Risk Taking Behavior of Investors of Pakistan

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1. Introduction

Investors all over the world have different kind of risk taking attitudes. There are four kinds of basic risk attitudes: Risk seeking, Risk tolerant, Risk averse and Risk neutral. These different kinds of risk attitudes of investors have a major impact upon their level of investment and earning profits in their organization. Our study will analyze the risk taking attitudes of the investors of Pakistan. In the time of recent economic recession of 2008, it has been observed that the investors of Pakistan were became risk averse because there wasn't any investors who is willing to take any risk to invest in stock exchange and even they were withdrawing their investments due to the risk of loss and were not making any further investments. This attitude of the investors of Pakistan results in a crash down of the Stock Market and also results in the major factor of economic recession.

1.1 Background

Risk management is an important part that leads to the success of the business and projects, since it majorly focuses on encountering uncertainties in a proactive manner in order to reduce threats of loss and maximize opportunities to gain more returns. There is mutual consent of different financial institutions on the elements necessary for the risk management process, and that are supported by a series of capable tools and techniques, and institution of knowledge, academic, research base, and extensive experience in the practical implementation in different organizations. Although this concept often fails to meet the expectations in the field of risk management practice and become as the continued failure of businesses and projects. Risks that can be achieved in the near problems and the achievement of the lost opportunities that leads to the loss of benefits. It is clear that the existence of accepted principles and following this practice on a large scale is not enough to ensure success. As a conclusion, some of the other major components are missing. The most important critical success factors for risk management and the effectiveness of the one most often lacking is an appropriate culture of risk and mature. Research and experience both indicate that the position of individuals and organizations to have a significant impact depends upon whether the risk management delivers what it promises. The human element provides an additional layer of complexity in the process of risk. These serve as sources of bias, and create the conditions that affect every aspect of the risks and prefer to risk management. Risk attitudes exist in the individual and society, and institutional and national levels, can be evaluated and described with some degree of accuracy. This allows the

diagnosis of sources of bias, and to expose their impact on risk. But diagnosis is different from the treatment. Preferred position, where the risk is not conducive to effective risk management, should take the necessary measures to amend the situation. Recent developments in the field of emotional intelligence provide the means by which to promote change in attitudes and management, both from individuals and organizations. It is first important to understand the positions of the risks and impact can be on the risk management process if it is not to determine the presence and influence, or management. It is also important to understand how the development of emotional literacy can provide powerful and practical tools to change attitudes in danger.

1.2 Definition of Risk

Word "risk" in general, and on a wide range of vocabulary used in part, related to personal circumstances (health, pension, insurance, investments, etc.) and society (terrorism, economic performance, food, security, etc.) and business (corporate governance, and strategic to, business continuity, etc.). Not surprising, there is still a large consensus on the meaning of the word. Various national and international standards and guidelines, which the United States, there is a risk, but there are many different definitions and concepts underlying this document. Practitioners in various professional organizations include the risk of an ongoing debate on the core of their discipline. Of course, the general literature, which is a basic definition of risk is reflected on the absence of formal agreements varies widely. Despite the differences, all agreed that the two aspects of the definition of risk: uncertainty to it, and the related creation. Risk, but, in the same uneasy sense of doubt is not doubt. Perhaps the simplest definition of risk is "uncertainty factor" because of the uncertainty of not pose any risk. In this sense, we may be at risk if you do not set some kind of committee goals. ". That a state of uncertainty or more than one purpose may be positive or negative impact" may be a more complete definition of the link between risk and risk management for the purpose of selection is important, it indicates the importance of risk assessment, and determine the appropriate response is essential. But this is a serious risk factor in understanding the location, where the party, the concerned person or organization goals, and in advance what amount of risk "factors (Hillson and Murray, 2011)

1.3 Definition of Attitude

“Attitude is another word used commonly but loosely. Dictionaries offer two differing definitions. The first relates to the inner working of the human mind, where “attitude” is “state of mind, mental view or disposition with regard to a fact or state”. A second equally valid definition describes the positioning of an object in space, such as an aircraft, spaceship, or missile, where “attitude” is said to mean “orientation of axes in relation to some reference plane, usually the horizontal”. It is interesting to note that both definitions insist that attitude can only exist in relation to a datum point – either a fact towards which one holds a mental disposition, or a reference plane such as the horizon against which orientation is measured. In this respect “attitude” is similar to “risk”, which is defined in terms of objectives. Although at first sight mental views and aircraft positioning do not seem to have much in common, in fact the two definitions of attitude are not incompatible or unrelated.” (Hillson and Murray, 2011)

1.4 Definition of Risk Attitude

The purpose of the positive or negative impact on or simply the answer is more important to the sense of uncertainty in the definition of risk attitude to work.

We are living in an uncertain environment in which risk is everywhere around us. In these cases, and most of the practices and techniques that a lot of time to 'free flow' to be active in their lives. It is exceptional only in the presence of a risk that people need to be aware of is the one preferred. In this case, management is uncertain that matter, also known as risk management is a discipline. It is a role within the business establishment there, and a strategic risk management, corporate governance, risk and operational and project risk, health, safety and environment (health and safety) with a dimension, which is widely applied. However, it is important not only for risk management business. There is need for a number of groups have been recognized by the government, and academia in a more considered and responsible for risk, and in urgent need of review, appropriate for both individual and group work, risk, and social support to engage the government and the wider community to high.

Through the identification of risk simply as' uncertainty that matters, it is clear that the knowledge of how to take appropriate risks in any particular case requires an understanding of two things: the nature and sources of uncertainty, and the degree to which something matters. It is also clear that different things to different people matter to some extent different in different circumstances. As a result, the risks perceived by one person or group that require

urgent attention may be perceived by others as normal and not worthy of their time. Perception of risk is not absolute, either present or absent, but the circumstantial and heavily dependent on a number of situational factors. It is this aspect of situational risks that make it the subject of the decision-making in situations of uncertain both fascinating and important. Appropriate risk requires an understanding of the underlying nature of the challenge. On the one hand, can be considered as a process of risk management requires a rational and logical understanding of the historical evidence realism along with assessments of mathematical probability of this event is uncertain. However, it is also true that risk management involves deeper work of the human brain, are also affected by the decisions people make by the complex interaction between the conscious and unconscious factors. This is why one of the basic components of the appropriate risk is to understand the position of risk as it applies to individuals and groups of decision-making.

Talk about the danger of lead to a lot of people do not think only of the threats, that is, those doubts that should occur that would result in an undesirable outcome. However, contemporary thinking and practice of risk management is treated in a way more balanced. A set of circumstances is equally certain to lead to positive results, and to allow the definition of risk to include both the opportunities and threats. This two-sided concept of risk is particularly important in the context of effective decision-making, because most of the decisions need to achieve a balance between the exploitation or promotion is hoped to achieve positive results while avoiding or mitigating the negative effects of the unwanted. For example, determine whether it exceeded the speed limit when driving will depend on a number of uncertainties, including such access to the destination more quickly, and such threats that they have arrested or killed during the operation. Similarly, to determine whether to seize the opportunity to work for the launch of a new product on the market before the competition must be balanced against the threats to the reputation of the company if the new product is not free of trouble. Although each decision is unique, there are no risk-free options. Moreover, zero risk cannot be achieved, but is also undesirable. Not to risk will stifle growth and improve the limit. Appropriate risk enhances competitive advantage and stimulates innovation and creativity. Decision-making in a world full of 'uncertainty that matters' needs to search for an optimal balance between risks and opportunities. (David Hilson, 2008)

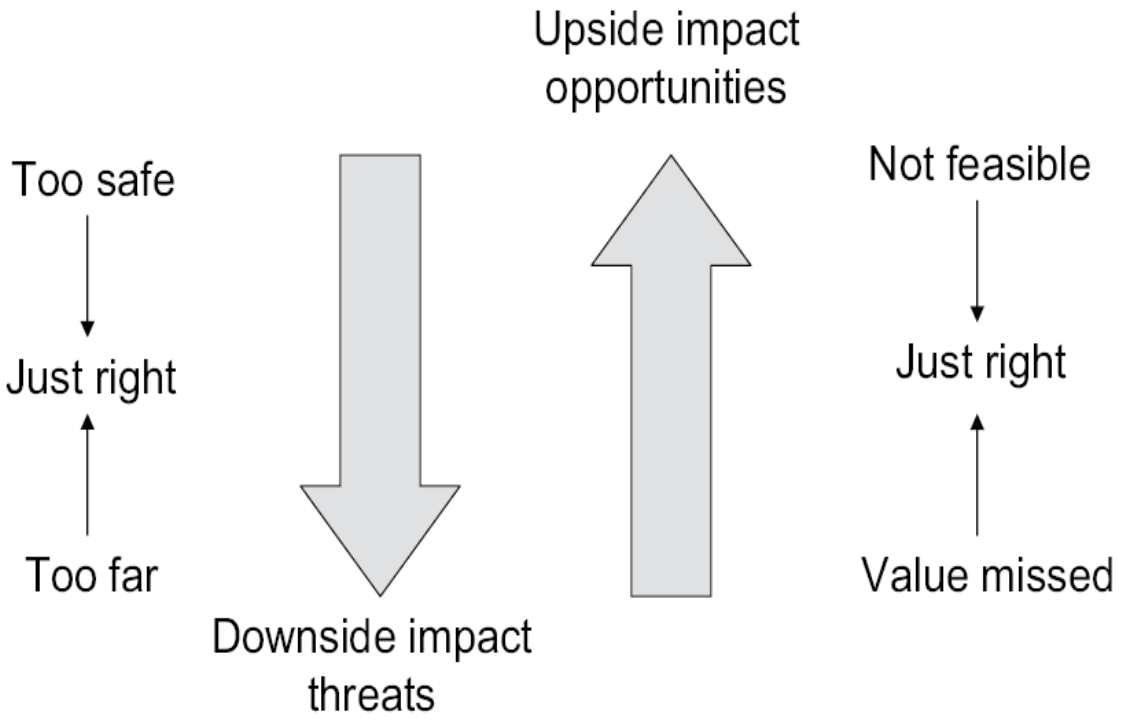


Figure 1.1 appropriate risk taking requires optimization of opportunities and threats.

There is broad agreement that people are the most important factor of the success factors critical to effective risk management. One of the biggest influences on the process of risk is the risk of the positions that people adopt. This affects every aspect of the operation at risk, even if they do not realize it. Do you understand and manage these situations increase the risk of large risk management effectiveness - what are they and what affects them? One simple definition of 'risk' is' uncertainty that matters and it is only possible to determine the risks with regard to something specific, usually the target of some kind. 'Attitude' and likewise is the 'chosen response to a particular situation, and they, too, is linked to a specific case and affected of perception. Combining the two definitions of 'risk' and 'position' allows us to build a workable definition of 'danger position': 'response to uncertainty chosen to be affected by the perception that matters. Risk attitudes exist on a range of risk averse (uncomfortable with uncertainty), through tolerant of risk (i.e., a strong response), risk-seeking (welcome uncertainty). She was active in individual or group companies and at the national level and they need to be understood so that they can run their impact on the process of effective risk.

Figure 1.2 Risk attitude spectrums. (David Hilson, 2008)

Conscious factors

These are the characteristics of clear and measurable dangerous situation, in particular, on the basis of our assessment of rationality. We also take into account situational factors such as whether we have not done anything similar before (learn), and the degree to which we have control of the situation (management), or when he expected that the situation affects us (proximity).

Subconscious factors

'These include heuristics and other sources of cognitive bias. Heuristics are mental short cuts based on our previous experience. Some heuristics help us to reach an appropriate position quickly, while others can be misleading. Unfortunately, because heuristics are subconscious, their influence is often hidden, and they can be a significant source of bias. Common heuristics include memory of significant events (availability), or the conviction that we already know the right answer (confirmation trap)." (David Hilson, 2008)

Affective factors

These are the deep feelings at the level of the gastrointestinal tract and the emotions that tend to rise automatically or instinctively in the situation and affect how we react. The fear, excitement or attract leads us to the adoption of attitudes to risk assessment may not be a

more rational look. Three branches of influences interact together to form a complex web of factors that affect our understanding in two important ways: how we perceive a given situation is fraught with risks, and our perception of the right way to respond to it. And an estimate by how factors triple strand drive our perception of dangerous situations, and we understand better why we adopt different risk attitudes. This will help us to manage the risks of active positions, so take good decisions, and determine appropriate responses, and improve our management of risk. (David Hilson, 2008)

Figure 1.3 The triple strand. (David Hilson, 2008)

1.5 Types of Risk Attitudes

There are four basic types of risk attitude:

1.5.1 Risk averse

"Uncomfortable with uncertainty, desire to avoid or reduce threats and exploit opportunities to remove uncertainty. Would be unhappy with an uncertain outcome." (Hillson and Murray, 2011)

1.5.2 Risk seeking

"Comfortable with uncertainty, no desire to avoid or reduce threats or to exploit opportunities to remove uncertainty. Would be happy with an uncertain outcome." (Hillson and Murray, 2011)

1.5.3 Risk tolerant

"Tolerant of uncertainty, no strong desire to respond to threats or opportunities in any way. Could tolerate an uncertain outcome if necessary." (Hillson and Murray, 2011)

1.5.4 Risk neutral

"Uncomfortable with uncertainty in the long term so prepared to take whatever short-term actions are necessary to deliver a certain long-term outcome." (Hillson and Murray, 2011)

1.6 Risk attitudes in groups

The factors in three strands model affect the perceptions, risk attitudes and decision-making capacity of individuals and suggest that this ability is alike groups. However, the risk attitudes of groups are usually different from the individuals because the risk attitude of a group is affected by the risk attitude of every single member of the group. Suppose if a family is like a group then each member of family possess different attitude of risk but their risk attitude in group might be same or vice versa. Organizations are also like a group and employees are like member of these groups. Individuals with an opportunity to travel around the world can consider themselves as a member of the world. Every individual made a kind of impact on the risk taking behavior of the group. Risk also eliminate at all levels, with interactions between different types of risks consider that when applied in the context of decision-making and the effects of different group and individual levels to provide the complex web that is difficult to determine the precise impact. This is the group dynamics, organizational, national, and independent assessments and expectations than the conscious or unconscious mental estimate the relative importance of hard feelings. It is clear that the decision to create a full and meaningful consideration of any dangerous situations for both individuals and groups should be dealt with, and influences a wide range of influences, such as determining risk attitudes.

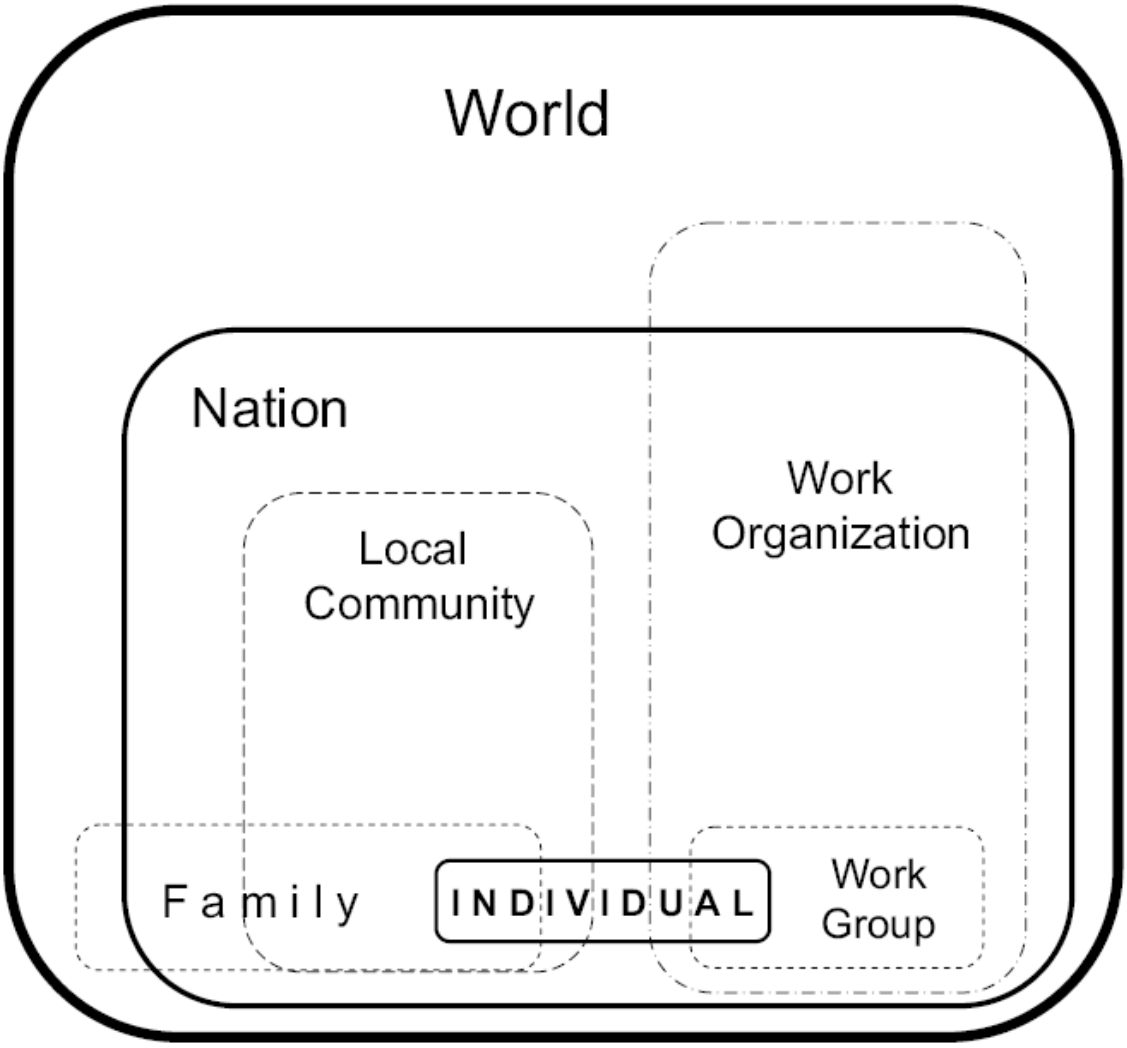


Figure 1.4 Hierarchies of membership and influence (not to scale)
(Hillson and Murray-Webste, 2007)

1.7 Importance of understanding risk attitude

No one can get out of bed in the morning if they have the awareness to make every decision about what action to take, so people develop habits and routines that allow their lives to the 'free flow' unless there is an unusual situation to be addressed. Biased and the perception of uncertainty and response resulting from the ordinary cases in which triple strand complex of interrelated factors including the assessment of rational and conscious, and subconscious reasoning and cognitive biases, and emotions at the level of the gastrointestinal tract. Each of these three influences on individuals and groups both in different ways. And increases the

complexity of the situation is different impacts organizational, national or societal rules and expectations imposed on individuals and groups. When decisions must be made under conditions of uncertainty and each of these effects is important, because they pay perception of risk. Risk attitude is a response selected from an individual or group to the uncertainty that matters, driven by perception. As a result, the ability to understand the position of risk provides the key to unlocking the secrets of effective decision-making involving risk. Understand the position of risk is critical success factor which enhances the effectiveness of decision-making in hazardous situations. However, the absence of this understanding is not neutral, but represents a vital source of failure, leading to decreased effectiveness.

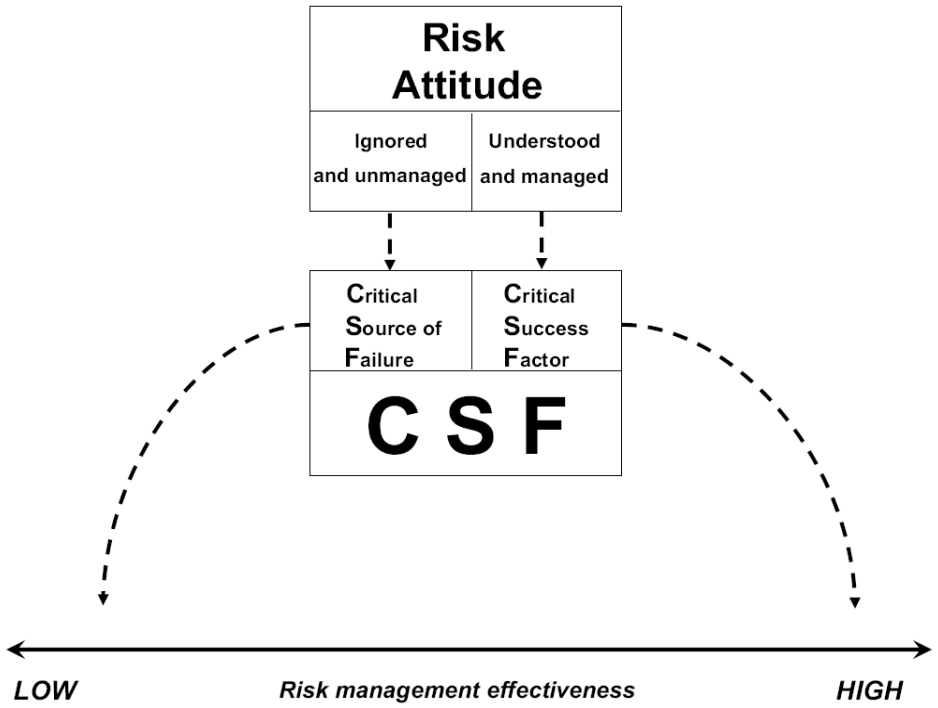


Figure 1.5 Risk attitudes as a CSF for effective risk management
(Hillson and Murray-Webste, 2007)

1.8 Need of study

Exposed to stock market speculation and inefficiency, which is on the beach to the rationality of the investor. And financial theory is based on traditional assumptions Mon First, the 'investors make rational decisions, investors and the second being non-biased in their expectations about future returns of the stock. Have realized the financial and economic experts, but now that the long-held assumptions of traditional finance theory is wrong, and found that investors can be irrational and fallacies and predictable about the return on

investment on their investment. This pilot study on the individual investor behavior is an attempt to see Profile of the investor and also know the properties of investors in order to find out their preference with regard to their investments. The aims of this study also revealed the impact of demographic factors such as sex, age at the level of risk tolerance of the investor.

1.9 Objective

- This research will analyze the risk taking behavior of the investors of Pakistan.
- Research will also analyze that whether or not, risk taking behavior in an investment context is affected by subjective risk attitudes, risk perceptions and return expectations.

1.10 Limitations

- This research is time constraint.
- Availability of Targeted sample or investors.
- Fewer budgets available.

2. Literature Review

On the Risk attitudes of the investors, various researches have been done earlier all over the world. Some of the findings of these researchers are defined as following:

Syeda Tabassum Sultana, 2010 confirms previous findings regarding the relationship between genders, age, and level of risk tolerance of individual investors. This study has important implications for investment managers because it has come out with some interesting aspects of the individual investor. Individual investor still prefers to invest in financial products that give risk-free returns. This confirms that the Indian investors even if they are high-income, well-educated, salaried, independent and conservative investors prefer to play safe. And designers can investment products that can design products to meet the needs of investors who are low risk tolerant and television use as a media and marketing as they seem to spend a long time to watch television.

Barnea, Cronqvist, and SiegelIn (2009) studied the principles of investment and financial risk-taking behavior among individual investors. Our aim was to provide insight into the

determinants of fiscal behavior and explain the large variation in observed behavior across individuals and differences that puzzled economists for a long time. The experimental approach to decompose variation in the financial decisions of individuals in the genetic component and separate components of the environments shared and idiosyncratic. Studying the investment decisions key to all individual investors in developed countries face over the life cycle, such as participation in the stock market, and asset allocation decisions, and the selection of portfolio risk. Through these measures of financial behavior, we find that the genetic component accounts for a very large proportion of the variance. Specifically, we can explain up to 45 percent of the heterogeneity in investment behavior by genetic factor. Size of such a working genetic in a very large in comparison with other individual characteristics such as age, sex, education, and wealth, which has been explored in the literature of existing financial. We find that the genetic component explains a much larger proportion of the disparity between individuals to do a wide range of individual characteristics combined. In general, we have evidence to suggest that the composition of the individual genetic an important factor in determining the investment behavior of the individual. Although the evidence shows us that nature has a significant impact on the investment behavior of the individual, our analysis also shows significant environmental impacts. The most direct evidence supports this conclusion is that the link to the investment behaviors that are studied much less than one, in spite of identical twins are identical genetically. Our results suggest that in most cases, does not share these environmental impacts by individuals who grow up in a single family. That is, the environmental effects that contribute to non-uniformity in the behavior of individual financial are those that make family members different. Family environment, of any upbringing, have an impact on investment decisions of young individuals, but this effect is not long-term (unless a permanent connection still) disappears as an individual in terms of gaining experience of relevant for decision-making in the financial area. Conclusion Most importantly, and perhaps most surprising, too, from our study is that individuals are biologically pre-disposed to certain behaviors investment in the financial area to a large extent like this. This result is not only relevant to our general understanding of the foundations of investor behavior, but it is also important for the effectiveness of policy intervention on financial markets. For example, to the extent that investor behavior is genetic, we expect that the behavior can continue to invest despite the wide reactions and education.

Dohmen, Falk, Huffman, Sunde, Schupp and Wagner (2005) did the research to improve understanding and measurement of individual risk attitudes. We use a new set of survey

measures, which have been collected for a representative sample than 22000 people. We also use representative data from an integrated field experiment designed to test the relevance of these behavioral measures. Based on our analysis, we report nine major findings. The first conclusion is that the distribution of willingness to take risks exhibits a large heterogeneity between individuals. Negatively associated with willingness to take risks to age and being female and related, positive in height and parental education: Second, this partly explains the differences of individual differences in the four external factors. The third result of following an important contribution to the methodology of the main paper: survey measures appear to be relevant to behavior, in the sense that they predict the actual risk-taking behavior in a field experiment we have. Fourth, estimates of coefficient of relative risk aversion of the sample to provide support to a range of parameter values usually assumed in economic models. And the fifth is found that attitudes are strongly linked to risk, but imperfectly across different life contexts. This provides some support for the hypothesis of a single level, a feature inherent, but also refers to the value-added context to ask specific questions, in order to capture the difference in risk perceptions. VI is the conclusion that sex, age, parental education, and height would have a qualitatively similar effect on the attitudes to risk in most contexts, but the size varies across contexts. The seventh finding is that the measures scanning can predict a wide range of important behavioral outcomes, including the option portfolio, and occupational choice, smoking, and migration. To find the eighth issue of risk is that the public are better than expected across all of these behaviors, beating the lottery measure or measures a specific area. Ninth, the best indicator of behavior within a particular context is usually a question of integrating the course of the interview, as opposed to the lottery measure or measures to integrate other contexts. In addition to the knowledge of the positions of the risks, some of these results have potentially important political implications. And can make the difference between the sexes a strong and widespread in risk attitudes may play a role in the interpretation of different results in the labor market, and investment behavior, note the men and women. The file can be age, for risk attitudes are also important implications on the macroeconomic level. Demographic changes that lead to a large number of elderly is expected to lead to the pool is more conservative investors and voters, which could affect the macroeconomic performance significantly and political outcomes, and increased resistance to reforms, and delay policy adjustments necessary but risky. Although we find that risk preferences are relatively stable across situations, a glimpse of Age also raises questions about the stability of risk preferences over time. There is a role of parental

education in shaping attitudes and highlight the risk of children an important role in education policy. The impact of the rise in risk attitudes indicates that there is a mechanism and the closer the relationship between height and earnings of the labor market. Our results leave the door open for a number of means of sedition for future research in the field of research in particular on the mechanisms behind the determinants of risk attitudes. One possible mechanism is socialization. Can be the impact of education between the sexes and parents reflect the different approaches to child-rearing or different rules to which the individual. Can also be differences in risk attitudes over the life cycle be socially, for example, and risky behaviors in driving, sports, and health can be overlooked in an early age, but frowned upon in later life. Instead, it can be a biological mechanism or evolutionary. Could be that the changes in attitudes and even risk with age and explain the biological or developmental. Obviously, it is important that the separation of these two interpretations because of their different implications regarding the malleability of individual risk attitudes.

Surveys conducted between September08 and June09, a sample of brokerage Barclays Wealth personal online investors has shown significant changes in risk over time. By the risk value models that allow for individual differences and situational expectations risks and returns, as well as differences in the position of the risk of self-reported, and we tie these changes in risk to changes in expectations of self-risk and return, while the positions are still stable risk with the passage of time, which one would expect from a psychological attribute. Any changes in the position of the small risk of self-reported cannot predict changes in risk. These results are stable when we control for investment performance in the past and demographic factors.

Consistent with previous work on the expectations of risk (E. Weber and others, 2005), we find that the specific provisions of self-risk market expected return prediction of risk, but estimates that investors amount of market returns and instability, much closer to the traditional risk model and financial returns, and the failure to predict the observed changes in risk. Subjective judgments of risk and expected return continues to predict high-risk even when they are included investors ‘quantitative estimates of the expected market returns and volatility in the gradient, suggesting that this is more of the components of emotion on the basis of these provisions that the leadership change in risk. First, the unique data set allows us to analyze the changes in risk, expectations, attitudes and risk customers and broker on the

Internet. Personal investors in the sample we have is rich and trade often in stocks and other securities, and sophisticated in financial terms. They do not appear short-sighted to use the information, in the sense that they do not use the / alternative risk and self-expectations for personal portfolios when making risky decisions involving the market portfolio. It also does not show any halo effect at risk of digital and forecasts the return of 12, and risk-taking is not directly affected by investment gains or losses recently. Thus it is fair to say that the results that we have a place that may have a minimum of the degree and type of irrationality that one can expect to see in a larger sample of personal investors. Even for this sample, however, we find evidence of short-term beliefs means apostasy to return, which affects the risk.

While analysis of previous studies in the literature only the changes in risk (see, for example, Malmendier and Nagel (2010)), expectations (see, for example, Vissing Jorgensen (2003)), or in a dangerous position (see, for example share (2007)), our study examined the relationship between these variables.

This allowed us to study the mechanism or the channel that the risk may change over time. Another feature of the beauties of our study is the fact that the first survey was conducted at the beginning of September08, before the turmoil in financial markets. Consequently, we are able to analyze the impact of large stock price drops on the attitudes and expectations of risk by comparing the expectations and attitudes shortly before the crisis to that during and after the crisis, using the same panel of investors. While only the direct manipulation of the expectations of the risks and returns will allow us to definitively establish their causal role in changing the risk, we have the design repeated measures within subject and the outcome of the mediation analysis strongly suggests that the observed changes in risk during the survey period was a result of changes in subjective feelings about market risk in the future and back, and not changes in the position of risk.

We noticed a significant change in the attitude of one self-reported risk. Risk position (6, I took the financial risk) showed a significant increase (4.43 until 4.61) from September08 to December08, but in the direction contrary to the marked decrease in risk during that time period. Has concluded that investors who know that we had been losing money in the stock market and the September08 December08, and they should be taking greater risks than previously thought, in light of these losses. Should our findings be of value to those working

in banks. Show that the positions of danger - if measured correctly and without the effects of mixing - seems to be fairly stable, and that changes in risk appears to be caused by changes in expectations of risk and return, rather than changes in attitudes, not risk, at least directly, because changes in the recent market performance or personal portfolio. Consequently, he urged practitioners (for example, MiFID in the Rupeepean Union (2006)) to obtain data on risk customers and risk preferences can be said that elicitation of risk attitudes does not need to be implemented on a quarterly basis. However, as we find that investors risk and return expectations can change dramatically with the passage of time, and it seems to guide the behavior of investment, there is ample room to help investors make better decisions. Our data show that investors are affected by risks and profit expectations by recent events and to change significantly over time, and in a number of ways not consistent with the theory of rationality. Even exhibited a relatively sophisticated financial investors, we have a sample of the misconception in the rebound means short-term market returns, and previously also observed Glaser and Mr. Weber (2005). As can be seen to believe investors 'inaccurate in regression and means in the short term market returns and a beneficial effect in stabilizing the risk in unstable environments, other errors such as halo effect observed in the risk of investors in the market and the expectations of the return of self seems to provide no vision benefits . Investor education can be the goal of these false beliefs.

Our results suggest that it might be useful to practitioners for risk clients and the expectations of the return of more frequent, and make some observations corrective at the end of regular intervals (for example, in the end of each calendar year), and it seems that investors underestimate the continued under the self-appreciate the vagaries of the market, putting hope instead of fear

3. Problem definition

What is the general risk taking attitude of the investors of Pakistan?

What are the factors that influence the risk taking attitude of the investors of Pakistan?

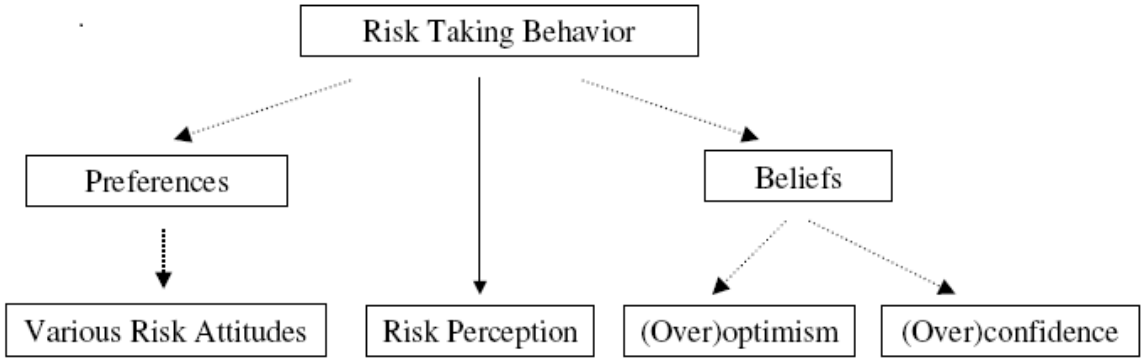
4. Theoretical framework

4.1 Identifying variables

The Variables which are identified are as following:

- Risk Taking Attitude (risk aversion, risk seeking and risk tolerant)
- Uncertainty of outcomes
- Heuristic bias
- Cognitive bias
- Feelings and emotions

4.3 Model



Variables:

There are eight variables in our research model which consists of independent variable, dependent variable, and intervening variable.

Independent variables are **"**Heuristic bias", "Cognitive bias", and "Feelings and emotions".

Dependent variables are **"**Risk aversion", "Risk seeking", "Risk tolerance", and "Risk tolerance".

Intervening variable is **"**Uncertainty of outcomes".

5. Hypotheses

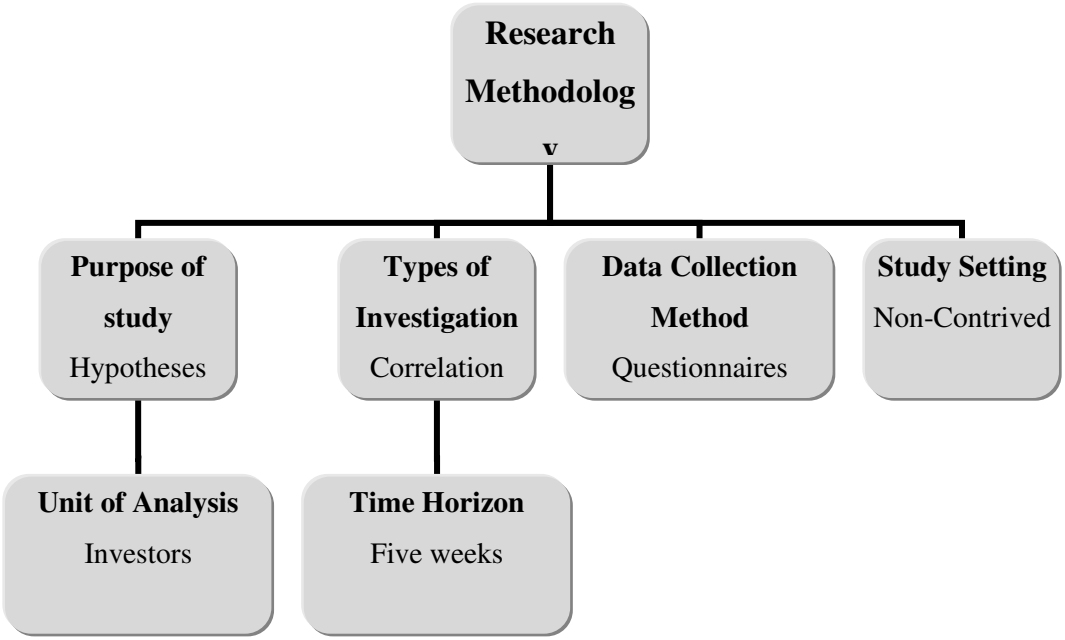
Null hypothesis:

H0: Risk taking behavior in an investment context is affected by subjective risk attitudes, risk perceptions and return expectations.

Alternate hypothesis:

H1: Risk taking behavior in an investment context is not affected by subjective risk attitudes, risk perceptions and return expectations.

6. Research design



6.1 Research Methodology

6.1.1 Type of investigation

Our type of investigation is co-relational.

6.1.2 Co-relational

It is a co-relational research as we want to know the relationship between risk taking attitude investors of financial institutions of Pakistan and uncertainty of outcomes.

6.1.3 Study setting

It was a non-contrived study. As the organizational research we did was in the natural environment where work proceeds normally.

6.1.4 Unit of analysis

Our unit of analysis is individual investors of Pakistan.

6.1.5 Time horizon

The time horizon of our study was much. It took us five weeks to gather the relevant knowledge for our report.

6.1.6 Data collection methods

The data collection method which we used in this report is questionnaire.

6.2 Population

Our population includes all the investors who invest in the different financial instruments a;; around the Pakistan.

6.3 Sample

It is the subset of population so we have taken sample size of **384 investors**. It is represented by "n".

6.4 Sampling technique

In non probability sampling, we have used "**convenience sampling technique**". As the information we collected from the investors who were conveniently available in financial institutions of Pakistan. It is quick, convenient and less expensive. As it is non probability sampling technique so it cannot be generalized to all.

6.5 Plan of analysis

We have used descriptive statistics. Our plan of analysis intricate various statistical tests and on the basis of these tests we will test the hypothesis developed from our research.

- By calculating the mean, standard deviation, frequency distribution and variance of the data we will have a complete idea of how the respondents have reacted to the items in the questionnaire.
- For frequency distribution we have a complete idea of how dependent and independent variables are related to each other.
- We have used t-test in our research as the standard deviation is unknown and we have assumed it to be equal (standard deviation is unknown but equal).
- Cross tabulation is used to know the different responses of the respondents.

6.6 Software employed

In order to prove our hypothesis and to test our selected variables we have used the software spss 16.0 i.e. statistical package for social science.

7. Analysis and findings

7.1 Frequency Analysis

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	210	54.7	54.7	54.7
	Female	174	45.3	45.3	100.0
	Total	384	100.0	100.0	

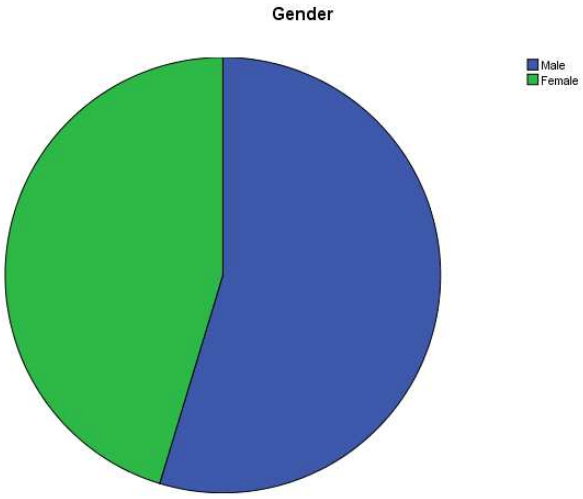


Table 7.1 Gender

Table 7.1 shows that there are 384 participants of the survey in which 94.6% are male and 5.4% are female.

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 - 29	104	27.1	27.1	27.1
	30 - 39	198	51.6	51.6	78.6
	40 - 49	82	21.4	21.4	100.0
	Total	384	100.0	100.0	

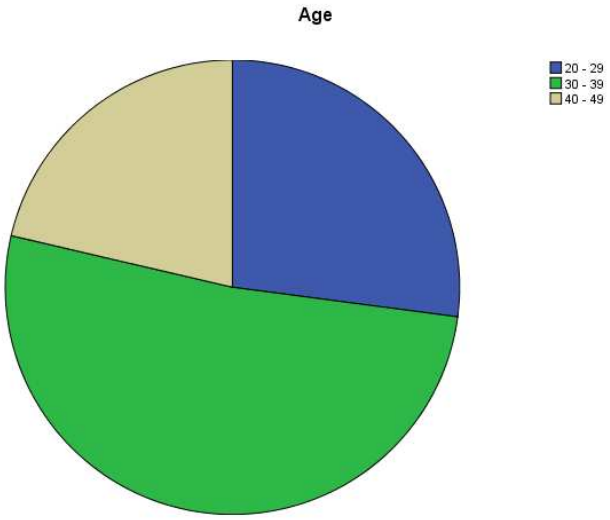


Table 7.2 **Ages**

Table 7.2 shows that 15% of the participants are in between age of 20-29years, 57.5% are in 30-39 years and 20% are in 40-49 years.

Investment Products hold within the last year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5	384	100.0	100.0	100.0

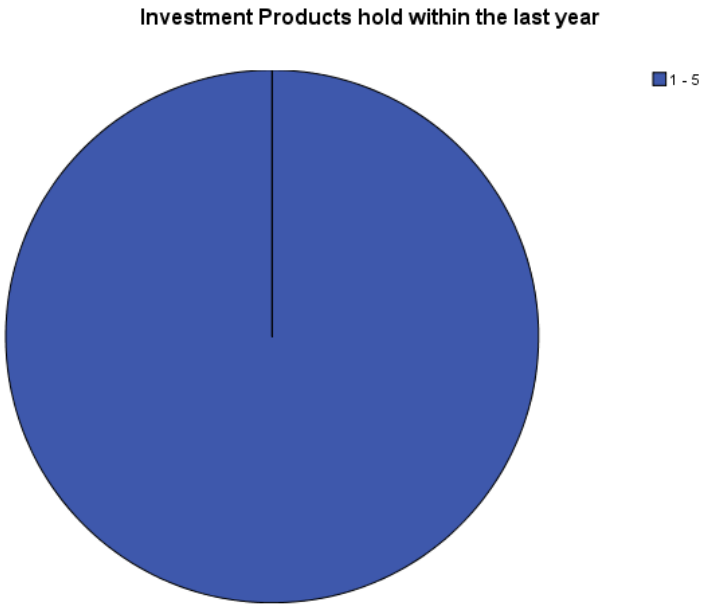


Table 7.4 **Investment Products hold within the last year**

Table 7.4 shows that 97% of the participants holds between 1 – 5 financial products.

statistical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very good	163	42.4	42.4	42.4
	good	95	24.7	24.7	67.2
	Average	105	27.3	27.3	94.5
	bad	21	5.5	5.5	100.0
	Total	384	100.0	100.0	

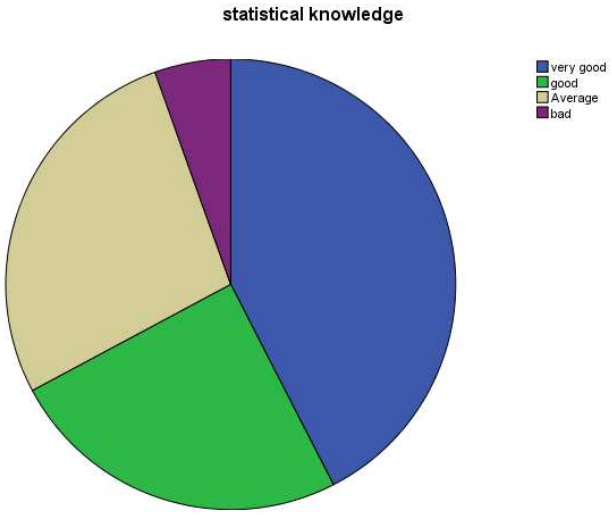


Table 7.5 **statistical knowledge**

Table 7.5 shows that 25% of the participants' thinks that they have good statistical knowledge, 50% thinks that they have average knowledge of statistics and 17.5% has bad statistical knowledge.

Knowledge about stocks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very good	113	29.4	29.4	29.4
	good	10	2.6	2.6	32.0
	Average	84	21.9	21.9	53.9
	bad	157	40.9	40.9	94.8
	very bad	20	5.2	5.2	100.0
	Total	384	100.0	100.0	

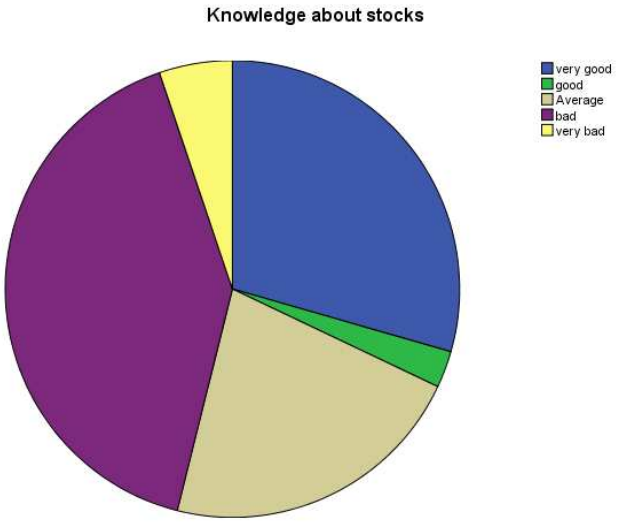


Table 7.6 **Knowledge about stocks**

Table 7.6 shows that 22.5% of the participants' thinks that they have good knowledge about stocks, 57.5% thinks that they have average knowledge about stocks and 12.5% has very bad knowledge about stocks.

Willingness to take risk in financial decisions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	high willingness	92	24.0	24.0	24.0
	Neutral	219	57.0	57.0	81.0
	Low willingness	73	19.0	19.0	100.0
	Total	384	100.0	100.0	

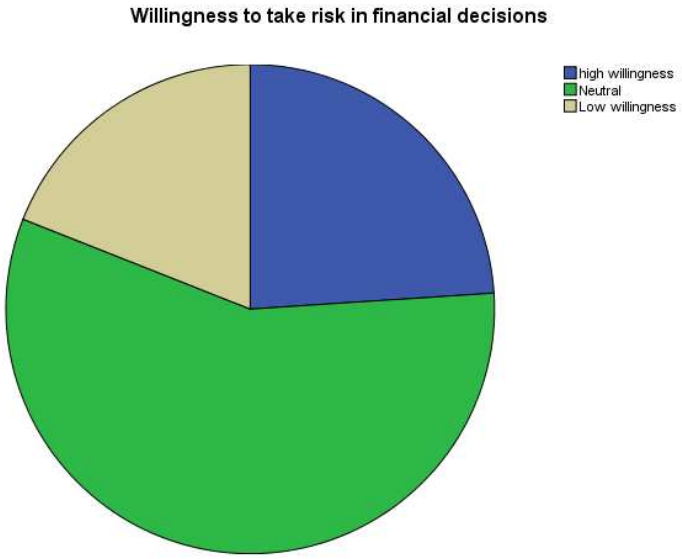


Table 7.7 **Willingness to take risk in financial decisions**

Table 7.7 shows that 22.5% of the participants' thinks that they have high Willingness to take risk in financial decisions, 52.5% thinks that they have moderate Willingness to take risk in financial decisions and 17.5% has low Willingness to take risk in financial decisions.

Risk of aforementioned lottery(Lottery 1)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0% risk	113	29.4	29.4	29.4
	20% risk	51	13.3	13.3	42.7
	30% risk	157	40.9	40.9	83.6
	40% risk	63	16.4	16.4	100.0
	Total	384	100.0	100.0	

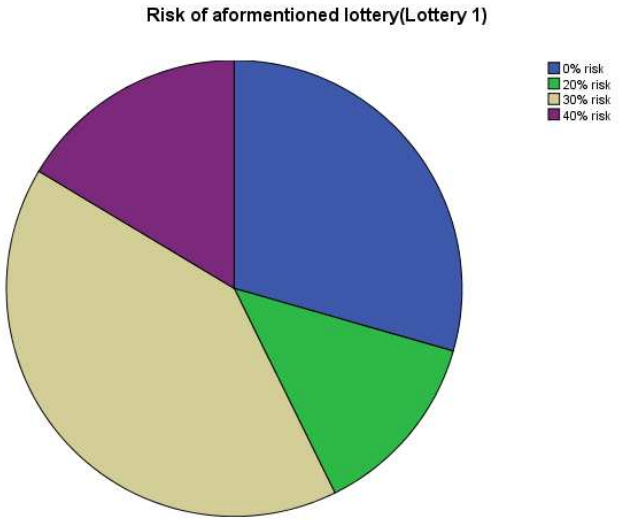


Table 7.8 **Risk of aforementioned lottery (Lottery 1)**

Table 7.8 shows that 2.5% of the participants' are willing to take 10% risk in aforementioned lottery, 10% of the participants' are willing to take 20% risk in aforementioned lottery, 12.5% of the participants' are willing to take 30% risk in aforementioned lottery, 57.5% of the participants' are willing to take 40% risk in aforementioned lottery and 10% of the participants' are willing to take 50% risk in aforementioned lottery. This question shows the risk attitude of the investors which shows 62.5% investors are only taking 40% risk which shows their risk neutral behavior.

Amount that will be invested in lottery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50%	167	43.5	43.5	43.5
	60%	104	27.1	27.1	70.6
	70%	52	13.5	13.5	84.1
	80%	61	15.9	15.9	100.0
	Total	384	100.0	100.0	

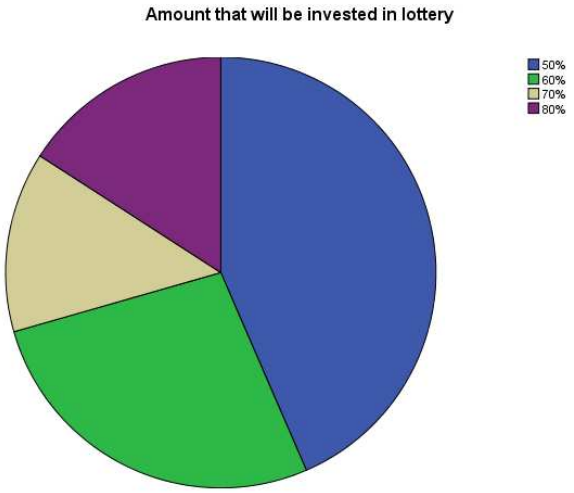


Table 7.9 **Amount that will be invested in lottery**

Table 7.9 shows that 17.5% of the participants' are willing to invest 40% of the amount in aforementioned lottery, 50% of the participants' are willing to invest 50% of the amount in aforementioned lottery and 25% of the participants' are willing to invest 70% of the amount in aforementioned lottery. This question shows the risk perception of the investors. Most investors are willing to take 50% risk which means that they posses risk neutral behavior.

Risk of aforementioned lottery(Lottery 2)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50% risk	62	16.1	16.1	16.1
	60% risk	62	16.1	16.1	32.3
	70% risk	196	51.0	51.0	83.3
	80% risk	42	10.9	10.9	94.3
	100% risk	22	5.7	5.7	100.0
	Total	384	100.0	100.0	

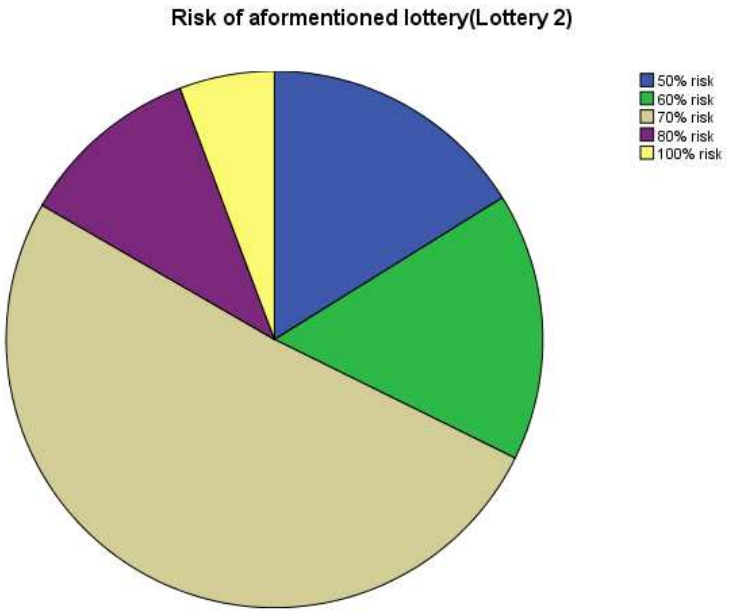


Table 7.10 **Risk of aforementioned lottery (Lottery 2)**

Table 7.10 shows that 16.2% of the participants' are willing to take 50% risk in aforementioned lottery, 16.2% of the participants' are willing to take 60% risk in aforementioned lottery, 51.4% of the participants' are willing to take 70% risk in aforementioned lottery 10.8% of the participants' are willing to take 80% risk in aforementioned lottery and 5.4% of the participants' are willing to take 100% risk in aforementioned lottery. . This question shows the risk attitude of the investors which shows most of the investors are only taking 70% risk which shows their risk neutral behavior. This

question has a less risky lottery as compare to the previous one which shows the amount of investment increases as the risk on the investment decreases.

Investment Preference (9000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	353	91.9	91.9	91.9
	I prefer risk free amount	31	8.1	8.1	100.0
	Total	384	100.0	100.0	

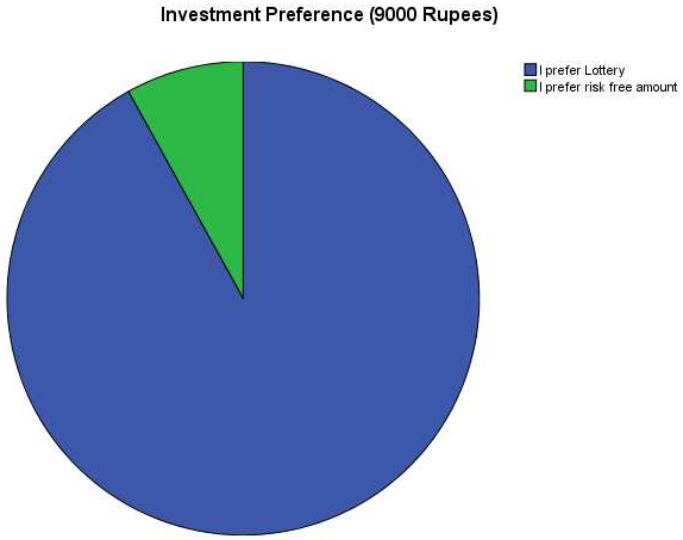


Table 7.11 **Investment Preference (9000 Rupee)**

Table 7.11 shows that 32.4% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 67.6% prefer risk free return when the is 9000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Investment Preference (8000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	307	79.9	79.9	79.9
	I prefer risk free amount	77	20.1	20.1	100.0
	Total	384	100.0	100.0	

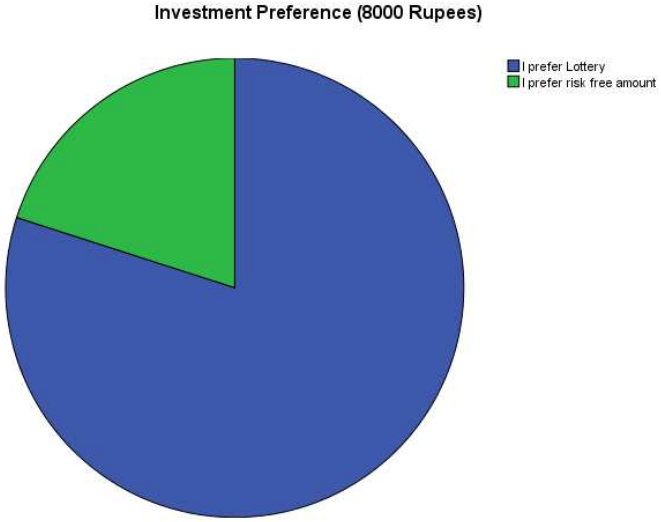


Table 7.12 **Risk of aforementioned lottery (Lottery 1)**

Table 7.12 shows that 35.1% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 64.9% prefer risk free return when the is 8000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Investment Preference (7000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	274	71.4	71.4	71.4
	I prefer risk free amount	110	28.6	28.6	100.0
	Total	384	100.0	100.0	

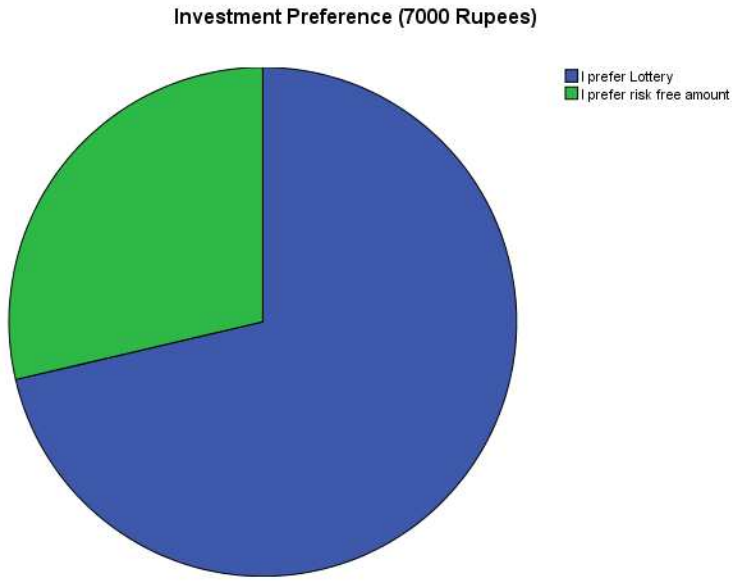


Table 7.13 **Risk of aforementioned lottery (Lottery 1)**

Table 7.13 shows that 40.5% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 59.5% prefer risk free return when the is 7000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Investment Preference (6000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	230	59.9	59.9	59.9
	I prefer risk free amount	154	40.1	40.1	100.0
	Total	384	100.0	100.0	

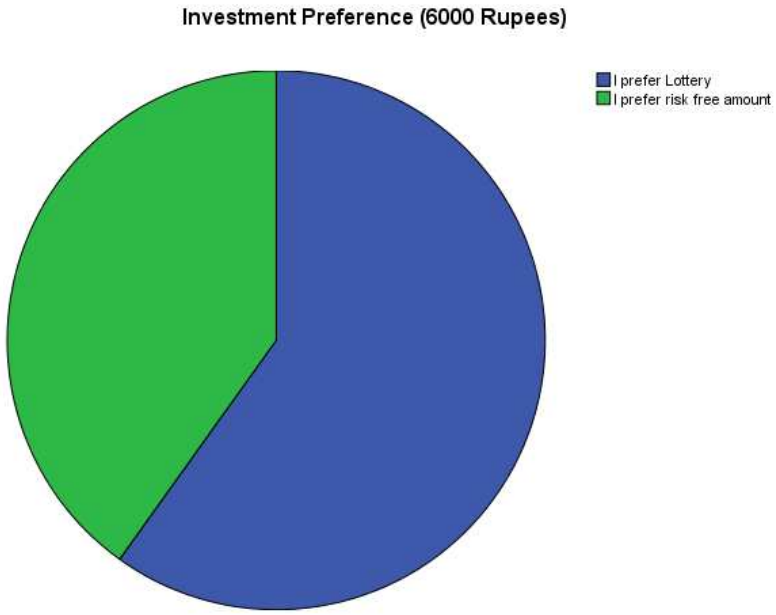


Table 7.14 **Risk of aforementioned lottery (Lottery 1)**

Table 7.14 shows that 32.4% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 67.6% prefer risk free return when the is 6000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Investment Preference (5000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	190	49.5	49.5	49.5
	I prefer risk free amount	194	50.5	50.5	100.0
	Total	384	100.0	100.0	

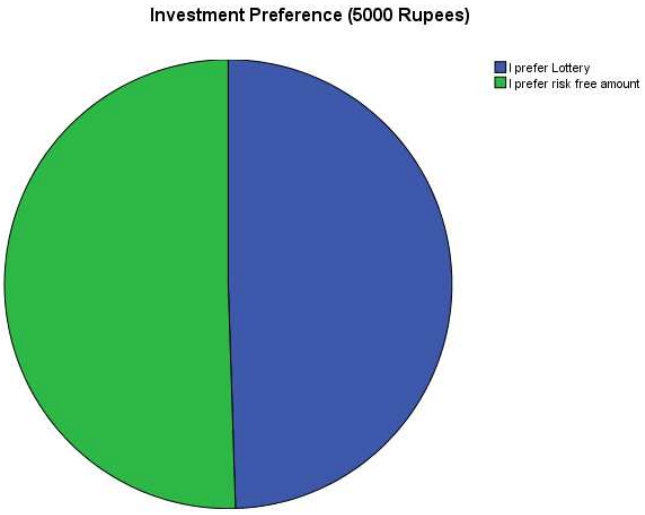


Table 7.15 **Risk of aforementioned lottery (Lottery 1)**

Table 7.15 shows that 24.3% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 75.7% prefer risk free return when the is 5000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Investment Preference (4000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	150	39.1	39.1	39.1
	I prefer risk free amount	234	60.9	60.9	100.0
	Total	384	100.0	100.0	

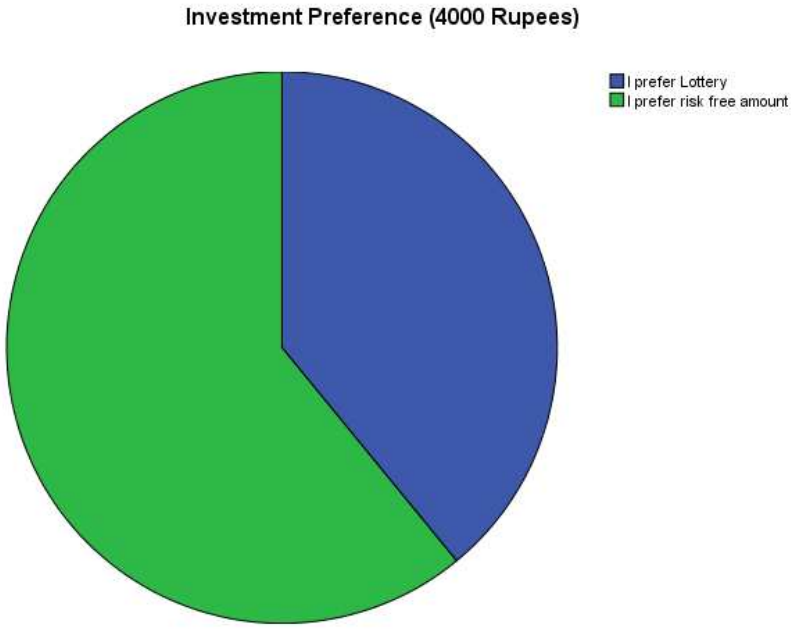


Table 7.16 **Risk of aforementioned lottery (Lottery 1)**

Table 7.16 shows that 70.3% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 29.7% prefer risk free return when the is 4000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Investment Preference (3000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	110	28.6	28.6	28.6
	I prefer risk free amount	274	71.4	71.4	100.0
	Total	384	100.0	100.0	

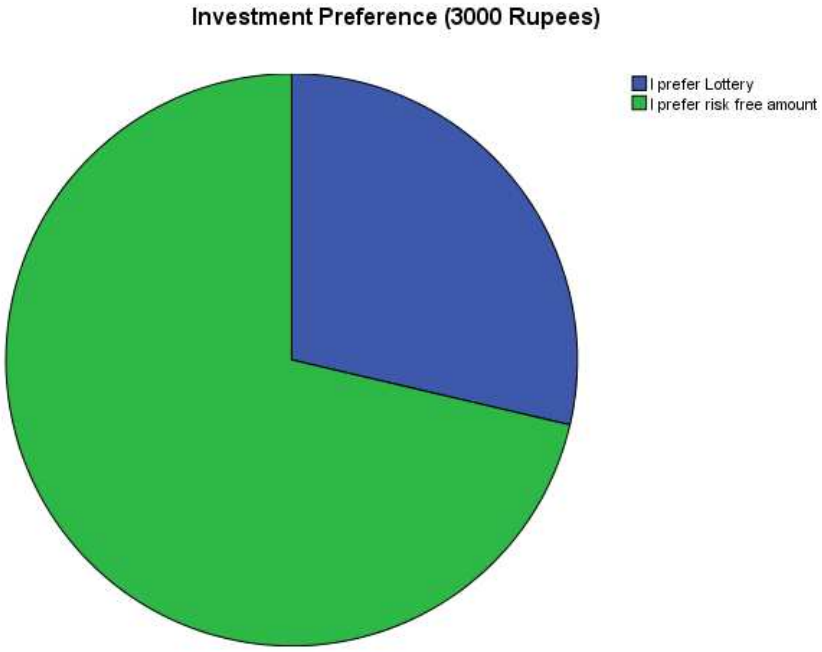


Table 7.17 **Risk of aforementioned lottery (Lottery 1)**

Table 7.17 shows that 70.3% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 29.7% prefer risk free return when the is 4000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Investment Preference (2000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	80	20.8	20.8	20.8
	I prefer risk free amount	304	79.2	79.2	100.0
	Total	384	100.0	100.0	

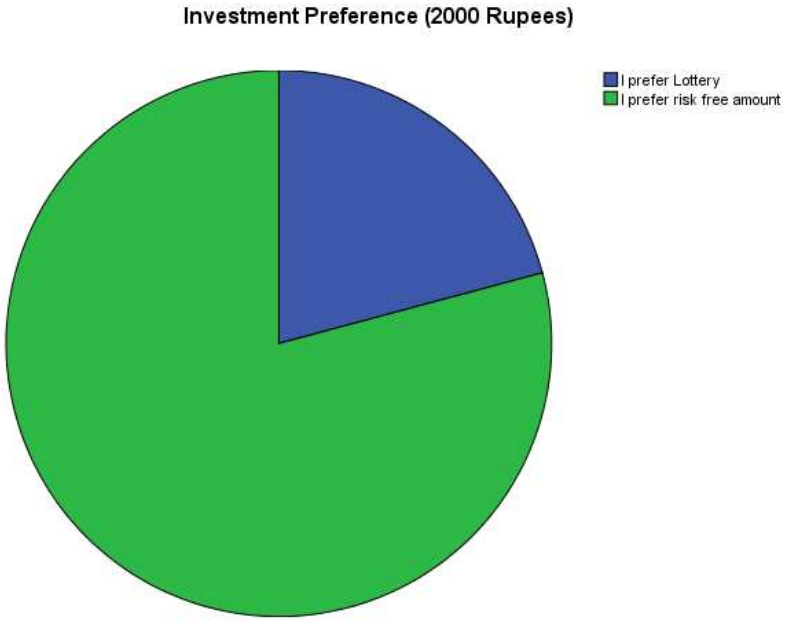


Table 7.18 **Investment Preference (2000 Rupee)**

Table 7.18 shows that 62.2% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 37.8% prefer risk free return when the is 2000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Investment Preference (1000 Rupees)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I prefer Lottery	50	13.0	13.0	13.0
	I prefer risk free amount	334	87.0	87.0	100.0
	Total	384	100.0	100.0	

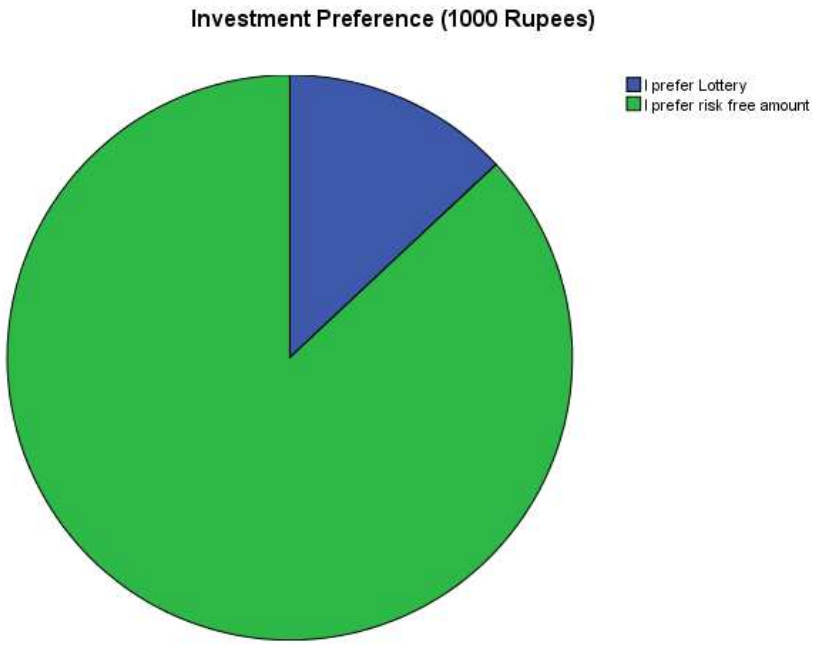


Table 7.19 **Risk of aforementioned lottery (Lottery 1)**

Table 7.19 shows that 73% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 27% prefer risk free return when the is 1000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Identification of stocks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	71	18.5	18.5	18.5
	neutral	271	70.6	70.6	89.1
	disagree	42	10.9	10.9	100.0
	Total	384	100.0	100.0	

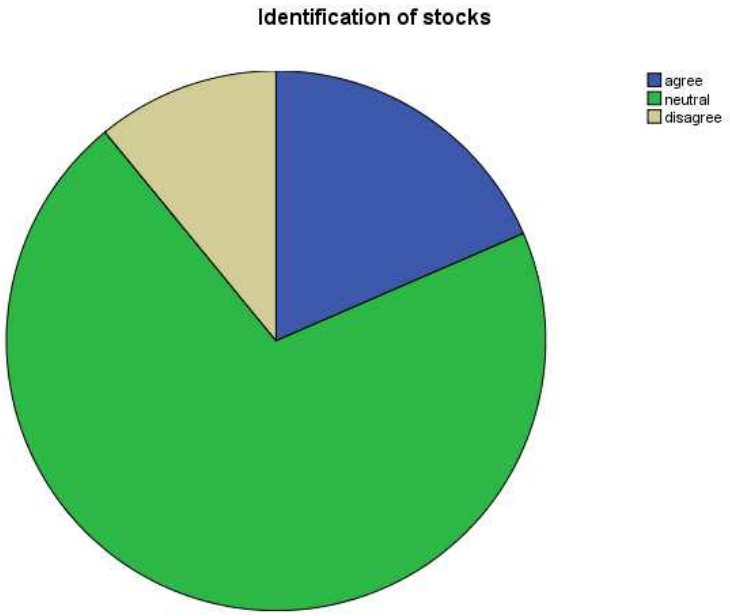


Table 7.20 **Risk of aforementioned lottery (Lottery 1)**

Table 7.20 shows that 18.9% investors agree that they are able to identify the stocks that will beat the market in the future. Most of the investors are neutral with the ability to identify the stocks that will beat the market in the future with the percentage 70.3% and only 10.8% investors disagree that they have the ability to identify the stocks that will beat the market in the future.

My stock forecast are always correct

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	fully agree	138	35.9	35.9	35.9
	agree	62	16.1	16.1	52.1
	neutral	144	37.5	37.5	89.6
	disagree	40	10.4	10.4	100.0
	Total	384	100.0	100.0	

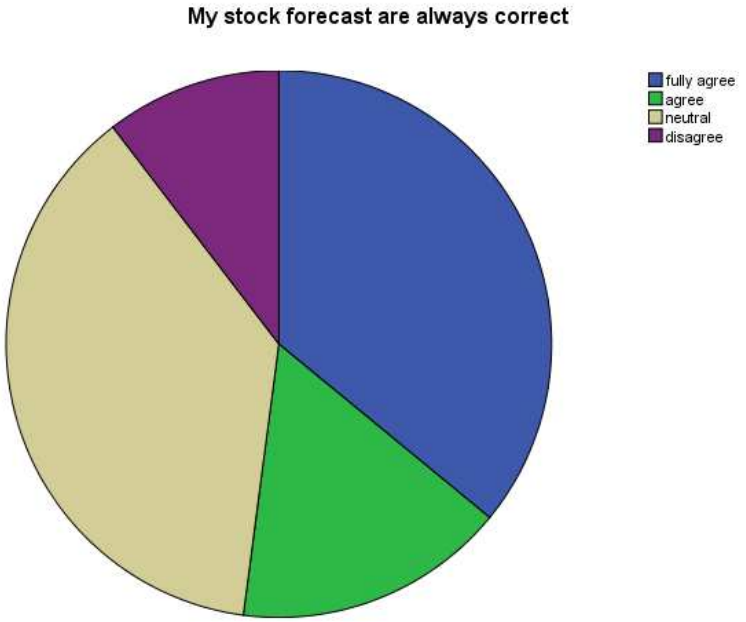


Table 7.21 **Stock forecast**

Table 7.21 shows that 18.9% investors agree that their stock forecast are always correct. Most of the investors are neutral with their stock forecast are always correct with the percentage 67.6% and only 10.8% disagree their stock forecast are always correct and only 2.7% totally disagree investors has their stock forecast are always correct.

Loss/Gain is a matter of chance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	agree	81	21.1	21.1	21.1
	neutral	249	64.8	64.8	85.9
	disagree	54	14.1	14.1	100.0
	Total	384	100.0	100.0	

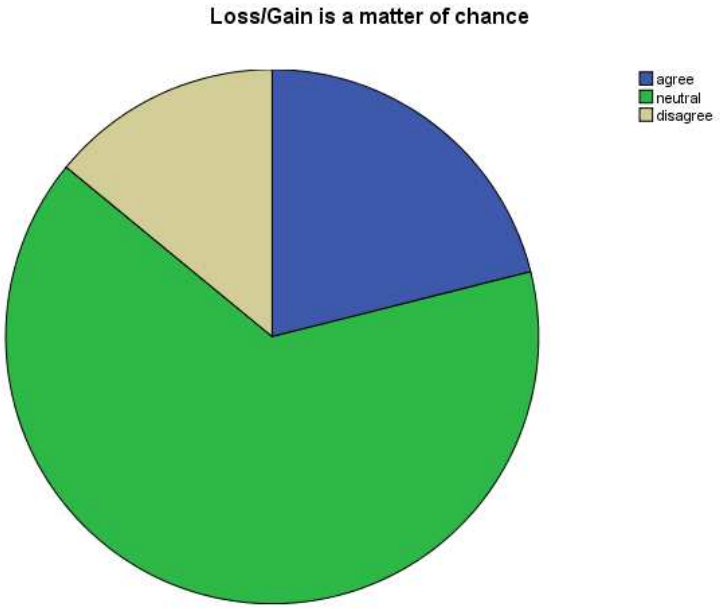


Table 7.22 **Loss/gains matter of chance**

Table 7.22 shows that 21.6% investors agree that loss or gain is just a matter of chance. Most of the investors are neutral with loss or gain is just a matter of chance with the percentage 64.9% and only 13.5% investors disagreed that loss or gain is just a matter of chance.

7.2 Descriptive Analysis

Descriptive Statistics

	N	Mean	Std. Deviation
Gender	384	1.45	.498
Age	384	1.94	.695
Investment Products hold within the last year	384	2.00	.000
statistical knowledge	384	1.96	.958
Knowledge about stocks	384	2.90	1.347
Willingness to take risk in financial decisions	384	2.95	.654
Risk of aforementioned lottery(Lottery 1)	384	3.15	1.492
Amount that will be invested in lottery	384	7.02	1.099
Risk of aforementioned lottery(Lottery 2)	384	7.74	1.040
Investment Preference (9000 Rupees)	384	1.08	.273
Investment Preference (8000 Rupees)	384	1.20	.401
Investment Preference (7000 Rupees)	384	1.29	.453
Investment Preference (6000 Rupees)	384	1.40	.491
Investment Preference (5000 Rupees)	384	1.51	.501
Investment Preference (4000 Rupees)	384	1.61	.489
Investment Preference (3000 Rupees)	384	1.71	.453
Investment Preference (2000 Rupees)	384	1.79	.407
Investment Preference (1000 Rupees)	384	1.87	.337
Identification of stocks	384	2.92	.538
My stock forecast are always correct	384	2.22	1.051
Loss/Gain is a matter of chance	384	2.93	.590
Valid N (list wise)	384		

Table 7.30**Descriptive Statistics**

Table 7.30 shows that 22.5% of the participants' thinks that they have high Willingness to take risk in financial decisions, 52.5% thinks that they have moderate Willingness to take risk in financial decisions and 17.5% has low Willingness to take risk in financial decisions.

7.3 Correlation Analysis

Correlations

		Risk of aforementioned lottery(Lottery 1)	Risk of aforementioned lottery(Lottery 2)
Risk of aforementioned lottery(Lottery 1)	Pearson Correlation	1	.208**
	Sig. (2-tailed)		.000
	N	384	384
Risk of aforementioned lottery(Lottery 2)	Pearson Correlation	.208**	1
	Sig. (2-tailed)	.000	
	N	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

A of Table 3 illustrates Spearman correlation coefficients (1) and Pearson correlation coefficients (2) between Risk Taking (Stocks) and related variables. The results show that Subjective Financial Risk Attitude is strongly positively related with Mean Risk Taking (Stocks). Hence, subjects who have a higher Subjective Financial Risk Attitude also (on average) invest into more risky portfolios.

Correlations

		Risk of aforementioned lottery(Lottery 1)	Amount that will be invested in lottery	Risk of aforementioned lottery(Lottery 2)
Risk of aforementioned lottery(Lottery 1)	Pearson Correlation	1	-.140**	.208**
	Sig. (2-tailed)		.006	.000
	N	384	384	384
Amount that will be invested in lottery	Pearson Correlation	-.140**	1	.006
	Sig. (2-tailed)	.006		.900
	N	384	384	384
Risk of aforementioned lottery(Lottery 2)	Pearson Correlation	.208**	.006	1
	Sig. (2-tailed)	.000	.900	
	N	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

A of Table 3 illustrates Spearman correlation coefficients (1) and Pearson correlation coefficients (2) between Risk Taking (Stocks) and related variables. The results show that Subjective Financial Risk Attitude is strongly positively related with Mean Risk Taking (Stocks). Hence, subjects who have a higher Subjective Financial Risk Attitude also (on average) invest into more risky portfolios.

Correlations

		Gender	Age	Risk of aforementioned lottery(Lottery 1)	Amount that will be invested in lottery	Risk of aforementioned lottery(Lottery 2)
Gender	Pearson Correlation	1	-.166**	.109*	-.125*	.128*
	Sig. (2-tailed)		.001	.032	.014	.012
	N	384	384	384	384	384
Age	Pearson Correlation	-.166**	1	-.287**	.080	-.480**
	Sig. (2-tailed)	.001		.000	.117	.000
	N	384	384	384	384	384
Risk of aforementioned lottery(Lottery 1)	Pearson Correlation	.109*	-.287**	1	-.140**	.208**
	Sig. (2-tailed)	.032	.000		.006	.000
	N	384	384	384	384	384
Amount that will be invested in lottery	Pearson Correlation	-.125*	.080	-.140**	1	.006
	Sig. (2-tailed)	.014	.117	.006		.900
	N	384	384	384	384	384
Risk of aforementioned lottery(Lottery 2)	Pearson Correlation	.128*	-.480**	.208**	.006	1
	Sig. (2-tailed)	.012	.000	.000	.900	
	N	384	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

A of Table 3 illustrates Spearman correlation coefficients (1) and Pearson correlation coefficients (2) between Risk Taking (Stocks) and related variables. The results show that Subjective Financial Risk Attitude is strongly positively related with Mean Risk Taking (Stocks). Hence, subjects who have a higher Subjective Financial Risk Attitude also (on average) invest into more risky portfolios.

Correlations

		Gender	Risk of aforementioned lottery(Lottery 1)	Amount that will be invested in lottery	Risk of aforementioned lottery(Lottery 2)	Identification of stocks	My stock forecast are always correct	Loss/Gain is a matter of chance
Gender	Pearson Correlation	1	.109*	-.125*	.128*	.138**	-.264**	.224**
	Sig. (2-tailed)		.032	.014	.012	.007	.000	.000
	N	384	384	384	384	384	384	384
Risk of aforementioned lottery(Lottery 1)	Pearson Correlation	.109*	1	-.140**	.208**	-.048	.174**	-.163**
	Sig. (2-tailed)	.032		.006	.000	.350	.001	.001
	N	384	384	384	384	384	384	384
Amount that will be invested in lottery	Pearson Correlation	-.125*	-.140**	1	.006	.148**	.130*	.006
	Sig. (2-tailed)	.014	.006		.900	.004	.011	.907
	N	384	384	384	384	384	384	384
Risk of aforementioned lottery(Lottery 2)	Pearson Correlation	.128*	.208**	.006	1	.007	.006	-.068
	Sig. (2-tailed)	.012	.000	.900		.895	.911	.182
	N	384	384	384	384	384	384	384
Identification of stocks	Pearson Correlation	.138**	-.048	.148**	.007	1	.035	-.017
	Sig. (2-tailed)	.007	.350	.004	.895		.499	.743
	N	384	384	384	384	384	384	384
My stock forecast are always correct	Pearson Correlation	-.264**	.174**	.130*	.006	.035	1	-.324**
	Sig. (2-tailed)	.000	.001	.011	.911	.499		.000
	N	384	384	384	384	384	384	384

Loss/Gain is a matter of chance	Pearson Correlation	.224**	-.163**	.006	-.068	-.017	-.324**	1
	Sig. (2-tailed)	.000	.001	.907	.182	.743	.000	
	N	384	384	384	384	384	384	384

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

A of Table 3 illustrates Spearman correlation coefficients (1) and Pearson correlation coefficients (2) between Risk Taking (Stocks) and related variables. The results show that Subjective Financial Risk Attitude is strongly positively related with Mean Risk Taking (Stocks). Hence, subjects who have a higher Subjective Financial Risk Attitude also (on average) invest into more risky portfolios.

Correlations

		Investment Products hold within the last year	statistical knowledge	Knowledge about stocks	Willingness to take risk in financial decisions	Risk of aforementioned lottery(Lottery 1)	Amount that will be invested in lottery	Risk of aforementioned lottery(Lottery 2)
Investment Products hold within the last year	Pearson Correlation	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]
	Sig. (2-tailed)	.	.	.	.	.	.	.
	N	384	384	384	384	384	384	384
statistical knowledge	Pearson Correlation	.[a]	1	-.032	-.091	-.153**	-.086	-.187**
	Sig. (2-tailed)	.		.537	.076	.003	.092	.000
	N	384	384	384	384	384	384	384
Knowledge about stocks	Pearson Correlation	.[a]	-.032	1	-.305**	.877**	-.219**	.058
	Sig. (2-tailed)	.	.537		.000	.000	.000	.261
	N	384	384	384	384	384	384	384
Willingness to take risk in financial decisions	Pearson Correlation	.[a]	-.091	-.305**	1	-.252**	-.376**	-.084
	Sig. (2-tailed)	.	.076	.000		.000	.000	.099
	N	384	384	384	384	384	384	384
Risk of aforementioned lottery(Lottery 1)	Pearson Correlation	.[a]	-.153**	.877**	-.252**	1	-.140**	.208**
	Sig. (2-tailed)	.	.003	.000	.000		.006	.000
	N	384	384	384	384	384	384	384
Amount that will be invested in lottery	Pearson Correlation	.[a]	-.086	-.219**	-.376**	-.140**	1	.006
	Sig. (2-tailed)	.	.092	.000	.000	.006		.900
	N	384	384	384	384	384	384	384

Risk of aforementioned lottery(Lottery 2)	Pearson Correlation	.[a]	-.187**	.058	-.084	.208**	.006	1
	Sig. (2-tailed)	.	.000	.261	.099	.000	.900	
	N	384	384	384	384	384	384	384

a. Cannot be computed because at least one of the variables is constant.

**. Correlation is significant at the 0.01 level (2-tailed).

A of Table 3 illustrates Spearman correlation coefficients (1) and Pearson correlation coefficients (2) between Risk Taking (Stocks) and related variables. The results show that Subjective Financial Risk Attitude is strongly positively related with Mean Risk Taking (Stocks). Hence, subjects who have a higher Subjective Financial Risk Attitude also (on average) invest into more risky portfolios.

Correlations

		Investment Preference (9000 Rupees)	Investment Preference (8000 Rupees)	Investment Preference (7000 Rupees)	Investment Preference (6000 Rupees)	Investment Preference (5000 Rupees)	Investment Preference (4000 Rupees)	Investment Preference (3000 Rupees)	Investment Preference (2000 Rupees)	Investment Preference (1000 Rupees)
Investment Preference (9000 Rupees)	Pearson Correlation	1	.592**	.468**	.362**	.293**	.237**	.188**	.152**	.115*
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.003	.025
	N	384	384	384	384	384	384	384	384	384
Investment Preference (8000 Rupees)	Pearson Correlation	.592**	1	.790**	.612**	.496**	.401**	.317**	.257**	.194**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000
	N	384	384	384	384	384	384	384	384	384
Investment Preference (7000 Rupees)	Pearson Correlation	.468**	.790**	1	.774**	.627**	.507**	.401**	.325**	.245**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000
	N	384	384	384	384	384	384	384	384	384
Investment Preference (6000 Rupees)	Pearson Correlation	.362**	.612**	.774**	1	.810**	.655**	.518**	.420**	.317**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000
	N	384	384	384	384	384	384	384	384	384
Investment Preference (5000 Rupees)	Pearson Correlation	.293**	.496**	.627**	.810**	1	.809**	.640**	.518**	.391**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
	N	384	384	384	384	384	384	384	384	384

Investment Preference (4000 Rupees)	Pearson Correlation	.237**	.401**	.507**	.655**	.809**	1	.791**	.641**	.483**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000
	N	384	384	384	384	384	384	384	384	384
Investment Preference (3000 Rupees)	Pearson Correlation	.188**	.317**	.401**	.518**	.640**	.791**	1	.810**	.611**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000	.000
	N	384	384	384	384	384	384	384	384	384
Investment Preference (2000 Rupees)	Pearson Correlation	.152**	.257**	.325**	.420**	.518**	.641**	.810**	1	.754**
	Sig. (2-tailed)	.003	.000	.000	.000	.000	.000	.000		.000
	N	384	384	384	384	384	384	384	384	384
Investment Preference (1000 Rupees)	Pearson Correlation	.115*	.194**	.245**	.317**	.391**	.483**	.611**	.754**	1
	Sig. (2-tailed)	.025	.000	.000	.000	.000	.000	.000	.000	
	N	384	384	384	384	384	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

A of Table 3 illustrates Spearman correlation coefficients (1) and Pearson correlation coefficients (2) between Risk Taking (Stocks) and related variables. The results show that Subjective Financial Risk Attitude is strongly positively related with Mean Risk Taking (Stocks). Hence, subjects who have a higher Subjective Financial Risk Attitude also (on average) invest into more risky portfolios.

Results

Table 7.7 shows that 22.5% of the participants' thinks that they have high Willingness to take risk in financial decisions, 52.5% thinks that they have moderate Willingness to take risk in financial decisions and 17.5% has low Willingness to take risk in financial decisions.

Table 7.8 shows that 2.5% of the participants' are willing to take 10% risk in aforementioned lottery, 10% of the participants' are willing to take 20% risk in aforementioned lottery, 12.5% of the participants' are willing to take 30% risk in aforementioned lottery, 57.5% of the participants' are willing to take 40% risk in aforementioned lottery and 10% of the participants' are willing to take 50% risk in aforementioned lottery. This question shows the risk attitude of the investors which shows 62.5% investors are only taking 40% risk which shows their risk neutral behavior.

Table 7.9 shows that 17.5% of the participants' are willing to invest 40% of the amount in aforementioned lottery, 50% of the participants' are willing to invest 50% of the amount in aforementioned lottery and 25% of the participants' are willing to invest 70% of the amount in aforementioned lottery. This question shows the risk perception of the investors. Most investors are willing to take 50% risk which means that they posses risk neutral behavior.

Table 7.10 shows that 16.2% of the participants' are willing to take 50% risk in aforementioned lottery, 16.2% of the participants' are willing to take 60% risk in aforementioned lottery, 51.4% of the participants' are willing to take 70% risk in aforementioned lottery 10.8% of the participants' are willing to take 80% risk in aforementioned lottery and 5.4% of the participants' are willing to take 100% risk in aforementioned lottery. . This question shows the risk attitude of the investors which shows most of the investors are only taking 70% risk which shows their risk neutral behavior. This question has a less risky lottery as compare to the previous one which shows the amount of investment increases as the risk on the investment decreases.

Table 7.12 shows that 35.1% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 64.9% prefer risk free return when the is 8000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Table 7.13 shows that 40.5% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 59.5% prefer risk free return when the is 7000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Table 7.14 shows that 32.4% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 67.6% prefer risk free return when the is 6000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Table 7.15 shows that 24.3% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 75.7% prefer risk free return when the is 5000 Rupees or 0 Rupees. This shows that investors prefer higher risk free amount then investing in lottery.

Table 7.16 shows that 70.3% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 29.7% prefer risk free return when the is 4000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Table 7.17 shows that 70.3% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 29.7% prefer risk free return when the is 4000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Table 7.18 shows that 62.2% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 37.8% prefer risk free return when the is 2000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Table 7.19 shows that 73% of the participants' prefer lottery as an investment preference when the return is 9000 Rupees or 0 Rupees and 27% prefer risk free return when the is 1000 Rupees or 0 Rupees. This shows that investors prefer investing in lottery then lower risk free amount.

Table 7.20 shows that 18.9% investors agree that they are able to identify the stocks that will beat the market in the future. Most of the investors are neutral with the ability to identify the stocks that will beat the market in the future with the percentage 70.3% and only 10.8% investors disagree that they have the ability to identify the stocks that will beat the market in the future

Table 7.21 shows that 18.9% investors agree that their stock forecast are always correct. Most of the investors are neutral with their stock forecast are always correct with the percentage 67.6% and only 10.8% disagree their stock forecast are always correct and only 2.7% totally disagree investors has their stock forecast are always correct.

Table 7.22 shows that 21.6% investors agree that loss or gain is just a matter of chance. Most of the investors are neutral with loss or gain is just a matter of chance with the percentage 64.9% and only 13.5% investors disagree that loss or gain is just a matter of chance.

Table 7.23 Most of the investors thinks that the capital preservation is very important. This shows that most of the investors are risk neutral in the subjective risk scenario.

Table 7.24 Most of the investors thinks that the Growth is very important. This shows that most of the investors are risk neutral in the subjective risk scenario.

Table 7.25 Most of the investors thinks that the low volatility is very important. This shows that most of the investors are risk neutral in the subjective risk scenario.

Table 7.26 Most of the investors thinks that the low volatility is very important. This shows that most of the investors are risk neutral in the subjective risk scenario.

Table 7.27 shows that 73% of the investors are ready to bear 20%-25% loss if the overall return on the investment is 15%. Which shows the change of financial decision to take risk when the circumstances changes.

Table 7.28 shows that portfolio E has more chances of loss and can give higher return on investment. In this scenario the risk attitude of the investors changes when they are getting higher return and has a more chance of having loss.

Table 7.29 shows that 73% of the investors will invest their 50%-75% of their assets if the return on investment is 15%.

Conclusion

The main objective of this study is to analyze the determinants of risk-taking behavior. Consistent with models of risk return, we indicate that risk-taking behavior in the context of investment is affected by the risk of self-attitudes, and perceptions of risk and return expectations. Analysis of the determinants of financial risk with the behavior is also important for practitioners. This applies in particular because of the implementation of the markets of financial instruments directive, which urges financial institutions to be aware of the risk preferences of our customers risk and their personal risk. One implication of our study is that objective measures of risk, such as historical volatility and return, are not able to determine the risk-taking behavior almost as well as subjective measures, the risk perceptions and self-return, especially the historical returns seems to be a poor indicator of risk-taking behavior. Moreover, we find substantial differences between the self-perceptions of risk is inferred from the interval estimates and inferred from those of the Likert scales. Our results also indicate that, in line with theoretical models, behavioral biases such as overconfidence and excessive optimism significantly affect risk behavior. Those investment advisers can try to incorporate some of these results in the consultative processes to correct the erroneous beliefs of investors. This can be achieved through the strengthening of the patch from the financial literacy of clients as well as showing them that their investment is required is probably more serious than originally envisaged by them. We also find evidence of the expanding scope of content in the privacy of our data. Determinants of risk-taking behavior differ not only between the two areas of content and very clear, but even in the field of investments. Show that the determinants of risk behavior in the field of investments, lottery does not need to be able to predict the risk in equity investments, and vice versa. Measuring risk attitudes using lotteries approach is useless and therefore if we want to predict the behavior of risk in financial securities. It therefore seems that (method is used to have, for example, often in surveys of large plate-sized enterprises, such as socio-economic panel (SOEP), as well as in the banking industry) to extract positions risk customers by asking them about his conviction cannot predict the risk behavior of individuals. The same field content as a result of the extension of privacy also applies to measures of overconfidence; miscalibration only in the field of securities have had an impact on the portfolio of options, but not excessive in the preparation of a more general. Research the future needs to address whether you can generalize the results that we have reached a virtual portfolio decisions and simplified the actual portfolio decisions. To accomplish this type of study, it may be insightful to cooperate with the World Bank and the decisions of the bank's clients portfolio analysis in the light of our findings. In addition, it will certainly be of interest to analyze how these determinants of risk behavior change over time, and how these changes affect risk-taking behavior, to be more precise, it can be interesting to determine whether the success of previous investments at risk or affect the perception of overconfidence, as was stated in the literature. Moreover, as we have shown that over-confidence (ie, miscalibration) has no effect on risk-taking behavior; may be

insightful to analyze the possible ways to reduce the level of overconfidence. However, the type of feedback given to subjects and seems to be crucial. And therefore, can also be further research and analysis and effective means to degrade customers. A promising line of research in the analysis of the issue of measuring the efficiency of financial risk positions. Since we have shown that the risk of inferred from the positions near certainty is not an effective way to measure risk preferences, it might be interesting to analyze in more depth the reliability and validity of the graphical tools measure the risk of the situation.

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Appendix

QUESTIONNAIRE

Name: _____

Gender: ☐ Male ☐ Female

Age: ☐ Between 20 - 29

☐ Between 30 - 39

☐ Between 40 - 49

☐ Between 50 - Above

1. How many different investments products (e.g. shares, funds, bonds, certificates) did you hold within the last year?

0 ☐ 1-5 ☐ 6-10 ☐ more than 10 ☐

2. How do you rate your statistical knowledge?

Very good		*Moderate*		*Very bad*
1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

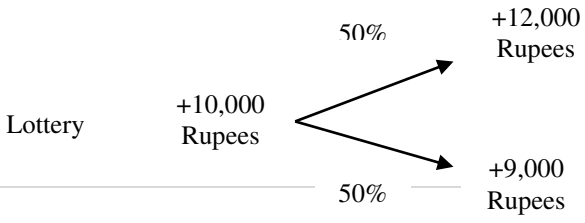
3. How do you rate your knowledge about stock markets and financial markets?

Very good		*Moderate*		*Very bad*
1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

4. How would you classify your willingness to take risks in financial decisions?

Very good		*Moderate*		*Very bad*
1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

You have an initial wealth of 10,000 Rupee, which could be invested in a lottery (risky investment). Your wealth could increase to 12,000 Rupee or decrease to 9,000 Rupee, each with a probability of 50%.

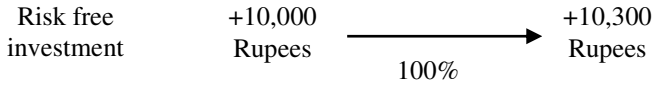


5. How do you assess the risk of the aforementioned lottery (risky investment)?

No risk at all *Very high risk*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

You could also invest the 10,000 Rupee in a risk free alternative with a safe 3% interest rate.



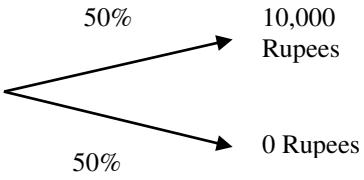
Now consider the following scenario. You could invest your initial wealth of 10,000 Rupee in either the lottery (risky investment) or in the risk free asset. How much would you invest in the lottery (risky investment) and in the risk free investment, respectively?

6. Please mark your answer on the following scale from 0 to 100, where 0 indicates that the full amount will be invested in the risk free alternative and 100 indicates that the full amount will be invested in the lottery (risky alternative).

Total amount invested in Risk free alternative *Total amount invested in Lottery (risky investment)*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

In the following situation you can again choose between a lottery (risky investment) and a risk free alternative.
The lottery either returns you an amount of 10,000 Rupee or it returns nothing.



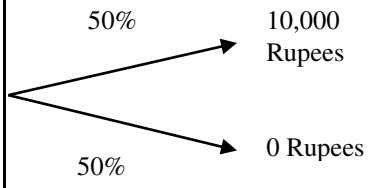
7. How do you assess the risk of the aforementioned lottery (risky investment) on a scale from 0 (no risk at all) to 10 (very high risk) if you can alternatively get 4,000 Rupee.

No risk at all *Very high risk*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10

Now the amount you could alternatively get if you pick the risk free alternative will vary from 0 Rupee to 10,000 Rupee.

8. Please mark for each amount whether you prefer the participation in the lottery or the risk free amount.

Lottery	Risk - Free amount	I prefer the lottery	I prefer the risk free amount
	9,000 Rupees		
	8,000 Rupees		
	7,000 Rupees		
	6,000 Rupees		
	5,000 Rupees		
	4,000 Rupees		
	3,000 Rupees		
	2,000 Rupees		
	1,000 Rupees		

9. I am able to identify stocks that will beat the market in the future.

Fully agree *Fully disagree*

1☐ 2☐ 3☐ 4☐ 5☐

10. My stock forecasts are always correct.

Fully agree *Fully disagree*

1☐ 2☐ 3☐ 4☐ 5☐

11. Losses and gains in stock markets are just a matter of chance.

Fully agree *Fully disagree*

1☐ 2☐ 3☐ 4☐ 5☐