is widely used by finance officers in the business world and it allows the organization or the investor to conclude that return their investment shall yield. By using the information available and making informed decisions, an investor can largely predict the investment return of the future (Botchkarev and Andru, 2011).

The trade-off between risk and the expected return of an investment is an age old question and according to Cascante (2009), empirical data has still not been able to give a definitive answer to the relationship between risk and return. One of the major reasons for this indecisiveness is the unpredictable nature of the market and the constant volatility risk factor associated with it.

According to Glogger (2008), risk can be classified in to market and unique risk. Furthermore the return that an investor expects consists of a risk free rate and a risk premium. Hence the author summarized that the expected return on an investment directly depends on its riskiness. One method where the associated risk can be minimized is through having a diversified portfolio of products.

According to Wang, Yan, and Yu (2015), there has been sufficient data from past studies and researches to conclude that there is a positive relationship between risk and expected return, however with the turn of time, new data has emerged proving the old notion

wrong and stating that there is in fact there is a negative relationship between risk and expected return. Therefore keeping this argument in mind, Wang, Yan and Yu (2015) decided to test their theory that in organizations where investors face prior losses the risk and return relationship is negative whereas in firms where the investors have gained prior profits the relationship between the two variable is positive.

Many researchers have in past tried to come up with solutions pertaining to the phenomena regarding risk free return on investment. However this is a hypothetical analogy as researchers have failed to come up with something that is risk free and provides a return to the investors. The phenomena of risk free return argues that, an investment is free from all sorts of risk and yet provides a return to the investor.

The other phenomena or the alternate to risk free return is risk premium. According to Aswath Damodaran (2012), market risk premium is essential to every financial model that is formulated. Risk premium is associative to the fact that the higher the risk the higher the return. There are a few economic indicators and factors to risk premium, they are: investor risk aversion, information uncertainty and perception of macroeconomic risk. Furthermore, Damodaran (2012) states that by studying risk free return and market risk premium, the investor can calculate expected return of any investment. Thus, the expected return on any investment can be written as the sum of the risk-free rate and a risk premium to compensate for the risk. Recently, the equity risk premium (ERP) has also returned to the forefront as a leading indicator of the evolution of the economy, a potential explanation for jobless recoveries and a gauge of financial stability

### 2.3.1. Determinants of Expected Return

There are many factors which impacts the investors' decision for investment in any asset market. Expected return is one of the key factors among them and investor tend to know

how the profit will be received and what will be the return against their investment. For knowing such factors, investor observes some determinant which can cause them the higher or lower returns against their investment. Generally, investors require information and knowledge before making the investments on short or long term basis in the equity market. Usually they may be interested to utilize the ratios of relative valuation as the determinant of expected returns against their investment on short term basis particularly the returns expected in next few months or within a year time frame (Jagannathan and Suresh, 2015). Following are such ratios which are defined as the determinants of expected returns by the author:

- Price to Earnings Ratio
- Price to Book Ratio
- Price to Sales Ratio
- Price to Earnings Growth Ratio

#### *2.3.1.1. Price to Earnings Ratio*

The research by the author Mayur (2014) found that the consequent prices will rise and subsequent returns will decrease responsive to the increase in the Price to Earnings Ratio, in large businesses.

#### *2.3.1.2. Price to Book Ratio*

Similarly, according to the Hillard and Zhang (2015), examination of the size and price to-book impacts in stock markets and identified that there is a relationship among the price to book and expected returns. Furthermore the researchers found the strong indication of effects of size of the firm on the investment decision of the investor however there is a weak relation between the price-to-book ratio and investments.

#### *2.3.1.3. Price to Sales Ratio*

Moreover, while studying the determinants of expected returns on the investments, Jagannathan and Suresh (2015) showed that the relationship between the expected returns and intention of investor for making investment in shares market is slightly weaker in short term

basis. However, the association between these variable can vary in different scenario and the investments in long term basis.

#### *2.3.1.4. Price to Earnings Growth Ratio*

In the same context, the research by Jagannathan and Suresh (2015) found the relationship between the Prices to Earnings Growth ratio slightly weak and insignificant in immediate results, however, in the long term investments it can vary and impacts significantly.

### 2.3.2. Types of Expected Return

Investors usually look for the returns which they will get against the investments made by them. Such returns can be in shape of cash or the additional shares equivalent to the amount of their dividend. The expectedness of returns has a high interest among the market practitioners which also has the significant implications for asset valuation (Golez, 2011). According to Masum (2014), the returns against the investment are usually offered to the investors in terms of cash which is known as cash dividends. Furthermore, another type of return which an investor can get is the share dividend or stock dividend; it is regarded as the return of investment by the company to their investors in the form of additional shares.

### 2.3.1. Challenges to Risk and Expected Return in Pakistan

The expected returns for any investors are the basic demands of high profits earned when they invest into commodities. While this is a global phenomenon there is no difference observed in Pakistan where the main challenge is the Uncertainty investors' face in security markets. This has become the main reason as to why many investors have become reluctant to participate in the market activities.

It sometimes becomes impossible for Financial Institutions as well as Investors to determine the worth of the investments especially if they want high returns with less risk

involved. Many Financial Institutions have restricted their activities that involve substantial losses of risk.

As Researchers Nasr and Shafiq (2010) stated that Pakistan has many types of risks involved in its security market which are mainly consisting of Liquidity, Interest rate, Foreign Exchange and most important the Credit Risk (as cited by Nawaz, Daniel & Nazir, 2012,p. 115). Therefore the main determinant to overcome the challenges involved in Risk and expected return would be to identify the uncertainty that exists in not knowing the consequences.

Reinvestment rates may also prove to be an element of uncertainty as in many situations due to changing Government Policies and Regulations of the market; financial Institutions, Banks and Companies are vulnerable to unknown effects. The effects of long term rate and short term rates vary on the decisions that institutions make, as our economy shows instability.

Therefore, also the uncertainty of stock prices at expected prices and premium prices may also affect the investor's reluctance in reinvesting into the market. Implementing the Management of Risk techniques by Financial Institutions has to be practiced to avoid the losing the trust of the investors in the security and commodity markets. This means that consistency should be shown throughout the investments and its expected returns to assure the Investors as safe and notable return. Also due to volatile circumstances existing in the markets, It becomes difficult to handle the outcomes if not in the investors favor.

### *2.4 Influences of Social Structure*

According to Schmidt and Sevak (2006), social structure plays a significant role for evaluating the investment behaviour in the stock market. Social and demographic factors are

essential elements for controlling the characteristics of individuals. Based on these factors it has been evaluated from their study that participation of women for investment is lower than men. In the study of Kabra, Mishra and Dash (2010), different demographic factors are evaluated which can have significant effect on the investment behaviour, these are gender and age. The capacity of investors for taking risk and making decisions can be determined with the help of these factors. In this category, modest and groomed people are included and are the reason for the stability and growth of the market with the incorporation of initial public offerings. The modern investors evaluate the market forts and makes decisions according to the preferences of risk factors (Kabra, Mishra and Dash, 2010). There are numerous factors which are impacting the individual behaviours of investor, which are influencing their decisions (Forbes and Kara, 2010).

According to Copeland and Tufano (2004), the sustainability of financial needs is dependent upon the satisfaction of people in their social circle in terms of their needs. The basic intention of investor is on the economic gain that ultimately supports the financial gain and can have different practical benefits in the social structure. In the study of Wiedemer *et al*. (2010), it has been viewed that social interference can have significant impact on the investment behaviour of an individual. Basically demographic factors are used to interpret the financial and economic facilities. Based on these factors a need of an individual investor can be appropriately evaluated. The savings of an individual like bonds and stocks can depict the lifestyle measures in a society. Some people are more inclined towards savings but are also following different people in their social circle so they are somehow getting distracted from the profitable investments.

The demand for the social information is essential for the individual investors, as mentioned in the study of Epstien (1994). The result of the study stated that annual reports are playing significant role in defining the position of companies to the respective corporate

shareholders. This will also helpful for the environmental activities of the company including safety and quality controls. According to Demirel and Suleyman (2011), the investment decisions are mostly affected by unconsciousness and emotional elements which can lead to have non-optimal decisions. It has also been evaluated that financial behaviour has been affected by financial decisions that came across due to the gender interaction which includes biasness, irrational way of thinking, over confidence and over reaction etc.

According to the study of Alleyne and Broom (2010), the investment behaviour of an individual is highly dependent upon the attitudes and behaviours of friends, peers and other significant relationships. Their beliefs and thoughts about the opportunities and difficulties in investment depicts their intentions towards invest. In case of students, these relationships like as friends, peers and elder relatives are the absolute predictors of their behaviours and intentions towards various approaches. The study of Demirel *et al*. (2011) was based on the association between demographic factors and its impact on the individual behaviours of an investor. From the study, it has been viewed that there are several factors which can cause changes in the investor behaviour and these are basically caused by the social influence which are biasness, level of savings, over confidence, irrational behaviour of thinking, and irrelevant advices by the peers that distract from the particular investment.

From the study of Kaleem, Wajid and Hussain (2009), it has been determined that in management portfolio of Pakistan, financial advisors have a strong impact on the changing behaviours of an investor. Along with that based on study results, the significant factors which can have strong impact on the determination of investors style of investment includes level of education, income, language, age, etc.

Another factor that has been discussed previously is called Herding. According to Anderson (2009), herding refers to the influence of other entities on the investment decisions that individuals make. There are various reasons why herding takes place; one of them is

social reasons for which a sense of conformity to the larger public compels an individual to herd. Following a group and blindly adopting the same investment behaviours as those members do leaves on the mind of an investor that he will be an active part of the group that may be quite attractive or lucrative in terms of gainful returns from the investment (Anderson, 2009).

In the words of Shafi (2014), the most common factors influencing the investment behaviour of individuals can be classified into four broad categories: social, psychological, economic and demographic. Each of the following headers mentioned have various sub headings as well. Two of those major headers and their sub heads discussed here are related to psychological and social domains. Shafi (2014) mentions that under the psychological factors the various following aspects need to be considered, namely: cognitive bias, irrational thinking, confidence (over or under), get rich quick and overreaction. Cognitive bias resonates when individuals have limited information and they try to make sense out of what little they have and in doing so, they end up misinterpreting certain aspects. A similar aspect can be observed under the context of behavioural finance, where investors make limited sense out of the information they are presented with and mould it in a way which suits them thereby making a mock reality based on their assumptions (Shafi, 2014).

Similar to cognitive bias is irrational thinking, where the investors expect too much from their investment decisions. Sometimes investors tend to get over confident about their investments, and make hurried decisions and sometimes the complete opposite can take place, as investors under estimate their credentials and end up missing on an important window of opportunity (Shafi, 2014).

Shafi (2014) points out that there are various aspects that affect the behaviour of an individual during investment decisions. The author states that some of these factors impact the investors decisions in a significant manner while some of them can be neglected or have

lesser impact on the investment behaviour of the individual. The most common determinants that have a significant impact on the investors' behaviour include tendencies of herding, over-reaction, cognitive bias, irrational thinking, confidence (over or under), gender, age, income, education, risk factor, dividends, influence of people's opinion (friends or family), past performance of the company, mental accounting practices, accounting information, ownership structure, bonus payments, expected corporate earnings and the internal desire to become rich and influential.

A research conducted by Pal and Mittal (2011) on the Indian stock exchange market tried to determine whether macroeconomic variables like inflation, interest rates and exchange rates affect the conditions of the stock exchange. By using extensive data, they concluded that inflation had significant impact on the stock exchange market of India. In a study conducted by Ansari and Moid (2013), the correlation between age, gender, and income with investment behaviour was highlighted. They concluded that young professionals' investment behaviour was independent from the influences of gender; that is to say each gender showed similar results towards investment behaviour. However, significant difference was observed when the relationship between income and age studied in the context of investment behaviour. The data analysed here depicted that both income and age played a significant factor in the investment decisions of the young professionals.

In a separate study conducted by Bennett and Levy (2009), the authors discussed the investment function at the firm level which was dependant not only on the usual economic and financial factors, but also on parameters related to the poverty and vulnerability of the entrepreneur's family. The conclusion of this study highlighted that the number of family members to feed, average family income and the needs and wants of the family members significantly impacted the investment behaviours of individuals (Bennett and Levy, 2009).

Societal factors like friends and family members, society trends and perceptions play a vital part in an individuals' investment behaviour. A young investor will look upon the family needs and requirements before making an investment decisions. Maybe the capital needed for making the investment is required to complete the designated needs of the family. Most of the times family members and friends tend to advice individual investors regarding what to do and how to invest their capital (Bennett and Levy, 2009). In some cases, peers' and family's help can prove to be relevant and provide additional information and acts as a window of opportunity to the respective investor. Yet sometimes this information can also lead to disastrous effects and under peer pressure, the investor ends up taking ill-judged decisions

### *2.4.1. Types of Social Structures*

#### *2.4.1.1. The Universalistic-Achievement Pattern*

It is the combination of the value patterns that sometimes oppose to the values of the social structure that built regarding the community, race, and class. It favours status determination keeping under consideration the generalised rules that independent of an individual's achievement

#### *2.4.1.2. The Universalistic-Ascription Pattern*

In this type of social structure the value orientation is dominated by the elements of ascription, and strong emphasis is given to the status of the individuals residing in the society rather than focusing over the achievements.

*2.4.1.3. The Particularistic-Achievement Pattern*

It is the combination of the achievement values of an individual with particularism. It emphasis over achievement of the individual which leads towards the development of conception towards a proper pattern of adaption

*2.4.1.4. The Particularistic-Ascriptive Pattern*

It is a type of social structure which is organised around the relational references point that revolves around local community and kinship; however it is quite different from particularistic-achievement type as it focuses more towards a system that is actively organised.

***2.4.2. Determinants of Social Structures***

*2.4.2.1. Economic Factor*

The economic crisis and unstable economic condition of the Pakistani market have a major impact over the decisions of the investors to invest in the market.

*2.4.2.2. Political Factor*

In a social structure state is the most powerful organisation, as it regulates the social relationships. The state possesses the power of regulating, and changing laws of investments and expected returns. This can have a major impact over the decision of the investors.

***2.4.3. Challenges of Social Structures***

*2.4.3.1. Low Foreign Direct Investment*

Due to the unstable market conditions investors hesitate to make huge investment in the stock market of Pakistan. The have an impact over the lifestyle of the people in the longer run, as the social structure of the society is disturbed and society does not progress.

*2.4.3.2. Depreciating Currency*

The depreciating value of the currency have a negative impact over the investing decisions, which directly have an impact over the social structure as due to low investment market does not grow which results in disturbing the established social structure of the society.

## *2.5 Theories of Investor Behaviours*

### 2.5.1 Regret-Theory or Regret-Aversion Theory

The basic postulate behind regret theory is that people anticipate regret in making an investment and takes this regret into consideration at the time of making decisions. When people realize they have taken a decision that was a faulty judgment, the extent to which they face an emotional reaction is a useful consideration in the domain of investment behaviors. When investors purchase stock, they fear emotional consequences in case of selling the stock afterwards (Suman and Warne, 2012). They may be avoiding the sale of stock in a manner that a bad investment results in sheer embarrassment and disappointments. Regret theory also considers the situation in which an investor may buy a stock that eventually does not go up in its value; hence, the investment strategy in this regards would be a use of conventional wisdom or go for popular stocks that other investors are confidently purchasing. The main rationale they put forward behind such a purchase is that "everyone else is doing it as well". In this case, investors may rely on their familial relationships or on friends, and exhibit less

risk-averse tendencies. The theory is much different to other risk aversion models because it treats forgone gains and does not represent any consideration with recognition of a potential loss (Suman and Warne, 2012).

From a rather pragmatic point-of-view, the applications of regret theory might be quite limited since in assessing the viability of a potential investment option, various feasible strategies have to be brought into consideration (Suman and Warne, 2012). In volatile stock markets such as the situation in Karachi, emotions undoubtedly play a major role in investor psychology and underlying relational responses towards available options. Under these volatile situations, it is futile to believe that people will behave rationally and will be emotionally-detached from the decisions. A possible reaction towards regret theory results in a behavioral tendency called investor herding, in which an investor may invest in high-acclaimed companies realizing that in case a regretful circumstance occurs, these companies will provide insurance against the loss. Hence, in this case, as described by (Suman and Warne, 2012), investors' herding behavior is positively related to regret aversion.

### 2.5.2 Theory of Mental Accounting

Richard Thaler's (1983) concept of mental accounting is basically an economic concept that is based on a proposition that customers divide their assets into portions that are separate from each other. In doing so, individuals assign different utility levels to each group and then make decisions with regards to consumption (Thaler, 1999). An example of mental accounting can be the sale of an investment that once had huge gains, while now its gains may be somewhat modest. During periods of an economic boom, people are more prone towards healthy gains from selling investments and may not bother about money-based profits (Thaler, 1999). However, during recessionary periods, when market volatility affects investors' net worth, they are hesitant towards selling an investment for small profit margins.

Based on the gains earned during a certain period, these investors wait for the gainful period again and may delay the selling of investment options (Thaler, 2008).

Mental accounting considers the reference points that investors set for determining the potential losses and gains for an investment (Thaler, 1999). Using a set of cognitive operations, an investor tends to assess and evaluate the feasibility of different activities. Different concepts and examples can be given to define how mental accounting works in daily lives. For example, without thinking how illogical it may seem, many people keep a money jar somewhere in their room while carrying enough money in their credit card (Thaler, 2008). They may save money in the jar for a new project, new car purchase or simply to go on vacations next summer. In the same way, it brings about considerable bias in investment decisions where investors are likely to divide prospective investment options into two groups: speculative and safe portfolios. This is done in order to prevent negative returns from speculative portfolios from causing any effect on the entire portfolio containing investments that are entirely safe (Thaler, 2008).

### 2.5.3 Prospect/Loss-Aversion-Theory

Kahneman and Tversky (1979) defined the prospect theory as an alternative to the utility theory by contending that people seem to underweight the probable outcomes in comparison with other outcomes that were achieved with certainty. Another possible angle to their theory is that people are not as happier by potential gains as they are stressed or disappointed by prospective losses (Abdellaoui *et al*., 2007). In this case, the magnitude of a prospective loss will appear to be of greater significance than a potential gain. It also gives an explanation against the behavior of an individual investor as to why he would be more willing to avoid losses than to achieve gains. The loss-aversion theory explains why individual investors will hold their losers while selling their winners (Abdellaoui *et al*.,

2007). In this realm, it is often a common mistake to chase the market and invest in stocks just because the others are doing it (Kahneman and Tversky, 1992). Some important implications to behavioral finance can be explained by the prospect theory such as the benefit incurred from a gainful action is in no manner comparable to the feeling of loss incurred from another action.

### 2.5.4 Over/Under Reacting Theory

Over or under-reaction towards individualistic investments has a significant implication on how individual investors will react in comparison to studying their behavioral tendencies and reactions towards investment opportunities (Jagongo and Mutswenje, 2014). In circumstances of an under-reaction, investors tend to be somewhat conservative towards a new prospective investment if they think it is inconsistent with prior beliefs that seem to be psychologically impacting their decision-making ability. On the other hand, investors give more attention towards investment options that are prominent and are quick attention-grabbers. A heavier weightage to this information leads the investors towards forming new beliefs that will eventually lead them to an over-reaction (Jagongo and Mutswenje, 2014).

Similarly, when markets perform positively, investors would be optimistic that a good time will continue to prolong, while on the other hand, economic turmoil or resulting recessions tend to make them pessimistic and disappointed towards the outcomes of the market. This psychological behavior leads the individualistic investors towards ignoring historic data on the options, and rather blindly trusting the information present before the eyes. Extreme cases of market over or under reactions will eventually lead the markets towards crashes or collapses. Resultantly, inefficient market performance gives a perfect

opportunity to investment sellers for minting money and making the best use of mis-priced securities (Jagongo and Mutswenje, 2014).

### 2.5.5 Theory of Overconfidence

Overestimation of the precision of one's abilities and knowledge leads to a situation of over-confidence. In the perceptions of investors, their investing abilities are on an average in relation to others; this can probably lead them towards overconfidence as they believe they had the ability to time the market (D'Acunto, 2013). In reality, however, overconfidence is not beneficial to anybody as it leads to excess trades and inefficient profit practices by money-minters. While a lack of confidence is paralyzing, over-confidence is even more danerous. This is because these types of investors spend more money while gaining less in comparison since their behaviors contradict with those harboring the buy-and-hold strategy. Without using their prudence and market information in calculating time-weighted returns from each investment, these investors rely on their own brilliance which often, does not result in positive returns (D'Acunto, 2013).

## *2.6 Individual Investors' Behaviours in Different Stock Markets of the World*

### 2.6.1 Investor Behaviours in Pakistani Stock Exchanges

It is very necessary to gain some important insights regarding Pakistan Stock exchanges (especially Karachi Stock Exchange) for understanding the equity markets of Pakistan. The stock exchanges of Pakistan consist of three stock exchanges known as: Karachi Stock Exchange (KSE), Lahore Stock Exchange (LSE) and Islamabad Stock Exchange (ISE). KSE is considered and known as the most liquid and the best stock exchange in terms of performance in Pakistan. The work of the KSE started with an index of just 50 shares. As the business and economic conditions had increased considerably, a need

for enhanced and revised index became necessary. This is the reason why after this particular development, KSE-100 Index had been introduced on November 1, 1991. Since this period, it had then been gained recognition as the most famous stock exchange in Pakistan (Aamir, Zainab & Nadeem, 2014).

KSE-100 index has worked as a benchmark in order to have a comparison of the prices of shares for different companies over the period of time. In this particular index, all those companies that have the highest capitalization in the markets get selected. As the organization that is having maximum capitalization from each and every sector is even selected in this index for having a representation of the entire market. Since 1991, foreign investors' had also been given an opportunity by the Pakistani Government to operate and then have a trade in Karachi Stock Exchange along with other domestic investors. Since its birth, KSE has performed in a very efficient and effective for the entire group of investors. The average turnover of shares on daily basis is 525.15 million and the overall market capitalization is about US $ 54.28 billion. In 2002, KSE was awarded the best performing stock exchange in the world by the famous global magazine namely 'Business Week'. Since this time, KSE has consistently maintained its reputation as one of the best performing stock exchange in the world (Zeshan, Mian, Kaleem & Asma, 2013, 5).

### 2.6.2 Investors' Behaviour in the Athens Stock Exchange (ASE or ATHEX)

From the perspectives of an average equity investor, the market behaviour in Athens Stock Exchange market shows that individual investors speculate market factors from news and media channels while listening to the noises in the market (Jagongo and Mutswenje, 2014). Professional investors seem to be more inclined towards technical analysis of a prospective investment opportunity rather than engaging in an overall analysis of the entire portfolio. The performance of professional is directly linked with the market ups and downs

and there seems to be a lack of sophistication in the investment behaviours of uneducated investors (Merikas *et al*., 2011).

Recently, Greek debt crisis had a profoundly adverse impact on securities market resulting in lower degree of investor confidence and trust in the stock exchange while the fluctuations of the market was seen critically before making any decision. In such a circumstance, investors in the professional arenas became highly sceptic of the market performances, and in turn, used a greater extent of prudential mental accounting and prospect theories' implications in assessing the feasibility of their decisions (Merikas *et al*., 2011)

### 2.6.3 Investors' Behaviour in the Indian Stock Exchange

In accordance with the theories presented by economic theorists, investors' usually and then behave in a rational manner when they try to purchase and sell stocks. Usually, it is presumed that the investors' need to utilize all the information available in order to have rational expectations during the investment decision making. In real terms, individual investors do not actually try to think and then have a rational behavior. This is probably due to the nature of the uncertain stock market transactions' that occurs. The Indian Stock market, in this regard is usually considered very volatile, highly sensitive and reactive towards the news which is very shocking. Similarly, Indian market also demonstrates some resilience as well and then it gradually recovers' as well after experiencing high amount of shocks (Abey, 2012).

Often, the role and significance of individual investors and their overall trading behavior in the Indian stock market is not discounted. It is assumed that the trading behavior of the individual investors, very rarely creates an influence on stock prices. Though, there is a need to conduct an analysis regarding the determinants of the individual investor behavior of the stock market in India. Currently, India is having favorable level of demographics and a

rapid growing economy, but investors' are still struggling to make a mark in the financial markets of India. Though, it needs to be seen whether the coming years will create enough opportunities for the individual investors in India (Kyle, 2014).

### 2.6.4 Investors' Behaviour in US Stock Exchange

The US stock market comprises of a very famous Stock Exchange known as New York Stock Exchange (NYSE). It was the first stock market that was developed in the USA in the year 1792, having very old roots. NYSE is also the largest stock exchange in the world in terms of the overall market capitalization. The combined level of the capitalization of all the companies that are listed in the NYSE as of May 2009 is $10.4 trillion. There are around 419 billion stocks which are traded every year, having an average price of $24.87 per share. The financial condition of the USA is usually judged by the performance that has occurred in the New York Stock Exchange (Graham, 2009, 62).

The investment into a very unpredictable, unstable and the facets which are uncontrollable can have extreme level of risks. Like the lottery, the stock markets' success is very much dependent on the luck factor. It often leads to a loss of very big amount for many people. During the 2008 Global Financial Crisis, there were many investors that had lost billions of money in the New York Stock Exchange. It is very important to make very intelligent decisions, during the stock market transactions as investment in the stock market enables earning reasonable level of capital gains, stability and security as well. Though, the US Stock markets especially the New York Stock Exchange, which is very famous all over the world, provides lots of opportunities' to the investor because of high volume in the market capitalization. Therefore, NYSE will continue to remain an important financial center in USA (Graham, 2009, 62).

### 2.6.5 Investors' behaviour in Chinese Stock Exchange

Chinese stock markets are in their infancy, which is why the investors are less experienced in Chinese stock investments as compared to other capitalist-oriented economies. Investors' in China are hardly influenced by the economic booming of the country, and a smooth stock market performance is observed on an average (Yao *et al*., 2014). However, there have been speculative influences on the Chinese investors and in general trading activities. A number of behavioural biases in Chinese stock exchange have been observed that influence the manner in which individuals make investment decisions in the stock exchange, including factors such as over-confidence, herding, and an overall inclination towards disposition effect that had often led them towards poor decision-making (Lucarelli and Palomba, 2007).

While these investors often make trading mistakes, it has been observed that enhanced experiences bring remarkable improvements in the manner investors undertake investment decisions (Yao *et al*., 2014). Because of an emerging market, the education of investment processes for better quality decisions amongst the investors is an immediate challenge lying ahead. Without educating potential investors, there will be a certain degree of psychological effects or cognitive biases that will only be rectified or minimized with an enhanced level of sophistication in investors' decision-making abilities (Yao *et al*., 2014).

In a nutshell, Chinese stock markets are highly impacted by emotional characteristics of individual investors that sometimes lead to irrational behaviours and misjudgements. There has been a limited impact of the initiatives of policy-makers in improving market performance with the introduction of legal protections for shareholders and the opening-up of the Chinese Stock Markets to foreign investors, however, the future looks promising for the Chinese stock markets which will eventually result in far-reaching impacts on individual Chinese investors (Lucarelli and Palomba, 2007).

## 3. RESEARCH METHODOLOGY

### 3.1 METHOD OF DATA COLLECTION

The proposed research will adopt combined research design i.e. qualitative and quantitative because it will allow the researcher to perform objective, as well as subjective investigation of the research issue. Under a deductive approach, the research will collect primary data through a questionnaire survey to be conducted with a sample of 500 respondents comprising of individual investors, brokers, and market analysts of the KSE. The research will use SPSS to perform suitable statistical tests to examine the impact of certain factors on the individual investor behaviour in KSE. The proposed research will used primary sources to collect first hand or primary data on the identified research problem. In addition to this, the study will use secondary sources to collect information on the research topic. Secondary sources will include e-journals, research articles, text books, government publications and other online and offline mediums of information. In addition, the study will also collect information through interviews from bank branch managers, from internet sources and from bank branch customer through questionnaire. The data will be collected through structured close-ended questionnaire in order to have reasonable conclusion.

### 3.2 SAMPLE SIZE

In the research study sample size was comprised of 500 people from different investment firms in Pakistan to collect the primary data for this research study. Data from past 20 years will be needed i.e. from 1994 to 2014 for this study.

### 3.3 SAMPLING TECHNIQUE

Random sampling techniques will be used in this dissertation because these are selected to provide a rational investigation for the researchers. In this research study, people from different investment firms will also be approached to provide a balanced opinion about the issue.

### 3.4 STATISTICAL TECHNIQUE

SPSS will be used for analyzing the data.

## 3.5 RESEARCH MODEL

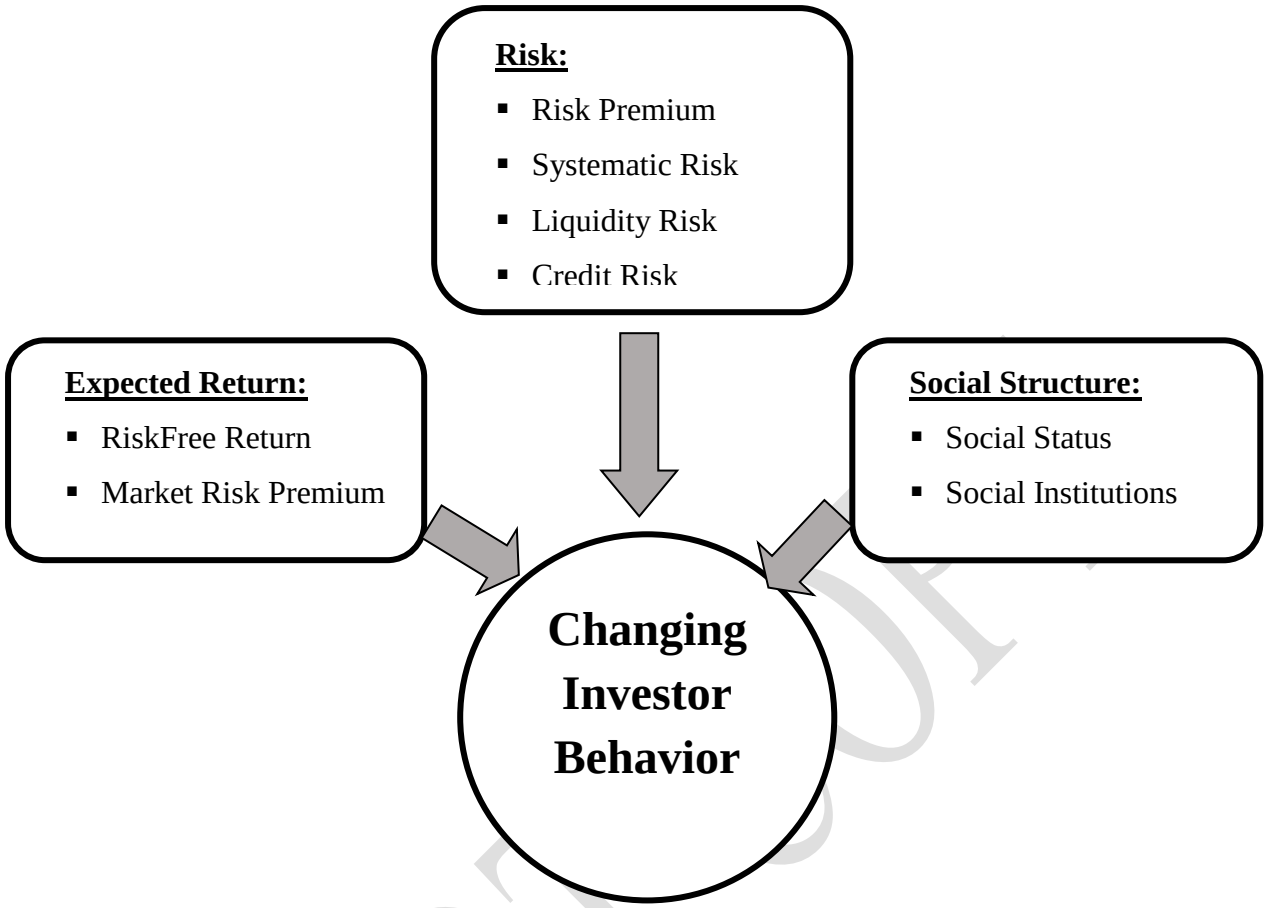
The model used in the research study is stated as follows which involves the dependent as well as independent variable on which the entire research study was based are:

**Dependent Variable:**

- Changing Investor Behavior

**Independent variable:**

- Expected Return
  - Risk Free Return
  - Market Risk Premium
- Risk
  - Risk Premium
  - Systematic Risk
  - Liquidity Risk
  - Credit Risk
- Social Structure
  - Social Status
  - Social Institutions




## CHAPTER 4: RESULTS AND ANALYSIS

### 4.1 Introduction

The following chapter is the fourth chapter of this dissertation in which the researcher has provided the analysis and results of data which was collected through primary and secondary approach. The primary data was collected through questionnaires whereas the secondary data was gathered from different online sources and journals which were published previously by different researchers. Frequency analysis has been provided regarding the demographics of respondents from whom the data was collected. Furthermore, this chapter also provides the correlation analysis and regression analysis which are required to determine the reliability, validity and relationship between the variables that are chosen for accomplishing the purpose of research study. In addition to this, regression analysis has also been used for the purpose of

testing the hypotheses constructed in order to achieve the main aim of the study. The results obtained by analysis of data along with their interpretations are provided below.

## 4.2 Frequency Analysis

The frequency analysis has been conducted for the purpose of building an understanding of the demographics of the participants of study. Such demographic variables include age of respondents, investment time period, gender of respondents, level of education, and marital status. The results obtained by carrying out the frequency analysis along with their tables, graphs, and interpretations are provided below.

### 4.2.1 Age of Respondents.

Provided below is the table and a bar chart which represents the age of respondents from whom the data was collected for arriving at the results of research study. The table shows that 558 responses were collected from the respondents among which 6 questionnaires were received with missing value. Furthermore, the table shows that 66 respondents were under the age of 25 years, 139 respondents were between the ages of 25-30, 147 respondents were among the age bracket of 31-35, 97 respondents belonged to the age bracket of 36-40 and the remaining 103 respondents were above the age of 40 years. The bar chart displays the same distribution of respondents chosen for research study.

**Age**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Under 25 | 66 | 11.8 | 12.0 | 12.0 |
| | 25 - 30 | 139 | 24.9 | 25.2 | 37.1 |
| | 31 - 35 | 147 | 26.3 | 26.6 | 63.8 |
| | 36 - 40 | 97 | 17.4 | 17.6 | 81.3 |
| | Above 40 | 103 | 18.5 | 18.7 | 100.0 |
| | Total | 552 | 98.9 | 100.0 | |
| Missing | System | 6 | 1.1 | | |
| Total | | 558 | 100.0 | | |

Table 1: Age of Respondents

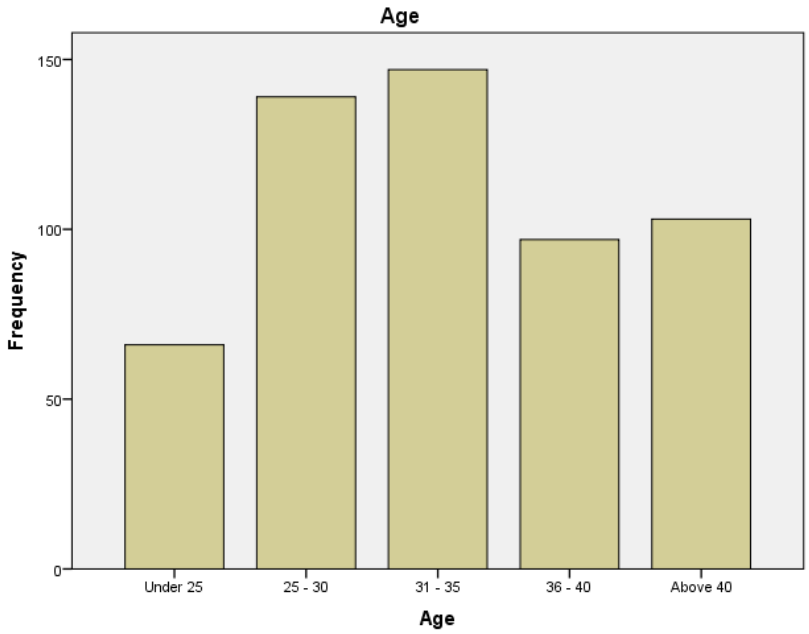



Figure 1: Age of Respondents

### 4.2.2 Investment Time Period.

Provided below is the table which represents the response of respondents regarding the question “How long have you been investing”. Respondents were given different options regarding the time period to select from. Among 558 responses collected, 208 respondents have been investing since last three years, 154 respondents have been investing for 4-9 years, 118 respondents have been investing for 10-15 years, 33 respondents have been investing for 16-21 years and 39 respondents have been investing for more than 21 years. The total number

of respondents generated is 552 since 6 values were missing. Bar chart provided also displays the same distribution of respondents.

**How long you have been investing?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Last 3 Years | 208 | 37.3 | 37.7 | 37.7 |
| | 4 - 9 Years | 154 | 27.6 | 27.9 | 65.6 |
| | 10 - 15 Years | 118 | 21.1 | 21.4 | 87.0 |
| | 16 - 21 Years | 33 | 5.9 | 6.0 | 92.9 |
| | More than 21 Years | 39 | 7.0 | 7.1 | 100.0 |
| | Total | 552 | 98.9 | 100.0 | |
| Missing | System | 6 | 1.1 | | |
| Total | | 558 | 100.0 | | |

Table 2: Investment Time Period

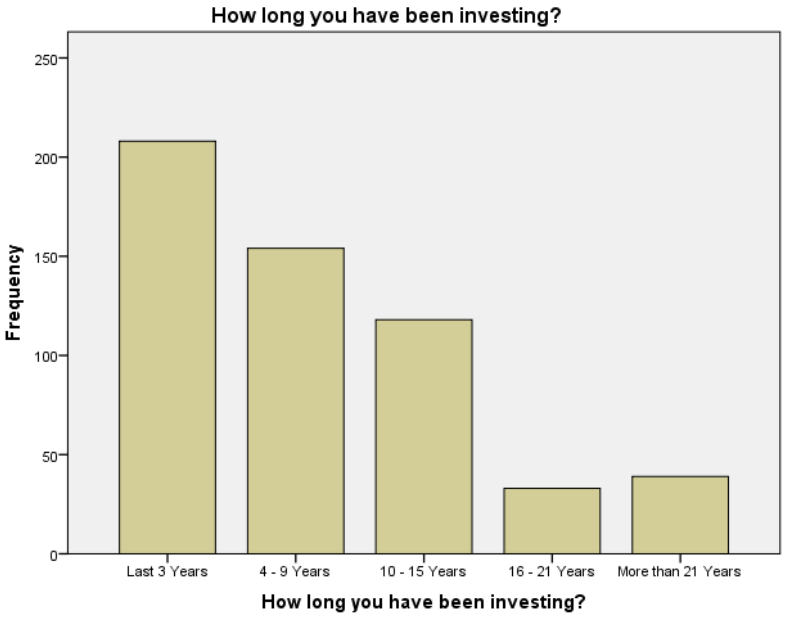



Figure 2: Investment Time Period

### 4.2.3 Gender.

Given below is the table which displays the distribution among the genders from whom the data for research study was collected. 558 responses were gathered in order to derive the

results of study among which only three values were missing. Total responses used for research were 555, in which 484 responses belonged to Male and 71 responses belong to Female. The pie chart provided also displays the same distribution in which 87.2% respondents were Male and 12.8% were Female.

**Gender**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 484 | 86.7 | 87.2 | 87.2 |
| | Female | 71 | 12.7 | 12.8 | 100.0 |
| | Total | 555 | 99.5 | 100.0 | |
| Missing | System | 3 | .5 | | |
| Total | | 558 | 100.0 | | |

Table 3: Gender of Respondents

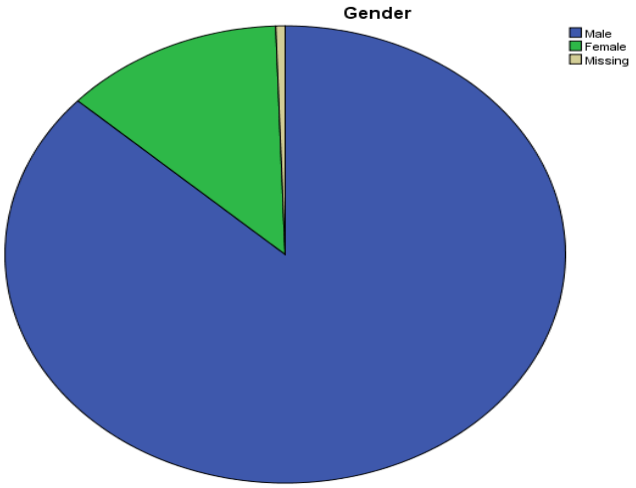



Figure 3: Gender of Respondents

### 4.2.4 Educational Level.

The following table provided below is generated using the software of SPSS, which shows the distribution of respondents with respect to their educational level. The following question was recorded without any missing value and all the respondents provided information regarding their educational level. The table below displays that among 558 respondents 73 respondents were under graduate, 249 respondents were graduate, 211 respondents were post

graduate, and 3 respondents were ACCA (Association of Chartered Certified Accountant), 8 respondents among 558 completed their master's degree, 3 were doing MEF and the reaming 3 belonged to different educational level. Pie chart provided shows the same distribution and different educational level in displayed in different colours.

**Educational Level**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | | 8 | 1.4 | 1.4 | 1.4 |
| | Under Graduate | 73 | 13.1 | 13.1 | 14.5 |
| | Graduate | 249 | 44.6 | 44.6 | 59.1 |
| | Post Graduate | 211 | 37.8 | 37.8 | 97.0 |
| | ACCA | 3 | .5 | .5 | 97.5 |
| | masters | 2 | .4 | .4 | 97.8 |
| | mba | 6 | 1.1 | 1.1 | 98.9 |
| | MEF | 3 | .5 | .5 | 99.5 |
| | other | 3 | .5 | .5 | 100.0 |
| | Total | 558 | 100.0 | 100.0 | |

Table 4: Educational Level of Respondents

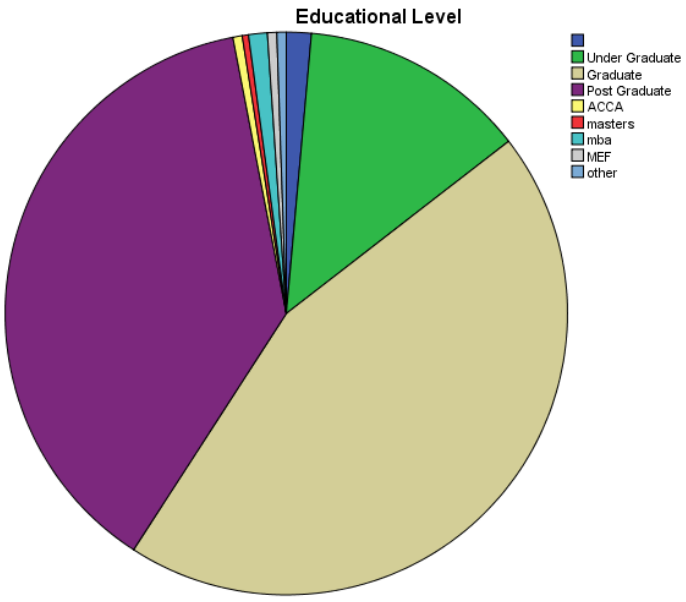



Figure 4: Educational Level of Respondents

### 4.2.5 Marital Status.

Provided below is the table which shows the distribution of Marital status of respondents who were chosen as the audience for this study. Among 558 responses collected, 12 values were missing regarding the marital status of respondents. The distribution shows that 157 respondents were unmarried and the remaining 389 respondents were married. These respondents were chosen to provide information regarding the changing individual investors' behaviour at Karachi Stock Exchange; an Evaluation of Relationship between Risk & Return Preferences and Social Structure. Similarly, the pie chart displays the same distribution of marital status of respondents.

**Marital Status**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Unmarried | 157 | 28.1 | 28.8 | 28.8 |
| | Married | 389 | 69.7 | 71.2 | 100.0 |
| | Total | 546 | 97.8 | 100.0 | |
| Missing | System | 12 | 2.2 | | |
| Total | | 558 | 100.0 | | |

Table 5: Marital Status of Respondents

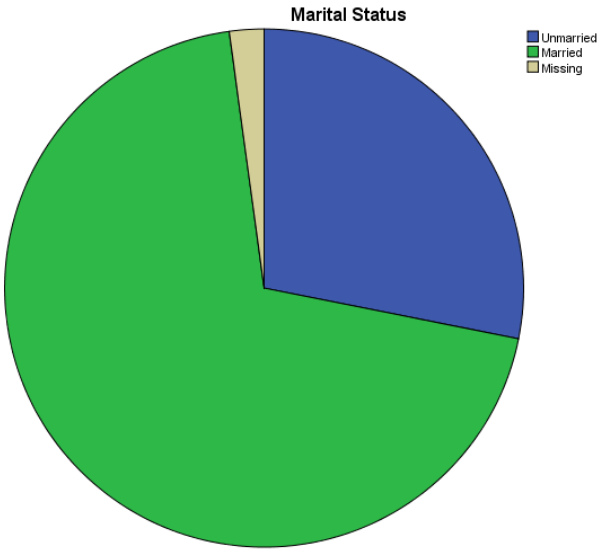



Figure 5: Marital Status of Respondents

### 4.3 Primary Multi Regression

The results for primary multi regression are derived from the data collected from the respondents of research study. The primary data was collected through structured close-ended questionnaire which is provided in the appendix section of this study. Data collected from respondents was analysed using the software of SPSS by which the tests of correlation and regression were applied. The interpretation of all the numeric outcomes is provided below;

#### 4.3.1 Correlation Analysis.

According to Sun, Ji & Ye (2011), the test of Pearson correlation analysis is adopted in order to determine the strength of relationship among the variables which are chosen for deriving the outcomes of the study. The value near to 1 shows that the relationship which exists between the variables is strong whereas the value near to 0 shows that the relationship between the variables is weak. Similarly, the positive or negative sign indicates the direction of relationship i.e. whether the relationship existing between variables is direct or indirect.

Negative sign with the coefficient of Pearson Correlation indicates an inverse or indirect relation while a positive sign shows a direct relationship between the variables.

**Correlations**

| | | Behaviour | Return | Risk | Social_Structure |
|---|---|---|---|---|---|
| Pearson Correlation | Behaviour | 1.000 | .602 | .530 | .492 |
| | Return | .602 | 1.000 | .620 | .606 |
| | Risk | .530 | .620 | 1.000 | .688 |
| | Social_Structure | .492 | .606 | .688 | 1.000 |
| Sig. (1-tailed) | Behaviour | . | .000 | .000 | .000 |
| | Return | .000 | . | .000 | .000 |
| | Risk | .000 | .000 | . | .000 |
| | Social_Structure | .000 | .000 | .000 | . |
| N | Behaviour | 558 | 558 | 558 | 558 |
| | Return | 558 | 558 | 558 | 558 |
| | Risk | 558 | 558 | 558 | 558 |
| | Social_Structure | 558 | 558 | 558 | 558 |

Table 6: Correlation Table

The correlation between two variables indicates the strength and nature of relationship between two variables. In other words the correlation shows whether change in one variable causes change in another or not. Following table shows the correlation between dependent variable i.e. behaviour and each independent variable i.e. return, risk, and social structure. The Pearson's correlation coefficient indicates the nature and strength of relationship. If the coefficient has a negative sign, it means that there is negative or inverse relationship. In other words increase in one variable causes decrease in the other variable. Furthermore, if the sign of coefficient is positive, it means that increase in one variable causes increase and decrease in one variable causes decrease in the other. Furthermore, the quotient indicates the strength of relationship. If the quotient is higher than 0.05 or 5% then the relationship is strong and if it is less than 0.05 or 5% then the correlation is weak.

The Pearson's correlation coefficient between behaviour and return is 0.602 or 60.2%. The sign is positive which implies that increase in return causes increase in behaviour and

decrease in return causes decrease in behaviour. Thus if the return increases the investors show positive behaviour, and, if the return decreases the investors show negative unfavourable behaviour. This implies that increasing returns are favourable while decreasing return is unfavourable. The quotient of correlation between behaviour and return is 60.2% which is higher than 50%. Thus the correlation between behaviour and return is strong. Thus an increase in return implies a strong positive behaviour and similarly a decrease in return implies a strong negative behaviour from investors.

The Pearson's correlation coefficient between behaviour and risk is 0.530 or 53.0%. The sign is positive which implies that increase in risk causes increase in behaviour and decrease in risk causes decrease in behaviour. Thus if the risk increases the investors show positive behaviour, and, if the risk decreases the investors show negative unfavourable behaviour. This implies that increasing risk is favourable while decreasing risk is unfavourable. The quotient of correlation between behaviour and risk is 60.2 which is higher than 50%. Thus the correlation between behaviour and risk is strong. Thus an increase in risk implies a strong positive behaviour and similarly a decrease in risk implies a strong negative behaviour from investors.

The Pearson's correlation coefficient between behaviour and Social Structure is 0.492 or 49.2%. The sign is positive which implies that increase in Social Structure causes increase in behaviour and decrease in Social Structure causes decrease in behaviour. Thus if the Social Structure increases the investors show positive behaviour, and, if the Social Structure decreases the investors show negative unfavourable behaviour. This implies that increasing Social Structure is favourable while decreasing Social Structure is unfavourable. The quotient of correlation between behaviour and Social Structure is 49.2% which is less than 50%. Thus the correlation between behaviour and Social Structure is weak. Thus an increase in Social Structure implies a weak positive behaviour and similarly a decrease in Social Structure

implies a weak negative behaviour from investors.

### 4.3.2 Regression Analysis

According to Satorra & Bentler (2011), regression is a tool used by the researchers for the purpose of analysing the relationship that exists among the variables. Regression analysis checks the relationship of dependent variable with the independent variables chosen for the study. The test of regression generates different tables through which the outcomes of the research are interpreted into meaningful for developing a clear understanding regarding the phenomenon.

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | Social_Structure, Return, Risk[b] | . | Enter |

a. Dependent Variable: Behaviour

b. All requested variables entered.

Table 7: Variables Entered/Removed Table

Table provided above is generated by applying the test of Regression on the software of SPSS through which different values are generated. The table of variables entered and removed displays the variables which are used for deriving the results of study. No variable was removed from the test of regression and all the variables are reliable for extracting the outcomes of research study.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .638[a] | .407 | .404 | .50545 |

a. Predictors: (Constant), Social_Structure, Return, Risk

Table 8: Model Summary Table

The R-square value shows the degree of closeness between the data and the regression. In other words it shows the degree of fitness of the data with respect to the regression line. The coefficient of determination is also called the coefficient of multiple determinations in a multiple regression model. If the coefficient of determination is 0% then it implies that model explains zero variability and the higher the value of coefficient of determination then the more the model explains the variability of data around its mean, the central tendency measure.The coefficient of determination of the model above is .638 or 63.8%. This means that our regression model explains 63.8% variability in the dependent variable due to change in independent variables. In other words, changes in return, risk, and social structure indicates 63.8% of the change in behaviour of the investors. The rest of change in behaviour must be induced by other factors that are not included in this study. Overall, 63.8% can be considered as a good fit and thus our regression model is sound and valid.

**ANOVA**[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 97.243 | 3 | 32.414 | 126.878 | .000[b] |
| | Residual | 141.534 | 554 | .255 | | |
| | Total | 238.776 | 557 | | | |

a. Dependent Variable: Behaviour

b. Predictors: (Constant), Social_Structure, Return, Risk

Table 9: ANOVA Table

The table of ANOVA displays different values including the sum of squares, df, mean square, F value and significance value. The value of sum of squares present in the table is used for explaining the overall variation which is observed in the model of regression. The value of regression is 97.243 whereas the value of residual is 141.534 which sum the overall value to 238.776. The key value which the table of ANOVA represents is the significance value since it is required for the acceptance and rejection of hypotheses which are developed for the study. Here, the significance value is 0.000 which shows that the alternate hypotheses of the

study are accepted whereas the null hypotheses are rejected.

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Constant) | .967 | .151 | | 6.420 | .000 | | | | | |
| | Return | .435 | .046 | .415 | 9.454 | .000 | .602 | .373 | .309 | .555 | 1.802 |
| | Risk | .202 | .048 | .203 | 4.216 | .000 | .530 | .176 | .138 | .462 | 2.165 |
| | Social_Structure | .096 | .045 | .101 | 2.132 | .033 | .492 | .090 | .070 | .475 | 2.107 |

a. Dependent Variable: Behaviour

Table 10: Coefficient Table

The table above shows the beta values of regression model. The beta values depict the degree of impact that independent variable has on dependent variable. For example the beta value of return for investor behaviour in the table below is 0.435 or 43.5%. This implies that return explains 43.5% of variability in investor behaviour. The beta value of risk for investor behaviour in the table below is 0.202 or 20.2%. This implies that risk explains 20.2% of variability in investor behaviour. The beta value of social structure for investor behaviour in the table below is 0.096 or 9.6%. This implies that return explains 9.6% of variability in investor behaviour.

The results above are consistent with the results of correlation analysis. The correlation analysis indicated that return is the most influencing factor for investor behaviour as it has the strongest correlation with investor behaviour followed by risk and social structure has a weak relationship with investor behaviour. Likewise, regression analyses show that return has the highest impact followed by risk and social structure has a low impact on investor behaviour. Overall this study indicates that return is the most influencing factor followed by risk ad social structure has low impact. Furthermore, the significance value shows whether the relationship is significant or not. For a relationship to be significant the significance value must be less than 0.05. The significance value for return, risk, and social structure is less

0.05. These values imply that the relationships between return and investors' behaviour, the relationship between return and investor behaviour, and the relationship between social structure and investor behaviour are all statistically significant.

**Collinearity Diagnostics[a]**

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|---|---|---|---|---|---|---|---|
| | | | | (Constant) | Return | Risk | Social_Structure |
| 1 | 1 | 3.964 | 1.000 | .00 | .00 | .00 | .00 |
| | 2 | .017 | 15.194 | .72 | .00 | .05 | .29 |
| | 3 | .010 | 19.859 | .27 | .88 | .00 | .30 |
| | 4 | .009 | 21.174 | .01 | .12 | .95 | .41 |

a. Dependent Variable: Behaviour

Table 11: Collinearity Diagnostics

In light of the study by Shieh (2011), it has been observed that the diagnostics of collinearity measures the amount of regressors which are related to other regressors that affects the variance and stability of the estimate of regression analysis. The value of VIF given in table 9 shows the degree of coefficient of regression of dependent variable which is affected by the redundancy that is present within the independent variables. The value of VIF equal to 1 shows that the independent variables are not correlated, the value of VIF greater than 1 and less than 5 shows that the independent variables of the study are moderately correlated, lastly the value of VIF greater than 5 shows that the independent variables are highly correlated. The table above shows that VIF value of Return, Risk and Social Structure as 1.802, 2.165 and 2.107 respectively. These values indicate the independent variables are moderately correlated with each other.

### 4.4 Secondary Multi Regression

The data for secondary multi regression is collected from different secondary sources on which the data related to changing individual investors' behaviour at Karachi Stock Exchange; an Evaluation of Relationship between Risk & Return Preferences and Social

Structure was available. The secondary sources also include previously published journals and articles written by different researchers regarding the practices that were executed in the past. Furthermore, it also includes academic papers and articles and different offline medium which were valid and reliable enough to be used for attaining the results and outcomes of the study.

### 4.4.1 Regression Analysis.

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | Index, Risk[b] | . | Enter |

a. Dependent Variable: Return

b. All requested variables entered.

Table 12: Variables Entered/Removed Table

Table provided above is generated by applying the test of Regression on the software of SPSS through which different values are generated. The table of variables entered and removed displays the variables which are used for deriving the results of study. No variable was removed from the test of regression and all the variables are reliable for extracting the outcomes of research study.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .498[a] | .248 | .245 | .5367716 |

a. Predictors: (Constant), Index, Risk

Table 13: Model Summary Table

The value of R-squared displays the degree of familiarity amid the data and the regression. In other words it indicates the degree of data's fitness with respect to the line of regression. The coefficient of determination is also called the coefficient of multiple determinations in a

multiple regression model. If the coefficient of determination is 0% then it implies that model explains zero variability and the higher the value of coefficient of determination then the more the model explains the variability of data around its mean, the central tendency measure.The coefficient of determination in the table above is 0.498 or 49.8%. This means that the model of regression of this study explains 49.8% variability in the dependent variable due to change in independent variables. Alternatively is can be said that, changes in return, risk, and social structure indicate49.8% of the change in behaviour of the investors. The rest of change in behaviour must be induced by other factors that are not included in this study. Overall, 49.8% can be considered as a good fit and thus our regression model is sound and valid.

**ANOVA**[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 47.163 | 2 | 23.581 | 81.845 | .000[b] |
| | Residual | 143.198 | 497 | .288 | | |
| | Total | 190.360 | 499 | | | |

a. Dependent Variable: Return

b. Predictors: (Constant), Index, Risk

Table 14: ANOVA Table

The ANOVA table given above shows different values which are generated by applying the test of regression including the sum of squares, df, mean square, F value and significance value. The sum of squares valuegiven in the table is used for enlightening the overall disparity which is observed in the model of regression. The value of regression is 47.163 whereas the value of residual is 143.198 which sum the overall value to 190.360. The crucial value which the table of ANOVA signifies is the value of significance since it is essential for accepting and rejection of hypotheses which are developed for the study. Here, the significance value is 0.000 which shows that the alternate hypotheses of the study are accepted whereas the null hypotheses are rejected.

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.016 | .047 | | -.333 | .739 |
| | Risk | .178 | .042 | .165 | 4.247 | .000 |
| | Index | .904 | .075 | .470 | 12.069 | .000 |

a. Dependent Variable: Return

Table 15: Coefficients Table

Provided above is the table of Coefficients which displays the values of Beta and standardised and unstandardized coefficients. The value of Betashows the degree of impact that independent variable has on dependent variable. For instance the beta value of Risk in the table above is 0.178 or 17.8%. This indicates that Risk explains 17.8% of variability in Return. The beta value of Index in the table above is 0.904 or 90.4% which indicates that Index explains 90.4% of variability in returns. The outcomes above are constant with the results of correlation analysis. The correlation analysis specified that return is the most impelling factor for behaviour of investors as it displays strongest correlation with behaviour of investors followed by risk and social structure has a weak relationship with investor behaviour. Similarly, regression analyses displays that return has the highest impact followed by risk and index has a low impact on behaviour of investors. The result of the entire study specifies that return is the most influencing factor, after which comes risk and index which shows low impact.

Additionally, the value of significance displays that whether or not the relationship among the variables is significant or not. In order for a relationship to be significant,its significance value must be less than 0.05. The significance value for risk and index is less than 0.05. These values indicate that the relationships between risk and return, the relationship between index and return are all statistically significant.

### 4.5 Hypotheses Assessment Summary

| S.No | Hypotheses | Sig Value | Status |
|---|---|---|---|
| H1 | There is a strong positive relationship between Behavioural Theory of Finance and individual investors' behaviour at KSE | 0.000 | Accepted |
| H2 | There is a strong positive relationship between Individual investor's inclination towards investment and social structure of the society | 0.000 | Accepted |
| H3 | There is a strong positive relationship between classical wealth maximization theorem and individual investors' behavior at Karachi stock exchange | 0.000 | Accepted |
| H4 | There is strong relationship between stock price volatility and individual investor's behavior at Karachi stock exchange | 0.000 | Accepted |
| H5 | There is strong relationship between Systematic Risk and changing investor's behavior at Karachi stock exchange | 0.000 | Accepted |
| H6 | There is strong relationship between Liquidity Risk and changing investor's behavior at Karachi stock exchange | 0.000 | Accepted |
| H7 | There is strong relationship between Credit Risk and changing investor's behavior at Karachi stock exchange | 0.000 | Accepted |
| H8 | There is strong relationship between Expected return and changing investor's behavior at Karachi Stock Exchange | 0.000 | Accepted |
| H9 | There is strong relationship between Risk free return and changing investors' behavior at Karachi stock exchange | 0.000 | Accepted |

| | | | |
|---|---|---|---|
| H10 | There is strong relationship between Market Risk premium and changing investors' behavior at Karachi stock exchange | 0.000 | Accepted |
| H11 | There is a strong relationship between Social Structure and changing investor's behavior at Karachi stock exchange | 0.000 | Accepted |

# Chapter 5: Discussions, Conclusion, Policy Implications and Future Research

## 5.1. Introduction

This chapter is the final chapter of the dissertation which is focused towards concluding the whole study. This chapter adds value to the readers and future researchers as it provides policy implications related to the research which are in favour of the topic selected for the research. This research further includes the discussion of the overall results conducted in the previous chapter.

## 5.2. Discussion

This section presents a brief yet succinct discussion of all primary and secondary research results which were presented in chapter 4 and chapter 2 respectively. This purpose of this section is to show how aims and objectives of this study that were presented in chapter 1 have been achieved through primary and secondary research conducted during the research process. Following discussion shows how each aim was achieved.

The main objective of the study was based on the understanding of the behaviour of investors which was studied under the behavioural theory of finance. The main motive behind proposing this research objective was to gain the initial understanding of investors with the support of a behavioural theory of finance. The theory is focused towards the emotions and biases of the investors, who are curious about the share prices; the theory of behavioural finance describes the attitude and behaviour of the investors. Therefore, the theory has helped the investors in providing rational about shortcoming which is subjected to profitable opportunities for the investors.

As explained by Kaustia (2010), investors have deploying principles regarding the stock market which offers a return to the bank. Moreover, the behavioural finance impacts on the

research which still remains greater in the money management. The study conducted by Kaustia (2010), concluded that the disposition effect indicates the phenomenon whererby investors have a tendency to sell most profitable investments sooner than they ought to while they tend to keep those investments that show losses. Finance Experts strongly recommend investors, particularly young investors, that the basic principle to increase wealth is to make sure that profitable investment remain in the portfolio while less profitable investments or investment with potential losses are sold out.

However, in accordance with the phenomenon of the disposition effect, it has been observed that generally budding investors tend to cash in those stock that show high performance and they tend to accumulate wealth as they think that they are making quick money which increases their wealth in the long term. They are in allure of quick money and thus due to these decisions they generally end up keeping those stocks that are in fact losing and thus in the long term their end decreasing their wealth. It was also concluded by Kaustia (2010) investors lack awareness of real value of their investments, due to the disposition effect, they tend to make buying and selling decisions on the basis of realized returns.

The objective was also achieved by reviewing several other theories which are related to investor's behaviours including Loss Aversion Theory, the theory of mental accounting and theory of confidence. In the light of Hussein and Al-Tamimi (2005), the theory of mental accounting is explained as an economic concept which is based on a notion that customers divide their assets into separate portions which are distinct from each other. In this regard, the individual assigns different stages to the each group of investors because of which the investors can make decisions. The review of the theories related to the investors' behaviour helped the researcher in understanding the investor behaviour under a behavioural theory of finance.

The second objective proposed by the researcher was also theoretical in nature which is based

on the identification and explanation of key factors related to changes in the behaviour of the investors at the individual level, particularly in Karachi Stock Exchange. The objective was successfully achieved by the researcher by reviewing journals and articles in order to identify the factors associated with changing behaviour of the investors. The factors identified during the study were focused towards individual risk or in other words it is stated as financial tolerance. In the light of Barber and Odean (2011), financial tolerance risk explains the behaviour of investors which is related to the decision-making process of an individual for a potential investment. Jagongo and Mutswenje, (2014) concluded that there are various behavioural effects that force researchers to farther personal thoughts while discussing variation in the different perspectives of risk-return. Authors studied levels of individual risk tolerance, and suggested that it is essential to assume there is varying degree of tolerance in each person. The tolerance level is determined by investment experience, educational background, and culture and social values. Thus while studying risk tolerance level in investment behaviour it is also important to study aforementioned factors.

It is necessary to be studied because it determines the willingness of an individual towards the endurance of negative outcome that arises as a result of investment values which is entirely different than the expected outcomes. Another most important factor identified by the researcher is the emotional tolerance for the risk. As explained by Collard (2009), individual's emotions play an important role in making decisions in the risky situations. It has also been found that decisions involving a great risk or complexity have normally resorted to more disappointment than decisions that are typical. This is the reason that investors are concerned with the emotional tolerance of the risk associated with their investment. Other factors involve financial literacy of the investors, behaviour switches such as aggression, weak or moderate and various social and economic factors.

Furthermore, the second objective of this research was also cross-checked with the review of

the literature and the quantitative results. The quantitative results tested by the researcher portrayed that investment behaviour of the individuals is largely affected by three main factors. In addition to the above statement, the primary and one of the most significant factors that explain the behaviour of the investors is the high level of return on the investments. This can be explained by the fact that the investors can get or yield highest return and even can assume a higher investment based on high level of risk for the purpose of getting a higher return.

On the other hand, another most significant factor of the behaviour of investors interpreted in KSE is the higher risk of investment. It is depicted by some of the investors that they adopt the strategy of loss prevention by investing in a project which has a low risk of investment and even settles for low return. Moreover, there are also other investors which are willing to take higher risk for higher return. However, the tendency of risk taking in KSE investors can be explained by social structure and other factors such as education, financial status, etc.

The third objective of the study was based on analysing the impact of different identified factors on the individual investor behaviour at KSE. The quantitative results clearly indicate that there is a strong correlation between return and investment behaviour. An increase in return implies a strong positive behaviour and similarly a decrease in return implies a strong negative behaviour from investors. The quotient of correlation between behaviour and risk is 60.2 which is higher than 50%. Thus the correlation between behaviour and risk is strong. Thus an increase in risk implies a strong positive behaviour and similarly a decrease in risk implies a strong negative behaviour from investors. The quotient of correlation between behaviour and Social Structure is 49.2% which is less than 50%. Thus the correlation between behaviour and Social Structure is weak. Thus an increase in Social Structure implies a weak positive behaviour and similarly a decrease in Social Structure implies a weak negative behaviour from investors.

The study further incorporated the survey analysis and collection of data from secondary resources. According to a study conducted by Hill (2015), it was identified that return is the most influential factor in the investment decision. It is further argued by Gestel and Baesens (2009) that the basic purpose of the investment is return and therefore any investor would want to now and invest in highest paying opportunities or stocks. An investment is attractive until it stops paying the return or if the investor finds another stock that pays the higher return. Thus return is definitely the most influential or often the sole factor for an investment decision. Investors also invest in risky opportunities to gain a higher return. Some investors invest in only safe opportunities with low but consistent returns. It depends on the past experience of investor and also upon his/her judgement about a stock and movement in the stock market.

According to the survey analysis conducted by the researcher, it was identified that the risk has also been identified by all participant as an important factor in investment decisions. It was also identified from the survey results that higher risk investment implies that investor is likely to get a higher return and vice versa. Moreover, it was also found that the higher return expectations are the only reason people invest in risky investment otherwise, there is no rational for a person to take the risk. Thus risk plays a critical decision in investments. In addition to the above statement, the survey results also focused on the factor that risk and return go hand in hand. Every investor wants to take a minimum risk and get the highest return for investment and increase the wealth. However, in order to minimise risk and consequent loss amount, investors often distribute their investment in a portfolio of various investments. In this portfolio there are some investments which have low risk and low return and there are also some investments which have higher risk and higher returns. Investors try to absorb the risk by developing effective portfolios.

In this essence, a study conducted by Duarte and Rosa (2015) identified a variety of factors

that affect the social structure and consequently the investment decisions of investors in Pakistan. The study identified that the educational background of investor has a significant impact on the assessment of risk and return of an investment. In this context, investors in Pakistan have low technical or business knowledge and therefore they often make an investment based on past experience or market information only. This implies that they speculate rather than use effective investment appraisal techniques. This causes the high level of volatility in both return and investment decision patterns.

The study conducted by Belhoula and Naoui (2011) indicated that the socio-economic background of investor has a critical role in the investment decision. If the financial background of investor is sound he is likely to make an investment in a high risk with high return investment as he may not fear that if there is a loss he is bankrupt. In contrast, an investor with low financial strength, it is likely that he would prefer investments with low risk and compromise return to ensure that he prevent loss at all investments. This implies that the social structure has an impact which is examined to be low as compared to other factors.

### 5.3. Conclusion

This research is focused towards the stock exchange of Karachi where the investors come across certain factors which are responsible for influencing the decision-making of the investors. Moreover, the aim was also focused towards the fact that wealth maximisation is entirely based on the decision-making of the investors. The aim was also focused towards the fact that the decision of the investment of the investors' is based on their own will and not based on the influence of the family and friends references. Therefore, the researcher set the main purpose of the research as to analyse factors which are directly influencing the individual behaviour of the investors in the case of the Karachi Stock Exchange.

In order to conclude this research, the researcher has shed some light on the data results which were analysed in the previous chapter. In this research, a total of 558 responses were taken from the respondents in which most of the respondents belongs to the age group of 31-35 years. Moreover, the research also presented that the investment period of the investors belongs to the period of last three years. However, the participants of the research were graduates from reputable institutes. The researcher has used multi-regression in this research which was derived from the data collection from the respondents of the study as the primary data was collected through close-ended questionnaires.

In addition to the above statement, the researcher has used correlation analysis in order to determine the strength between variables which has been chosen for this study for the purpose of generating outcomes. The correlation in this research was conducted between a dependent variable which is behaviour while the independent variables were named as the return, social structure and risk. In this study, the researcher identified that the correlation between the return and behaviour of the investors is 60.2% which explains that the increase in return will enhance the behaviour of the investors and conversely, the decrease in the return can negatively impact the behaviour of the investors. Therefore, the negative correlation between return and behaviour of the investors explains can adversely impact the investor's behaviour and would further impact the decision-making process.

The researcher also conducted the correlation analysis between the risk and investors behaviour to which the results portrayed that there is 53% correlation between the variables presenting a positive relationship. Moreover, a correlation between the two variables showed a positive relationship between the variables implying that the increase in risk decreases the motivation of investor to invest in a project. However, the correlation presents a strong result between risk and behaviour. Moreover, the researcher has also analysed the Pearson correlation between behaviour and Social Structure is 49.2% which is almost 50% presents a

positive relation correlation between the variables. Moreover, the social structure has the tendency to increase the positive behaviour of the investors. This can positively impact the decision-making process of the investors. The overall results of the correlation analysis present a positive picture of the dependent and variable which is favourable for the particular study.

After conducting correlation analysis, the researcher also choose regression analysis for the purpose of analysing relationship between the variables. The results of the regression analysis presents that the coefficient of determination which is portrayed as 63.8% implying that the regression model of the research have more than 63% of the variability in the dependent variable which can bring a change because of independent variable. This further concludes that a change in the risk, return and social structure can bring either a positive or negative change in the behaviour of investors. Overall results of the regression model presents a good fit in the research which is also valid and sound.

The overall results of the study are persistent with the findings of the correlation analysis as the correlation results also present a positive side of the study. In addition to the above statement, the results of the correlation analysis presented that the influencing factors of the study for the investor's behaviour are comprehended by the factors such as social structure, risk, and return but the social structure has a weak relationship with investor behaviour. Similarly, regression analysis presents the fact that the return has the highest impact which is followed by social structure and risk as they have a low impact on the behaviour of the investors.

It is evident that investment has not significantly grown in Pakistan in the past which has further resulted in slower growth in the overall economy of the country. In addition, the comparison of the several countries reveals that Pakistan has a bright future in the investment market as the investment market is highly attracted by the foreign investors. Moreover, the

foreign investors wish to make huge projects in Pakistan for which they require large investments in order to make their project prosper in the country. Apart from this, the same level of growth in the fastest growing economies such as Pakistan requires large investments from the foreign investors in order to grow the economy in an efficient manner.

Furthermore, Pakistan is required to get financed by the desired investment through increasing the saving of the domestic market without relying completely on the stock exchange market of Karachi. In addition, the foreign resources can either create sustainability in the investment market of Pakistan. Therefore, it is necessary to enhance the saving rate for improving the investors' behaviour in the country. For this purpose, the government of Pakistan is required to change the policies and make it favourable for the investors as ultimately the economy of Pakistan will grow efficiently.

In the current study, the factors which influence the individual behaviour of the investors were analysed. The study also concludes that the if the investor has a financial literacy, he/she can increase the capability of taking the risk as they are able to analyse financial statement of different organisation and can acquire better knowledge for capital gains. Moreover, the information related to accounting and risk aversion can also enhance the information of the investors as they prefer to invest in the projects which are less risky and may accept lower returns of the investment in order to prevent suffering from huge losses. In order to overcome this issue, financial statement of the companies serves as the better platform for making decisions for investing in a company or a particular project.

In addition, lack of financial literacy, lack of trust and overconfidence of the individual investors in Pakistan can affect the stock market. The study also concludes that investor behaviour is also directed by the present market conditions of the stock exchange of Karachi in Pakistan. In this essence, the overconfidence on attitudes of risks of the investors can further affect the market conditions. Also, the risk attitude of the investors can affect the

market valuations and performance of the stocks variables in different markets due to the high level of ownership.

### 5.4. Policy Implication

The following policies can be recommended to the Government of Pakistan in order to provide better opportunities to the investors for investing in the long-term projects of the country:

- The government of Pakistan should introduce non-development expenditures in order to provide resources for the development of long-term projects which can enhance the confidence of the investors in the projects. Moreover, the expenditure of the Government can transfer the incomes and further enhance the stock exchange market.
- The government of Pakistan should stress over the formulation of policies in order to meet competitive industrialisation of the country and further improve the means to generate diversification in the competitiveness and exports.

### 5.5. Future Research

This research is based on individual investors' behaviour for which the case of Karachi stock exchange market was taken. For this purpose, a comparison can be done for which the stock exchange of other countries can be taken for further enhancing the results of the study. For instance, a comparison can be done for the stock exchange of Lahore with the stock exchange of Karachi with respect to investors' behaviour. Moreover, the study did not take into considerations any company which can be taken by the research in order to enhance the research results. In addition, the research can take the comparison of the investors of two or more than companies which can further add value to the research. Apart from this, it could be

interesting to analyse the stock exchange of Karachi by preventing the barriers of the study in order to gain better insights about the investors' behaviour in Pakistan and their attitude towards risk. The researcher could include more factors which add value in understanding the behaviour of the individual investors in the stock exchange of Karachi.

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