# Chapter I

# INTRODUCTION

## 1.1 Background:

Almost any human endeavour carries some risk, but some are much more risky than others. Risk is the potential that a chosen action or activity (including the choice of inaction) will lead to a loss (an undesirable outcome). The notion implies that a choice having an influence on the outcome exists (or existed). Potential losses themselves may also be called "risks". The term Financial Risk is often defined as the unexpected variability or volatility of returns and thus includes both potential worse-than-expected as well as better-than-expected returns.

The **stock market** is one of the most important sources for companies to raise money. This allows businesses to be publicly traded, or raise additional financial capital for expansion by selling shares of ownership of the company in a public market. The liquidity that an exchange provides affords investors the ability to quickly and easily sell securities. This is an attractive feature of investing in stocks, compared to other less liquid investments such as real estate. Some companies actively increase liquidity by trading in their own shares.

History has shown that the price of shares and other assets is an important part of the dynamics of economic activity, and can influence or be an indicator of social mood. An economy where the stock market is on the rise is considered to be an up-and-coming economy. In fact, the stock market is often considered the primary indicator of a country's economic strength and development.

Rising share prices, for instance, tend to be associated with increased business investment and vice versa. Share prices also affect the wealth of households and their consumption.

In 1994, the government of Nepal established stock market with the technical assistance of the IRIS center at the University of Maryland under the USAID sponsored Economic Liberalization Project. Since then the stock market has gone through various ups and down. In Nepalese stock market, there are many players involved like institutional investors, individual investors, brokers, security dealers, companies, market maker, issue manager, investment banker, underwriter etc. Among these investors play vital role in providing flow of capital in the market.

There are a number of Nepalese investors who dream of investing in share market and earning huge profit. However this seldom happens because the investors are lacking basic

investment skills and poor at financial and technical analysis of share issuer company's financial statements and also poor at gathering true data and information. Most of the investors depend upon whim and rumor. Due to these reasons Nepal Stock Market is not performing well as it is supposed to. Therefore, the regulators (SEBON in case of Nepal) tend to keep an eye on the control and behaviour of the stock market and, in general, on the smooth operation of financial system functions.

As we know the investors can be of different risk tolerance level like: risk averter, risk seeker and risk neutral. A good guidance is necessary for the investors to make them profitable. Investment managers who are concerned primarily with a client's access to and allocation of investment and financial resources can play a major role. The role of an investment manager is to help establish a client's financial objectives, develop plans, and manage how resources are accessed and allocated in meeting objectives. Investment managers use background analysis information and objectives as inputs into the development of financial and investment plans.

Gathering background information entails obtaining information such as records of income and expenditures as well as a descriptive assessment of an individual's or family's financial position. This step in the management of investment decisions is important, because prior to setting objectives investment managers must obtain and understand objective and subjective information regarding demographic inputs.

Investment managers who are aware of their clients' risk tolerance are best able to establish realistic and acceptable objectives.

Therefore, the role of investment manager is vital and study of the differentiating and classifying factors of risk tolerance of investors of Nepalese stock market is essential in today's context.

## 1.2 Statement of Problem:

The purpose of this study was to determine whether the variables gender, age, marital status and education could be used individually or in combination to both differentiate among levels of investor risk tolerance and classify individuals into risk-tolerance categories.

In recent years, investment managers and researchers have taken a renewed interest in understanding investor risk tolerance. Much of this interest has coincided with advances in the conceptualization of investment management models. Modern investment management decision making models require investment managers to use, at a minimum, four factors as

inputs into the development of financial and investment plans. These inputs include an investor's: (a) goals, (b) time horizon, (c) financial stability, and (d) risk tolerance (Garman & Forgue, 1997; Hallman & Rosenbloom, 1987; Trone, Allbright, & Taylor, 1996).

The first three inputs (i.e., goals, time horizon, and financial stability) tend to be objective and relatively easy to measure. Investor goals include plans to use investment principal and earnings for purposes such as educational expenses, retirement, future gifts, and estate transfers. Time horizon refers to the anticipated time span the investor will need before beginning to use investment returns; financial stability refers to concepts such as the nature and stability of an investor's employment, assets, liabilities, and net worth, and the extent to which current income is needed for current living expenses. The fourth input, investor risk tolerance, refers to how well

an investor is able "to weather the ups and particularly the downs in the securities markets ... with an emphasis on an investor's attitudes and emotional tolerance for risk" (Hallman & Rosenbloom,1987, p. 169). Unlike the other inputs into the investment management decision making process, investor risk tolerance tends to be subjective rather than objective, and somewhat difficult to measure. Although difficult to measure, Trone et al. (1996) have suggested that an ability to achieve desired investment objectives is influenced most significantly by an investor's emotional ability to accept possible losses in portfolio value.

Due to the subjective nature of investor risk tolerance, sometimes investment managers "give only lip service to analyzing one's level of financial risk tolerance" (Roszkowski, 1995, p. RT 1). According to Roszkowski, Snelbecker, and Leimberg (1993), analyzing an investor's risk tolerance has tended to be based on demographics, which have been turned into risk predicting heuristics. The following heuristics, based entirely on demographics, continue to be widely used to separate people into high, average, and no risk-tolerance categories (Roszkowski et al.):

(a) females are less risk tolerant than males;
(b) decreasing risk tolerance is associated with increasing age;
(c) unmarried individuals are more risk tolerant than are married individuals;
(d) individuals employed in professional occupations, rather than non-professional occupations, tend to be more risk tolerant;
(e) Full time employment status holder are more risk tolerant than part time and retired employment status holder;

(f) risk tolerance increases with income;

(h) risk tolerance increases with education.

## 1.3 Purpose And Justification of Study

It is not uncommon for investment managers to use certain demographics to classify investors into risk-tolerance categories when establishing investment management standards, controlling purchases and sales of investments, and managing overall client resources (Roszkowski et al., 1993). While possibly useful in certain circumstances, it has been shown that the use of demographics, when used as classification factors in determining investor risk tolerance, has not improved investment performance or household welfare, and in fact, the use of demographics has sometimes resulted in financial losses for investors (Palsson, 1996; Train, 1995). Research concerning the differentiating efficacy of certain demographics is inconclusive (e.g., Palsson; Sung & Hanna, 1996b). Furthermore, there is general consensus among researchers and investment managers that additional research concerning the usefulness of certain demographics in categorizing someone into a risk-tolerance category is needed (Baker & Haslem, 1974; Snelbecker, Roszkowski, & Cutler, 1990; Sung & Hanna; Williams, 1989).

The purpose of this study is to determine whether the variables gender, age, marital status, and education could be used individually or in combination to both differentiate among levels of investor risk tolerance and classify individuals into risk-tolerance categories. Conclusions and recommendations based on findings from this research will be developed to:

(a) provide insights into which of the four categories of demographics were most significant in differentiating among and classifying someone into investor risk-tolerance categories;

(b) go beyond purely subjective criteria related to the personal characteristics of individuals in order to define a set of operating characteristics that distinguished among high, average, and no investor risk tolerance; and

(c) consider the implications of those demographics that did not distinguish among high, average, and no investor risk tolerance.

It is anticipated that this research would be useful to investment managers in three specific ways. First, this research would add a measure of objectivity to a decision making process which has tended to rely on a combination of art, intuition, and experience in arriving at an estimate of investor risk tolerance. Second, this study would contribute to the general

knowledge in the field of family financial management by providing a multivariate analysis of the risk-tolerance variable using the levels of response collected through primary sources and third, this research would contribute to the ongoing discussion regarding the efficacy of using demographics for use in differentiating among and classifying investors into different risk-tolerance categories.

## 1.4 Objective of Study:

Each and every of the research study possess a certain objectives. Research without any specific objectives will be worthless. This research study entitled about the factors affecting risk tolerance of Nepalese stock market investors. The major objectives can be presented as below:

- To study the demographic factors (age, gender, marital status and education) of investor.
- To study the relationship between demographic variables and investors risk tolerance in context of Nepalese stock market.
- To study about the variable age, gender, marital status and education could be used individually or in combination to both differentiate among the level of risk tolerance.

## 1.5 Research Question

The following research question will be used to direct this study:

Can the variables gender, age, marital status and education be used individually or in combination to both differentiate among levels of investor risk tolerance and classify individuals into risk-tolerance categories?

## 1.6. Definitions

The following definitions were used for the purposes of this study:

### 1.6.1 Financial Risk:

Financial Risk refers to the possibility that the actual outcome of an investment will differ from its expected outcome. More specifically, most investors are considered about the actual outcome being less than the expected outcome. The wider the range of possible outcomes, the greater the risk. Risk is really the uncertainty that exists as to what the eventual outcome will be.

You cannot talk about investment return without talking about risk because investment decisions invariably involve a trade-off between the two. Risk arises in any decision where there is some doubt about at least one of the possible outcomes.

Risk emanates from several sources. The three major ones are: business risk, interest rate risk, and market risk. While a detailed treatment of these sources of risk is woven throughout the book, a brief discussion is given here.

***Business Risk:*** As a holder of corporate securities (equities shares and debentures), one is exposed to the risk of poor business performance. This may be caused by a variety of factors like heightened competition, emergence of new technologies, development of substitute products, shifts in consumer preference, inadequate supply of essential inputs, change in government policies, and so on. Often, of course, the principal may be inept and incompetent management. The poor business performance definitely affects the interest of equity shareholders, who have a residual claim on the income and wealth of the firm. It can also affect the interest of debenture holders if the ability of the firm to meet its interest and principal payment obligation is impaired. In such a case, debenture holders face the prospect of default risk.

***Interest Rate Risk:*** The changes in interest rate have a bearing on the welfare of investors. As the interest rate goes up, the market prices of existing fixed income securities fall, and vice versa. This happens because the buyer of a fixed income security would not buy it at its par value or face value if its fixed interest rate is lower than the prevailing interest rate on a similar security. For example, a debenture that has a face value of Rs. 100 and fixed rate of 12 percent will sell at a discount if the interest rate moves up from, say, 12 percent to 14 percent. While the changes in interest rate have a direct bearing on the prices of fixed income securities, they affect equity prices too, albeit somewhat directly. The changes in the relative yields of debentures and equity shares influence equity price.

***Market Risk:*** Even if the earning power of the corporate sector and the interest rate structure remain more or less unchanged, prices of securities, equity shares in particular, tend to fluctuate. While there can be several reasons for this fluctuation, a major cause appears to be the changing sentiment of the investors. There are periods when investors become bullish and their investment horizons lengthen. Investor optimism, which may border on euphoria during such periods, drives shares prices to great heights. The buoyancy created in the wake of this development is pervasive, affecting almost all the shares. On the other hand, when a wave of pessimism ( which often is an exaggerated response to some unfavourable political or

economic development) sweeps the market, investors turn bearish and myopic. Prices of almost all equity shares register decline as fear and uncertainty pervade the market.

***Types of Risk:*** Modern portfolio theory looks at risk from a different perspective. It divides total risk as follows:

Total Risk= Unique Risk + Market Risk

The unique risk of a security represents that portion of its total risk which stems from firm-specific factors like the development of a new product, a labour strike, or the emergence of new competitor. Events of this nature primarily affect the specific firm and not all firms in general. Hence, the unique risk of a stock can be washed away by combining it with other stock. In a diversified portfolio, unique risks of different stocks tend to cancel each other- a favourable development in one firm may offset an adverse happening in another and vice versa. Hence Unique risk is also referred to as diversifiable risk or unsystematic risk.

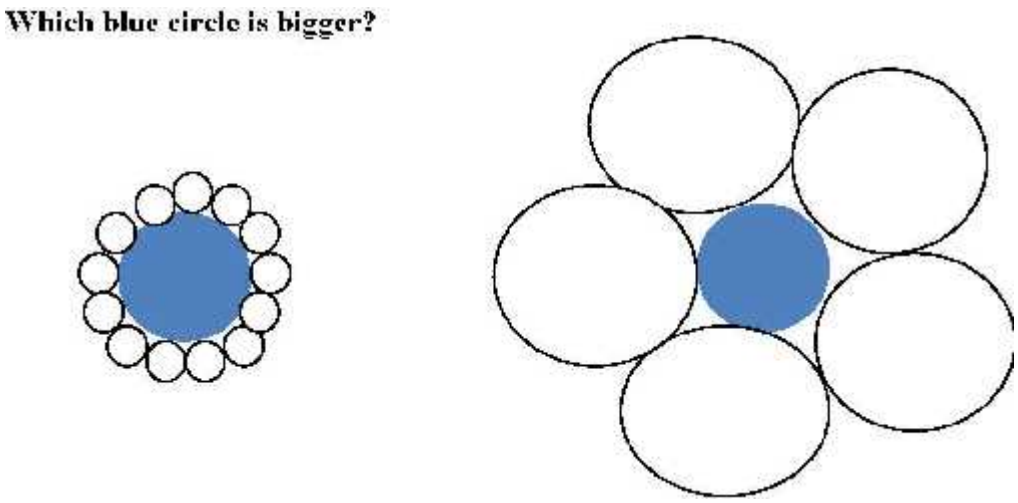
The Market risk of a security represents that portion of its risk which is attributed to economy- wide factors like the growth rate of GDP, the level of government spending, money supply, interest rate structure, and inflation rate. Since these factors affect all firms to a greater or lesser degree, investors cannot avoid the risk arising from them, however diversified their portfolios may be. Hence, it is also referred to as systematic risk (as it affects all securities) or non- diversifiable risk.

The risk inherent in any given situation will depend on the range of possible outcomes and the likelihood and value of each particular outcome. Thus, in a financial context, risk tolerance is the amount of risk an individual chooses when making a financial decision. If one person is willing to wager $50 on a coin toss that will result in either losing this amount of money or doubling it, and another person is unwilling to make this same wager, we can infer that the first person is more risk tolerant than the other (at least under these circumstances).

## 1.6.2. Perception of Risk:

Humans differ in the way in which they perceive risk, their desire for risk and the choice of actual level of risk they expose themselves to. Investors also differ in how they see various risks, in their specific investment goals (under the subject of different desires) and the actual investment choices that they make.

The example below clarifies the perception of risk and the risk tolerance capacity of the investors.




At first glance, the blue circle on the left appears bigger, because relative to the circles surrounding it, it is much bigger. However, the actual size of the blue circle is identical in both pictures. This shows that people make different choices based upon how they perceive them, even though the absolute outcome is the same.

## 1.6.3. Investor Risk Tolerance:

It is the extent to which an investor is willing to accept more risk in exchange for the possibility of a higher return. An investor with a high risk tolerance is likely to invest in securities, such as stocks in startup companies, and is willing to accept the possibility that the value of his/her portfolio will decline, at least in the short-term. An investor with a low risk tolerance, on the other hand, tends to invest predominantly in stable stocks and/or highly-graded bonds. One's risk tolerance is subjective and may vary according to age, needs, goals, and even personal dispositions.

Risk tolerance is the willingness of some person or some organization to accept or avoid risk. In any group of people there are gamblers or risk takers and there are non-gamblers or risk avoiders. People who have a low willingness to accept risks and the consequences of risks are called risk avoiders. Those people who are willing to take risks are called risk takers.

It is important to know that people and organizations have differing risk tolerances. Some people do not want to risk the delivery of the project they are paying for by taking a chance on something new. Other people will welcome the opportunity if the danger is not too great. This ability to choose is related to risk tolerance. In the mind of the people (investors) there is a tolerance for risk, which is expressed in his or her willingness to spend money.

If we draw increasing impact and increasing probability on an X and Y axis, we can draw the locus of all points of equal severity as a line on the graph in RISK TOLERANCE. Acceptable risks are any risks that are below and to the left of this locus of points of equal severity. Unacceptable risks are those risks that have a severity above and to the right of this severity line. If we shift the severity line up and to the right, as in RISK TOLERANCE: GAMBLERS, we are describing a person or an organization that is more of a risk taker. That is, the severity of the risks that one is willing to take is higher than before we shifted the line, and the person or organization shown is more of a gambler. If, on the other hand, we shift the line down and to the left, as in RISK TOLERANCE: AVOIDERS, we are describing a person or organization that is less of a risk taker. That is to say that the severity of the risks that a person or organization is willing to take is less than before we shifted the line.

Risk tolerance is somewhat describable in monetary terms. Our risk tolerance is how much we are willing to lose if the risk happens.

***The Five Most Commonly-Used Investment Risk Tolerance Categories***

The life factor that has the most influence on the mix of asset classes someone should hold, and how risky they should be, is called their "investment risk tolerance." This is why one of the first things most all financial advisors do is pull out some kind of an investment questionnaire to gauge how someone feels about losing their money.

Investment risk tolerance is known by many different names, but it's all the same thing. Some of the other names are: Investor risk tolerance, risk temperament, risk profile, investment profile, investor profile, investment profiler, investor profiler, risk attitudes, and investing risk tolerance. .

The biggest reason for needing to classify someone into a defined category, is because most investment advisors use asset allocation models that correspond directly with each category. This is exactly what we do with our portfolio models. Once one is put into a category, an investment adviser can easily invest their money appropriately by using the corresponding model portfolio.

**Conservative:** This investor isn’t willing to tolerate "noticeable downside market fluctuations," and is willing to forego most all significant upside potential, relative to the markets, to achieve this goal. Most conservative investors want their portfolio to provide them with an inflation-adjusted income stream to pay their living expenses. They're either currently dependent on their investments to provide some or all of their retirement paycheck, or are expecting this to happen soon. Some are on tight budgets and are barely making a living as it is, so they are very afraid of losing what little money they have left. They do not

have time to recoup any losses (because they can't go back to work for a multitude of reasons). Some realize they don't need their portfolio to provide income for more than several years, because of low life expectancy, so growth is not the objective. Conservative portfolios produce the highest annual income yields - typically in the range of 4% to 8%.

**Moderately Conservative:** If a worried investor can tolerate a little more risk than the Conservative investor, but still is adverse to large short-term downside fluctuations, and wants a little more return with a little less income, then this is the category for them.The typical investor in this category is either retired and getting their paycheck from portfolio income, soon to be retired, or has been burned by poor investment management and lost a lot of money in the past. These folks want to be protected somewhat from large downside market fluctuations and are willing to not fully participate when the markets rally upwards to get it. These folks want to be protected somewhat from large downside market fluctuations and are willing to not fully participate when the markets rally upwards to get it. Moderately Conservative portfolios produce significant annual income yields - typically in the range of 3% to 6%.

**Moderate:** The majority of investors are in this middle-of-the-road category. The reasons for people to be in this category are too many to list here. The most-common is the desire to invest long-term for retirement or college funding. These investors want good returns, and know they're taking some risk to get them. They should expect returns similar to a basket of similarly weighted market indices. Their portfolio should go up less than the markets as a whole, but should also go down less when markets go down.

A Moderate portfolio will hold a balanced mix of most all-major viable asset classes (for maximum diversification), which will include conservatively-managed bond funds as well as high-risk stock funds. This category typically uses the largest number of asset classes to both reduce risk and increase profits. Both safe and risky asset classes are utilized pragmatically. Balance between profits and loss reduction is the goal. They know they will lose money if the markets go down, but also expect to be along for the ride if they go up. Moderate portfolios produce modest annual income yields - typically in the range of 2% to 4%.

**Moderately Aggressive:** If an investor wants to outperform a basket of similarly weighted indices when the markets are up, and doesn’t mind too much being down a little more than the markets when they are down, then this is the category for them. They are taking on more downside risk than the markets, but expect to be substantially ahead of the game when markets go up. Fixed income positions are minimized and risky asset classes are fully

utilized. Most of the bond and international stock mutual funds in this portfolio are aggressively-managed.

These folks want to take the risks of winning the game by playing hard offense, but still don't want to lose too much in a short period of time. Most Moderately Aggressive investors want to accumulate a significant amount of wealth in the future, and are willing to wait a significant amount of time for the rewards (and to recoup short-term losses), and have a little income to contribute to the portfolio over time. They know they will lose a high percentage of their money if the markets go down (more than the S&P500), but also expect to profit greatly if they go up. More emphasis is put on making money than preventing the loss of money. Moderately Aggressive portfolios produce the little annual income yields - typically in the range of 0.5% to 2%.

**Aggressive:** Damn the torpedoes, full speed ahead! These investors want to substantially outperform the markets and (should) know they are exposed to much more risk than the markets. They could easily lose a third of their portfolio value in a few months, and it may take years to recoup these losses. These investors typically hold mostly growth, small-cap, and sector mutual funds (or stocks). Any fixed-income mutual funds in the portfolio are a small percentage of the portfolio, and also are of the riskier type that are aggressively-managed. The purpose of any cash held is to handle unexpected withdrawals, and to take advantage of perceived buying opportunities. Aggressive investors are typically younger (The Invincibles), and intend to contribute relatively large amounts into the portfolio periodically over time.

Most aggressive investors either want to accumulate substantial wealth in the future, are in a hurry, have enough income from other sources to fund their living expenses, and/or have plenty of time to work and recoup losses. Some just may have not yet personally experienced significant losses in the markets, so their bravery usually ends up being their own downfall. They should know they would lose a very high percentage of their money if the markets go down, but also expect to profit greatly if they go up. Most all emphasis is put on making money and little, other than the diversification benefits of using mutual funds with asset allocation, is used in preventing the loss of money. Aggressive portfolios produce the little-to-no annual income yields - typically in the range of 0% to 1%.

### *1.6.4.Stock Market*

Investment managers are concerned primarily with a client's access to and allocation of investment and financial resources. The role of an investment manager is to help establish a client's financial objectives, develop plans, and manage how resources are accessed and allocated in meeting objectives. Investment managers use background analysis information and objectives as inputs into the development of financial and investment plans.

Gathering background information entails obtaining information such as records of income and expenditures as well as a descriptive assessment of an individual's or family's financial position. This step in the management of investment decisions is important, because prior to setting objectives investment managers must obtain and understand objective and subjective information regarding demographic inputs.

Investment managers who are aware of their clients' risk tolerance are best able to establish realistic and acceptable objectives.

A stock market or equity market is a public entity (a loose network of economic transactions, not a physical facility or discrete entity) for the trading of company stock (shares) at an agreed price; these are securities listed on a stock exchange as well as those only traded privately.

The size of the world stock market was estimated at about $46.6 trillion at the beginning of October 2011. The stocks are listed and traded on stock exchanges which are entities of a corporation or mutual organization specialized in the business of bringing buyers and sellers of the organizations to a listing of stocks and securities together. The largest stock market in the United States, by market capitalization, is the New York Stock Exchange (NYSE). In Canada, the largest stock market is the Toronto Stock Exchange. The major European examples of stock exchanges include the Amsterdam Stock Exchange, London Stock Exchange, Paris Bourse, and the Deutsche Borse (Frankfurt Stock Exchange). In Asia the Singapore Exchange, the Tokyo Stock Exchange, the Hong Kong Stock Exchange http://en.wikipedia.org/wiki/Hong_Kong_Stock_Exchange, the Shanghai Stock Exchange, the Bombay Stock Exchange, and the Nepal Stock Exchange (NEPSE).

The exchanges provide real-time trading information on the listed securities, facilitating price discovery. The market participants of the exchanges include individual retail investors, institutional investors such as mutual funds, banks, insurance companies and hedge funds, and also publicly traded corporations trading in their own shares. Participants in the stock market range from small individual stock investors to large hedge fund traders, who can be

based anywhere. The purpose of a stock exchange is to facilitate the exchange of securities between buyers and sellers, thus providing a marketplace (virtual or real).

The stock market is one of the most important sources for companies to raise money. This allows businesses to be publicly traded, or raise additional financial capital for expansion by selling shares of ownership of the company in a public market. The liquidity that an exchange provides affords investors the ability to quickly and easily sell securities. This is an attractive feature of investing in stocks, compared to other less liquid investments such as real estate. Some companies actively increase liquidity by trading in their own shares.

History has shown that the price of shares and other assets is an important part of the dynamics of economic activity, and can influence or be an indicator of social mood. An economy where the stock market is on the rise is considered to be an up-and-coming economy. In fact, the stock market is often considered the primary indicator of a country's economic strength and development.

### ***1.6.5. Nepal Stock Exchange (NEPSE):***

The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. Introduction of the Company Act in 1964, the first issuance of Government Bond in 1964 and the establishment of Securities Exchange Center Ltd. in 1976 were other significant development relating to capital markets.

Securities Exchange Center was established with an objective of facilitating and promoting the growth of capital markets. Before conversion into stock exchange it was the only capital markets institution undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services. Nepal Government, under a program initiated to reform capital markets converted Securities Exchange Center into Nepal Stock Exchange in 1993.

Nepal Stock Exchange, in short NEPSE, is established under the company act, operating under Securities Exchange Act, 1983. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. NEPSE opened its trading floor on 13th January 1994. Government of Nepal, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of NEPSE.

NEPSE facilitates trading in the following instruments

A. Shares
   - Equity Shares
   - Preference Shares

   B. Debentures

   C. Government Bonds

   D. Mutual Funds

## 1.6.6. SEBON( Securities Board of Nepal):

Securities Board of Nepal (SEBON) was established by the Government of Nepal on June 7, 1993 as an apex regulator of Securities Markets in Nepal. It has been regulating the market under the Securities Act, 2006.

The Governing Board of SEBON is composed of seven members including one full time chairman appointed by the Government for a tenure of four years. Other members of the Board include joint secretary of Ministry of Finance, joint secretary of Ministry of Law, Justice and Parliamentary Affairs, representative from Nepal Rastra Bank, representative from Institute of Chartered Accountants of Nepal, representative from Federation of Nepalese Chambers of Commerce and Industries, and one member appointed by the Government from amongst the experts pertaining to management of securities market, development of capital market, financial or economic sector. The major financial sources of SEBON are the government grant, transaction fee from the stock exchange and registration fee of corporate securities. Other financing sources include registration and renewal of stock exchange and market intermediaries and the income from mobilization of its revolving fund.

*Major Functions And Duties of SEBON:*

- To offer advice to Government on matters connected with the development of the capital market.
- To register the securities of corporate bodies established with the authority to make a public issue of its securities.
- To regulate and systematize the issue, transfer, sale and exchange of registered securities.
- To give permission to operate a stock exchange to any corporate body desirous of doing so, subject to this Act or the rules and bye-rules framed under this Act.
- To supervise and monitor the functions and activities of stock exchange.

- ❖ To supervise and monitor the functions and activities of securities-dealers.
- ❖ To grant permission to operate collective investment schemes and investment fund programs, and to supervise and monitor them.
- ❖ To systematize the task of clearing accounts related to transactions in securities.
- ❖ To establish coordination and exchange cooperation with the appropriate agencies in order to supervise and regulate matters concerning securities or companies.

## 1.6.7. Cross –Tabulation:

Cross-tabulation is one of the analytical tools that is a main-stay of the market research industry. One estimate is that single variable frequency analysis and cross- tabulation analysis account for more than 90% of all research analysis. Cross- tabulation analysis, also known as contingency table analysis, is most often used to analyze categorical (nominal measurement scale) data. Cross- tabulation is a two or more dimensional table that records the number (frequency) of respondents that have the specific characteristics described in the cells of the table. Cross- tabulation table provides ample information the relationship between two variables.

## 1.6.8. Behavioral Finance

Behavioral finance is the study of psychological effects on the individual pertaining to choices made with respect to money and investing. It is a field of finance that proposes psychology-based theories to explain stock market anomalies. Within behavioral finance, it is assumed that the information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes.

It recognizes that the decisions individuals make are influenced by one or more behavioral biases. This is contrary to traditional finance. Behavioural finance challenges traditional economic thinking on a number of fronts:

- it has provided that psychological cost and benefits are a major influence on the cost/benefit analysis that drives decision making and that these can be very different from the economic costs and benefits.
- it has also demonstrated that decision making suffers from misapplied heuristics (mental shortcuts), biases and cognitive errors.

## 1.7 Limitations And Assumptions

***Limitations***

- The study is mainly based on primary data.
- The primary limitations of study are information asymmetry, time constraint, financial problem and lack of research experience.
- The study area is limited where the numbers of samples are chosen within Kathmandu Valley and cities Pokhara, Biratnagar, Butwal and Dhangadhi.
- This study only focuses on the differentiating and classifying factors like gender. age, marital status and education of risk tolerance of the investors of Nepalese stock market.
- Though the respondents are from different background, the numbers of the samples are still not enough to know the accurate results,
- While filing up the questionnaire for the research study, some of the respondents felt difficult to fill up simply by not responding to a question, untruthful responses, respondent fatigue, not paying close attention, and so forth.
- There is no cause and effect relationship analysis in terms of gender, marital status and age group.

***Assumptions***

The following specific research assumptions were made as a result of using a pre-existing data set: (a) respondents answered all relevant questions truthfully; (b) the data were entered and analyzed appropriately and accurately.

## 1.8 Organization of The Remainder of The Dissertation

This chapter has provided an overview of how investment managers use demographics when differentiating among and classifying individuals into investor risk-tolerance categories. The Leimberg et al. (1993) conceptual framework, and an explanation of demographics commonly thought to be effective in classifying individuals into investor risk-tolerance categories, were presented. The purpose, justification, and specific research question to be answered also are presented. The chapter concluded with definitions, limitations, assumptions, and delimitations.

The remainder of this dissertation is organized as follows: (a) Chapter II - “Review of Literature,” (b) Chapter III - “ Research Methodology,” and (c) Chapter IV - “Data Presentation and Analysis,” (d) Chapter V -“Majorfinding,Conclusions and Recommendations”.

# Chapter II

# REVIEW OF LITERATURE

## 2.1 Review of Literature

The initial literature review for this research project started via an Internet search of several journals, dissertation abstracts, and relevant professional publications, books, news releases, and subscriptions obtained by the researcher.

The literature review contains the through study Risk tolerance, summary and extracts of reports and journal related to my research topic. Some key words like: age, gender, marital status and education are studied. The relationship between these key words (factors) and risk tolerance is also reviewed through the findings of past researches.

Review of the literature in the area of the individual's investment risk attitude shows several underlying factors that determine the level of risk tolerance. The study of investor risk tolerance is not new. Individual risk tolerance has been of interest to investors and academics for hundreds of years. According to Bernstein (1996), the modern conception of risk "is rooted in the Hindu-Arabic numbering system that reached the West seven to eight hundred years ago" (p. 3). The first serious attempt to measure objective risk arose when Chevalier de Mere, using a question developed by Luca Paccioli (the person who developed double-entry bookkeeping.

Risk tolerance research did not re-emerge as a subject of importance until the 1900s, and as Bernstein (1996) pointed out, most research attempts to understand investor risk tolerance have occurred recently. Only a handful of research endeavours to understand risk-taking propensities were conducted prior to the 1950s. Two notable studies prior to the 1950s were undertaken by Keynes (1921) and Knight (1921).

Little additional research was conducted between the Great Depression and the end of World War II, with the notable exception of Keynes' (1937) publication of *The General Theory*. The lack of risk-tolerance research was primarily due to the fact that economists were preoccupied with social and political problems, and not interested in advancing research of interest to investors, because it was commonly assumed that the Great Depression was a result of excesses in the investment markets.

During the late 1950s and early 1960s, a major advancement in the study of choice in risky situations was advanced by Wallach and Kogan (1959; 1961). These researchers developed the widely used Choice Dilemmas Questionnaire to measure risk tolerance in everyday life

situations. After the mid-1970s both approaches came under increased attack for lack of validity and reliability due to the one dimensional nature of these types of risk assessments.

The lack of consistency between and among distinctive choice dilemma questionnaires administered by different researchers was revealed as far back as 1962 by Slovic who concluded that choice dilemma measures lacked sufficient validity and reliability to be of much predictive use. Slovic came to this conclusion after examining all forms of the choice dilemma instrument, including dot estimation tests, word meanings tests for category width, life experiences inventories, multiple choice exams, recreational activity measures, job preference inventories, gambling assessments, and peer ratings.

MacCrimmon and Wehrung (1986) concluded that one dimensional questions (e.g., "how risk tolerant are you?") measure only a small part of the multidimensional nature of risk, and that most people overestimate their risk preferences when answering these type of questions. MacCrimmon and Wehrung also concluded that "there is no particular reason to believe that a person who takes risks in one area of life is necessarily willing to take risks in all areas" (p. 51).

More studies conducted by Kahneman and Tversky (1979) and others (e.g., Bell, 1982; Loomes & Sugden, 1982; Payne, Laughhunn, & Crum, 1984; Shefrin & Statman, 1985, 1993; Tversky & Kahneman, 1981) highlighted the importance and role of differentiating and classifying factors of risk tolerance behaviour of investors.

Jasim Y. Al-Ajmi in his research named *Risk Tolerance of Individual Investors in an Emerging Market,* using a questionnaire method, studied new evidence on the determinants of risk tolerance of individual investors in Bahrain. On the basis of an analysis of close to 1,500 respondents, Jasim concluded that as investors, men have high propensity towards risk tolerance than women, investors with better level of education and wealth are more likely to seek risk than less educated and less wealthy ones, bahrainis are also found to be less risk tolerant than non-bahrainis. The study also reports that investors' risk tolerance declines when they have more financial commitments as well as when they are approaching towards their retirement age or are retired. That is, the effect of investor's age on risk tolerance is complex, in contrast to results reported elsewhere.

John E. Grable using the data of the 1992 Survey of Consumer Finances (SCF) (N = 2,626) conducted a study *Investor risk tolerance: testing the efficacy of demographics as differentiating and classifying factors* (1997). This study was designed to determine whether the variables gender, age, marital status and education could be used individually or in combination to both differentiate among levels of investor risk tolerance and classify

individuals into risk-tolerance categories. He came with the conclusion that: Professionals and individuals who were self-employed were significantly more likely to be classified as highly risk tolerant. Non-professionals and those who were not self-employed were more likely to be categorized as having no risk tolerance. Whites were proportionately more likely to be categorized as having either high or average risk tolerances. Single but previously married individuals, compared to marrieds, were more likely to be classified as having no risk tolerance. Respondents with lower household incomes were significantly more likely to be classified as having no risk tolerance.

## 2.2 Review of previous dissertations in Nepalese perspective

In Nepalese context very few or we can say one or two research has been conducted so far to understand the risk tolerance behaviour of Nepalese stock market investors.

(Adhikari, 2007), a scholar of University of Alabama, Tuscaloosa performed a study on "Gender Differences in Risk Aversion: A Study of Nepalese Banking Sector Employees." Using a new graphic-based survey instrument by Hanna and Lindamood (2004), this study examined whether women who are employed in the Nepalese banking sector show more risk aversion than men. The major finding of the study was that: women exhibit less financial risk tolerance than men is apparently occasioned by a disparity in perceived knowledge about investments (Basnet, 2004) had conducted a study on" A study on factors affecting investment pattern in the Securities market in Nepal" for the partial fulfilment of Masters of Business Studies in the year 2004 under faculty of management, Shankar Dev Campus. The study had the following objectives:

i) To study the factors affecting investor's behaviour.
ii) To examine the major factor affecting in investors behaviour.

In order to achieve the objective Mr. Basnet used the secondary data as well as primary data in the form of questionnaire. And the data collected was analyzes by using the different test and ultimately the following major findings had been detected which are:

i) The major factors affecting investors behaviour are political situation, gender, age and income.
ii) Political situation plays a major role.
iii) Interest of investors have been decreasing continuously towards the stock market.

There are some other researchers conducted on the topic on investors' perception, awareness and risk and risk on common stock investment. Though these research were not focused on

differentiating and classifying factors of risk tolerance of investors of Nepalese stock market but provided valuable insights to my research like that of:

(Dangol, 2007) conducted a study on " A Study on Investor's perception" for the partial fulfilment of Master's of Business Studies in the year 2007 under Faculty of Management, Public Youth Campus

(Subedi, 2003) has entitled "A Study on Investor's Awareness in the Securities Market in Nepal" for the partial fulfilment of Master's Of Business Studies in the year 2003 under Faculty of Management, Shankar Dev Campus.

(Shrestha, 2010) has conducted a research on " Investor's Awareness In Nepalese Stock Market" for the partial fulfilment of Master's of Business Administration in the year 2010 under Faculty of Management, Ace Institute of Management.

(Neupane, 2008) has made a study on " Determinants of Stock Price In Nepal Stock Exchange" for the partial fulfilment of Master's of Business Studies Degree in the year 2008 and submitted to Faculty of Management, Nepal Commerce Campus.

Another similar study conducted by (Shrestha C. , 2008) on Determining Risk and Return Relationship Between Listed Firms" for the partial fulfilment of Master's of Business Studies Degree in the year 2008 and submitted to Faculty of Management, Shankar Dev Campus

Thus we can see that very few research work has been conducted to study the differentiating and classifying factors of risk tolerance of investors of Nepalese stock market and study the clusters of investors. Hence the researcher believes that this research will fulfil the gap.

Review of the literature in the area of the individual's investment risk attitude shows several underlying factors that determine the level of risk tolerance Among the most important socio-economic factors are gender, age, marital status and education. Below are the brief reviews of the literature which examines research associated with the demographics (gender, age, marital status and education).

**a. Gender and Risk Tolerance**

A person's sex is one of the most researched factors that appear to determine the risk attitude of individual investors.

(Slovic, 1966, p. 169) a "prevalent belief in our culture is that men should, and do, take greater risks than women" (p. 169). This assumption has been confirmed by other researchers (Higbee & Lafferty, 1972).

(Lewellwn, W., Lease, R.and Schlarbaum,G., 1977) found that sex was the third most important determinant of investor style (after age and income).

Blume (1978), when reporting the results of a unique national study of New York Stock Exchange (NYSE) investors that employed a combination of descriptive and multivariate statistics, indicated that men who own and invest in equities avoided risk less than women with similar characteristics. This finding was affirmed by Coet and McDermott (1979) who studied the effects of gender, type of instruction, and group composition on general risk-taking behaviour using an experimental method with 200 college students, and by Rubin and Paul (1979) who designed an experimental study to examine systematic risk taking by gender over the life cycle as part of a larger model of risk-tolerance behaviour. Rubin and Paul found that males consistently demonstrated greater risk-taking behaviours than did females.

Belsky, Kobliner, & Walmac (1993) concluded that men and women differ about money and related risk tolerances. Although not grounded in original empirical research, the *Money* article was based on research findings from sociology, psychology, and other social science studies.

During the 1990s researchers continued to conclude that men were more willing to take financial risks than were women. Hawley and Fujii (1993-1994), Sung and Hanna (1996b), and Xiao and Noring (1994) each used a version of the Survey of Consumer Finances (SCF) to obtain data for regression type analyses (e.g., Ordinary Least Squares, logit, probit, and tobit),where willingness to take financial risks was defined as the dependent variable, and gender (among a number of other variables) was operationalized as an independent variable. These researchers concluded that men were more willing than women to take financial risks.

In the United States, (Bruce, A. and Johnson,J., 1994) found that women take less investment risk.

(Bajtelsmit, V. and Bernasek, A., 1996) in reporting findings from a survey of literature, concluded that women invest their pensions more conservatively than men, and that, in general, women are less risk tolerant than men. He reports that sex is the third most important factor in determinants of investors' risk attitude.

(Schumell,D., 1996) reports the results of 1992 Investment Marketing Group of America study that women tend to be less confident in their ability to make the right financial decisions.

Lytton and Grable (1997) analyzed gender differences in financial attitudes from a random sample of 592 tax payers from a mid-Atlantic state; they found that males expressed more confidence in their financial situation(s) and higher risk-taking propensities in relation to financial management strategies than women.

(Jianakoplas, N.and Bernasek,A., 1998) report results that lend further support to the hypothesis that a far lower percentage of women than men are willing to take any financial risk at all.

On an analysis of the Federal Reserve Board's Survey of Consumer Finances (SCF) Sunden and Surette (1998) show that women tend to invest more conservatively and manage retirement account decisions more conservatively than men. In a study the federal government's Thrift Savings Plan,

Hinz et al. (1997) also conclude that women are less likely to hold risky assets and more inclined to use fixed-income alternatives (65 percent women versus 52 percent to men) rather than toward equities (28 per cent women versus 45 per cent to men).

(Kover,A., 1999) finds that fewer than half of women were unwilling to take more risk in return for higher expected return. Studies from other areas of economics, for instance purchases of life insurances, support the view that women are more risk averse; see Halek and Eisenhauer (2001).

Byrnes et al. (1999) summarize 150 studies from psychology literature examining differences in risk taking between men and women, demonstrating that women, on average, take less risk than men. In this literature, two schools of thoughts that explain these differences, Felton et al. (2003): 1) biological differences between men and women and 2) socio-cultural reasons for women to take lower risks than men. Slovic (1966) notes that children are pressured during childhood into behaving according to their culture sex roles, which will result in a lower propensity for women to take risk. Byrnes (1998) assumes that restrictive parental of females during childhood likely to explain their resistance in engaging in risky behaviour. Additionally, Flynn et al. (1994) find that socio-political factors such as power and status favour men, resulting in an increase in their willingness to undertake higher risk.

(Barber,B.M. and Odean,T., 2001) also report that women show less confidence than men in areas related to finance. Barber and Odean (2001) find "that men trade 45 percent more than women. Trading reduces men's net returns by 2.65 percentage points a year as opposed to 1.72 percentage points for women." They propose that investors who tend to trade excessively take more risk and make poor investment decisions.

As indicated above, there is evidence to suggest that a relationship exists between gender and investor risk tolerance, with men tending to take more risks than women. Furthermore, it is commonly accepted that gender can be used effectively to classify individuals into investor risk tolerance categories; however, researchers have not reached consensus on this point.

There is also contradictory evidence. A number of empirical studies which indicate that there are no differences between men and women in relation to risk tolerances.

Johnson and Powell (1994) and Schubert et al. (1999), find that in specific circumstances women appear as risk loving as men or even more risk loving.

Schooley and Worden (1996) and Haliassos and Bertaut (1995), using data from the 1989 and 1983 SCF respectively (each employing a form of regression analysis), concluded that gender did not appear to influence stockholding.

Palsson (1996) employed a logit regression to determine if risk tolerance varied with household characteristics. She used Swedish cross-sectional data based on 1985 tax returns from more than 7,000 households to conclude that risk tolerance did not systematically change according to gender.

Schubert (2006) shows that women appear less sensitive to probabilities and more pessimistic about gains than men. In risk management, women appear to have a comparative advantage with respect to diversification and communication tasks.

Schubert (2006) describes the notion that men are less risk averse than women as a stereotype that leads to discrimination against women in the labor market and keeps women from assuming managerial positions. This is because a firm's value depends on how much risk it takes, which is in the end determined by the choices that firm managers make.

Most recently, Feng and Seasholes (2007) use data from a brokerage firm to show that Chinese men and women show similar investment behaviour.

**b. Age and Risk Tolerance**

Wallach and Kogan (1961) are generally considered to be the first researchers to study the relationship between risk tolerance and age. Their early experimental research used choice dilemmas which indicated that older individuals were less risk tolerant than younger individuals.

Age is found to be the most important determinants of investor style, Lewellen et al. (1977). Many researchers support the notion that young people are less risk averse than elder people in the same task context.

In 1966 Botwinick investigated cautiousness in relation to age, sex, and education in the context of 24 "life situations" (including several 'investing' type questions) using Wallach and Kogan's (1961) experimental choice-dilemma test as a basis of investigation. Based on experiments with 90 volunteer older adults and 111 young adults enrolled in psychology

courses at Duke University, he found that older subjects were more cautious in their decisions than younger adult subjects.

Bossons (1973) used estimates based on data collected in the 1963 SCF to conclude that younger individuals were more risk tolerant than older persons.

In 1974, Lease, Lewellen, and Schlarbaum used results from a survey of brokerage firm clientele (N = 1,000) and also concluded that age was inversely related to risk tolerance.

Okun and DiVesta (1976) obtained similar results from an experiment utilizing 48 younger and older males who were asked to participate in a vocabulary task involving varying degrees of risk under neutral, supportive, and challenging instructions. During this time other researchers, using both survey sampling methods and experimental designs, observed that older adults were more cautious than younger adults (Baker & Haslem, 1974).

McInish (1982), using data from a random sample of 3,000 investors, found (using regression analysis) significant negative age coefficients in his analysis of personality characteristics and risk tolerances.

Morin and Suarez (1983), using data from the 1970 SCF for Canada, attempted to add empirical evidence to the effect of wealth on risk aversion through the life cycle by concluding that risk tolerance decreases uniformly with age.

Dahlback (1991), using cross-sectional data from a survey of 443 unmarried Swedish citizens between 22 and 64 years of age, employed bivariate correlation analysis to determine that older individuals were more likely to avoid risk than younger persons.

Similar results were obtained by Hawley and Fujii (1993-1994) and Bakshi and Chen (1994). Bakshi and Chen used a Euler equation utilizing historical time-series data (e.g., stock market prices, price deflators, etc.) from the period 1926-1990 to conclude that a rise in average age was found to predict a rise in investment risk premiums, while Sung and Hanna (1996a), using data from both the 1983 and 1986 SCF to conduct an ordered probit analysis using willingness to take financial risks as the dependent variable, concluded that older individuals were less risk tolerant than younger persons.

Palsson (1996), using survey data from 7,000 Swedish households, also concluded that decreasing risk tolerance was correlated with increasing age. The reporting and acceptance of these findings has become so widespread that that there is now substantial consensus among financial advisors that as one ages, the cash portion (i.e., a risk-free asset) of one's portfolio should be increased (Reichenstein, 1996). The trade press has even advocated using age based formulas to create simple investment management strategies to account for the

perceived negative relationship between age and risk tolerance (Bengen, 1996; Gitter, 1995; Kapiloff, 1994).

(Botwinick, 2004), “there is a persistent belief that increasing age makes for increasing cautiousness or conservatism. There are researches data in support of this belief, but there are also data indicating otherwise” (p. 166).

Recent studies have shed doubts on the validity of claims that age is effective in differentiating between levels of investor risk tolerance. There are contrary evidences.

Using a combination of econometric modeling and data from the 1983 SCF, Haliassos and Bertaut (1995) suggested that individuals routinely depart from expected utility maximization, and that other factors, such as education and race account for risk tolerances more than age.

Gehrels (1991), using German microcensus data, also found no relationship between age and risk tolerance in his analysis of the life-cycle hypothesis.

Lee and Hanna (1991), in attempting to investigate the rate of stock ownership among U.S. households, using log-linear methods to analyze the 1983 SCF, concluded that age was not a significant variable in determining ownership of risky assets.

One of the most significant research studies to understand financial risk tolerance undertaken was conducted by the Boettner Institute under the leadership of Neal Cutler (1995). Cutler and his associates attempted to explore the concept that “risk-tolerance is a simple one-dimensional attitude” (p. 33) by testing data from a comprehensive mail survey (N = 801). Cutler concluded that there was no cause and effect linkage between age and comfort with financial risk. According to Cutler, “it is a myth to believe that age has an across-the-board effect on financial attitudes” (p. 37).

Yoo (1994) and Heaton and Lucas (2000) report a positive relation between investor age and the percentage of equities in portfolios, but when people retire, they reduce the weight of equities.

Poterba (2001), Poterba and Samwick (2001), and Feng and Seasholes (2007) find no significant relationship between investor’s age and the percentage of equities in investors’ portfolios.

More recently, Summers et al. (2006) found that investors become more risk seeking with age.

Regardless of conflicting opinions of researchers, investment managers should consider age as an investor risk tolerance differentiating and classifying factor.

**c. Marital Status and Risk Tolerance**

According to (Haslem, 1974), "the balancing of risk and return represents the classic dilemma faced by investors" (p. 469). It is widely assumed by investment managers that marital status is a factor that significantly influences risk and return preferences, and an individual's satisfaction with finances (Lazzarone, 1996). In some circumstances researchers have found that non-married individuals prefer more investment risk than similar married individuals.

Sung and Hanna (1996a, 1996b) concluded that single females were less likely to take financial risks than single males and married individuals.

Lee and Hanna (1991) found a positive relationship between stock ownership, wealth levels, and being a married couple. At a given level of wealth, single-headed households tended to have more stock ownership than married couple households. Lee and Hanna went on to state, "this result could be interpreted as being due to single-headed households having less risk aversion than married couple households" (p.137).

Although widely accepted as true, very little evidence exists to substantiate the claim that "unmarried individuals are more prone to take risks than married individuals" (Roszkowski et al., 1993, p. 220). Researchers have suggested that married individuals, not singles, possess greater risk-taking propensities, although others have failed to find any statistically significant relationship between marital status and risk tolerance (Haliassos & Bertaut, 1995; McInish, 1982).

Masters (1989), who administered Wallach and Kogan's (1961) choice dilemmas questionnaire to 480 randomly sampled investors from a midwestern investment firm, reported that singles appeared to be more conservative investors than marrieds; however he was unable to offer an explanation to explain this finding.

Mugenda, Hira, and Fanslow (1991) interviewed 123 randomly selected family financial managers from a Midwestern town. They concluded, using path analysis, that marital status was positively related to satisfaction with quality of life and higher levels of wealth.

Hawley and Fujii (1993-1994) concluded that among females, married women were the least risk averse, and that male heads of household (i.e., single) did not differ from married men in their risk tolerances.

Findings relating to marital status and risk tolerance tend to be conflicting.

Lee and Hanna (1995), in an apparent reversal of earlier findings based on an analysis of the 1983 SCF, suggested that single males and married respondents had significantly higher predicted probabilities of being willing to take risks than single females. Similar confusing

findings have been presented by Baker and Haslem (1974) who used a sample of 1,623 active investors, and Xiao and Noring (1994) who analyzed data from the 1986 SCF.

Lazzarone (1996) who analyzed data collected from 129 older subjects who were surveyed regarding satisfaction with finances, have concluded that marital status was not a significant classification factor for either marrieds or singles.

In general, conclusions from the literature make it difficult to confidently hypothesize about the expected relationship between marital status and risk tolerance; however, as pointed out above, it is still widely accepted among investment managers that single individuals are more risk tolerant when compared to married persons (Roszkowski et al., 1993).

**d. Education and Risk Tolerance**

Investors' educational level as a measure of individual earning power is hypothesized as one of the determinants of risk tolerance. This variable should thus be expected to be highly correlated with investors' income.

Education, as used in investor risk-tolerance research, has been defined as the level of formal education completed by an individual (Masters, 1989). Numerous researchers have concluded that greater levels of attained education are associated with increased risk tolerance.

Baker and Haslem (1974), using data from 851 respondents to a risk-tolerance questionnaire that was randomly distributed to customers of five brokerage firms, determined that investors with less education found price stability more important than those with at least some college training. Baker and Haslem acknowledged that their findings conflicted with findings from other researchers that suggested that those with little education were desirous of quick profits from risky trading (Potter, 1971).

Masters (1989) concluded that general education level was not always a factor influencing investment decisions, but that in general, investors with higher education levels tended to invest in higher risk investments.

Haliassos and Bertaut (1995) determined that education was an important factor in overcoming the barriers to stockholding, which included an initial risk of loss associated with equities. They also found that those who have not attended college were significantly less likely to hold stocks than those with at least a college degree.

Zhong and Xiao (1995), after conducting a tobit analysis using data from the 1989 SCF, reported that increased ownership of bonds and stocks (risky assets) increased with education.

Lee and Hanna (1995), concluded that the proportion of individuals willing to take risks increased significantly with education, while Sung and Hanna (1996a, 1996b), using data from the SCF, also determined that education was statistically significant in determining someone's willingness to assume greater risk.

Schooley and Worden (1999) report that American investors with high-school diplomas tend to hold portfolios heavily biased toward fixed-income securities, which are seen as less risky than equities.

Christiansen et al. (2006) find that investors with a higher education invest a larger fraction of asset in stocks and bonds. These findings lend further support to proposition made in several studies, which state that "the level of education is also of importance for whether or not an investor participates in the bond and stock market. More well-educated individuals are more likely to be financial investors", (for example, Mankiw and Zeldes (1991), Haliassos and Bertaut (1995) and Guiso et al.(2003)).

Although it is generally accepted by investment managers and researchers that increased educational levels are associated with increased levels of investor risk tolerance, there is research to suggest otherwise.

Blume (1978), using results from a large random national survey of NYSE investors, concluded that educated heads of households were somewhat less willing than others to take substantial risks, "but at the same time, they reported a less than average propensity for reducing financial risks to the barest minimum, preferring some intermediate trade-off between risk and expected return" (p. 124).

McInish (1982), as a result of a regression of betas against Rotter scores and demographic variables, found that educational levels showed a predicted positive relationship with risk tolerance, but that education coefficients were not significant in any of the regressions. The literature suggests that a positive relationship between attained education and increased investor risk tolerance is reasonable. However, as with the implications derived from research concerning other demographics, this relationship is not definite, and additional research is warranted.

## 2.3 Summary of the various Researches

It is important to remember that the four demographics (i.e. age, gender, marital status and education), as differentiating and classifying factors of investor risk tolerance, have not undergone enough rigorous testing. Some researchers found relationship between these

demographic variables and some did not. Those who found relationship with these variable and risk tolerance concluded with:

(a) men are more risk tolerant than women,

(b) older individuals are less risk tolerant than younger people,

(c) single individuals are more risk tolerant than married ones,

(d) certain occupations are associated with increased and decreased levels of risk tolerance,

(e) individuals with greater income have greater risk tolerances than lower income earners,

(g) greater educational attainment is associated with increased risk tolerance.

There are some researchers who found no relationship between the demographic variables and risk tolerance of the investors. The reason for not being successful to establish the relationship might be due to inappropriate research methodology, wrong sample size or sample drawn from extremes of the population, lack of validity involved with objective measures of risk tolerance, and lack of multidimensional risk-tolerance measures. However there still needs to research more, mostly in the Nepalese context, to establish the relationship between these demographic variables and risk tolerance in order to differentiate and classify the investors of NEPSE.

# Chapter III

# RESEARCH METHODOLOGY

## 3.1 Introduction

The objective of this chapter is to explain the design and methodological procedures that were used in this study. Chapter II provided a review of relevant literature concerning the research topic. The review indicated that gender, age, marital status and education continue to be used by investment managers to differentiate among and classify individuals into investor risk tolerance categories. The review also indicated that consensus among researchers regarding the efficacy of these demographics as differentiating and classifying factors was lacking.

Therefore the need for additional research on investor's risk tolerance is evidenced by four factors: (a) investment managers continue to use demographics to differentiate among and classify individuals into high, average, and no risk-tolerance categories; (b) it is reasonable to assume that investment managers will continue to use these characteristics in the future; (c) although widely used, the application of these demographics in differentiating among levels of risk tolerance has not improved investment performance; and (d) academic findings in relation to risk tolerance and these demographics have been inconclusive and often conflicting.

This chapter relates to the overall approach to the research process. Research methodology is the way to solve a research problem systematically. It describes the methods and process followed in the entire research process. Hence, this chapter deals with the method and process applied for this research study. This study covers qualitative methodology in a greater extent and also uses descriptive methods based on both technical and logical aspects.

In generally sense research design means definite procedure and technique used in the study that provides ways for research viability. It describes the general framework to collect and analyze the data. Research design provides the glue that holds the research project together. A design is used to structure the research, to show how all of the major parts of the research project—the samples or groups, measures, treatments or programs, and methods of assignment—work together to address the central research questions.

The study is based on the qualitative measure of data; however, these qualitative data are coded quantitatively. As per the nature of this research, the entire focus is on primary data collected in the form of questionnaire that has been used to achieve the research objective. To achieve the objective of study, following are the research design for the data analysis.

## 3.2 Explanation of Research Design:

The objective of this chapter is to explain the design and methodological procedures that were used in this study. Specific objectives are as follows:

(a) Discuss the survey instrument,

(b) Discuss the sample,

c) Discuss data collection procedure

(d) Discuss the time frame

(e) Discuss the viability of the data collection and study

(f) Variable Selection and Data Coding

(g) Discuss the reliability of research.

(h) Discuss the analysis plan

**a. Survey Instrument:**

For this research study, a questionnaire was prepared (segregated into two parts part A- questions related to Differentiating and Classifying factors and part B- questions related to risk tolerance behaviour) which consisted single response, multi response, rating scale, type of questions. All together there were 19 questions (part A- 9 and part B-10)

The questionnaires were distributed to the respondents (investors) by email, placed in internet (facebook) and handed over personally. A black and white printed copy was handed over to the investors personally and was requested to fill it.

In order to get relevant information informal interviews were also conducted with some of the investors in course of data collection. To meet the objective here in the research, random quota sampling has been used in terms of gender, age, marital status and education.

The data and information collected from primary as well as secondary sources were categorised and tabulated. Here, data from questionnaire have been gathered and tabulated systematically and then analyzed using frequency and valid percentage. For coding and output SPSS 16.0 software is used. The output and results are presented through Microsoft Excel, which is shown in Data Analysis Section.

**(b) Sample:**

The exact number of investors, both active and passive, in Nepal Stock Exchange is difficult to find out; therefore it has been assumed that the number of investors of Nepal Stock Exchange is more than 1 million. Hence our population size will be automatically considered

more than 1 million. As per Krejcie and Morgan (1970) for the population equal to 1 million the sample size was taken as 384.

For the research investors were randomly selected from Kathamndu Valley and from cities Pokhara, Biratnagar, Butwal and Dhangadhi. Both frequent and non frequent investors in the Nepalese Stock market were selected on the random basis. Furthermore the samples were classified based on the age, gender, marital status and education of the respondents for the study of differentiating and classifying factors affecting risk tolerance of Nepalese Stock market investors.

**(c) Data collection procedure:**

In order to achieve the objective of the study, both the primary and secondary sources have been used for data collection.

**i. Primary source of data collection:**

For the purpose of primary data collection structured questionnaire and personal interview method were used. Since the overall research is dependent upon primary data, three hundred and eighty four (384) investors of Nepal Stock Market were requested to answer the questionnaire. The investors were from different sectors such as banking and finance, broker house, college and school, travel and tours, government organization, house maker, training institute, fast food restaurant, consultancy, business organization like medical , jewellery, stationery, departmental store, and others and from Kathmandu Valley, and from cities Pokhara, Biratnagar, Butwal and Dhangadhi. All the investors were randomly selected without any biasness.

Most of the respondents (investors) were easily available to share data and information; however some were not interested to cooperate. The hours spent in discussion with investors at various broker agent offices were derived as valuable source of primary data collection.

**ii. Secondary Source of Data Collection:**

The role of secondary data was also vital in this study. Periodical magazines, journals reports, newspaper, articles and research papers were the valuable secondary sources of data. These secondary sources of data were collected through websites, library visits and even requested through personal visit and emails. Some websites like that of SEBON, NEPSE, NRB and books and dissertation of various scholars related to my research topic were considered as the source of secondary data collection.

Therefore, by using both the primary and secondary data the study was conducted keeping both the sources important.

**(d) Time Frame:**

The data collection process through the questionnaire was expected to be completed in two weeks however due to large sample size and delay in response from some investors the data collection through questionnaire lasted for three (3) weeks. Other process of data (both primary and secondary) collection was completed in two (2) weeks. Most of the respondents (investors) were easily available to share data and information; however some were not interested to cooperate.

**(e) Validity of Data Collection and Study:**

Validity is the extent to which a test measures what it claims to measure. It is vital for a test to be valid in order for the results to be accurately applied and interpreted. For validity of the study, initially a structured questionnaire was set after deep analysis and study of literature. The questionnaire was then submitted to the guide teacher for necessary suggestions. Finally after consideration of suggestion given by the guide teacher a new questionnaire was prepared. The new questionnaire was simple to understand and divided into two sections. Section A contains questions related to differentiating and classifying factors like age, gender, income, occupation etc. and Section B contains questions that measure the risk tolerance of the investors. After the preparation of the new questionnaire, for more validity the pilot testing of the questionnaire was executed in some investors. After completion of the test the questionnaire was once again review and finalized after the advice of the guide teacher and experts.

The questionnaire was distributed to the investors from various sectors such as banking and finance, broker house, college and school, travel and tours, government organization, house maker, training institute, fast food restaurant, consultancy, business organization like medical, jewellery, stationery, departmental store, and residing in Kathmandu Valley, Pokhara, Biratnagar, Butwal and Dhangadhi. The responses of the respondents were supposed to be unbiased because the samples were selected randomly. In order to study about the differentiating and classifying factors affecting risk tolerance of the investors, informal interviews and group discussions were also conducted. This all activities justify the validity of the data collection process and study.

**(f) Variable Selection and Data Coding**

**i) Dependent Variable**

The final dependent variable was comprised of three categories: (a) high risk tolerance, (b) moderate risk tolerance, and (c) no/low risk tolerance.

**ii. Independent Variables**

A summary of the operationalized variable definitions is provided below:

| Variable Measurement | |
|---|---|
| Gender | 1=Male 0=Female |
| Age | 0= Below 24 1=25-34 2=35-44 3=45-54 4=55 and above |
| Marital Status | 0= Unmarried 1=married |
| Education | 0= Below or Equal to SLC 1= Higher Secondary/ Diploma 2= Undergraduate 3= Graduate or Professional Degree or Higher. |

- Gender, a categorical variable, was dummy coded (1 = male, 0 = female) to allow its use as an interval level variable.
- Ages were dummy coded as 0= Below 24 1=25-34 2=35-44 3=45-54 4=55 and above
- Marital status were dummy coded as follows: 0 = unmarried 1 = married
- Education was coded as 0= Below or Equal to SLC 1= Higher Secondary/ Diploma 2= Undergraduate 3= Graduate or Professional Degree or Higher.

**(g) Reliability of the Research:**

It is very vital for a research or study to be reliable. Reliability refers to the consistency of a measure. It also refers to how well it produces results (or how bad it may fail). A test is considered reliable if we get the same result repeatedly. Regarding reliability of this research and accuracy in data, the questionnaire were explained thoroughly to the respondents and asked them to answer the questionnaire without any biasness. To have more accurate results and relationship between variables, the questionnaire are cross checked and finalized. In most cases the respondents were asked to complete the questionnaire in the presence of the researcher to nullify the effect of confusion upon the question.

**(h) Analysis Plan:**

The purpose of this study was to determine whether the variables gender, age, marital status and education could be used individually or in combination to both differentiate among levels of investor risk tolerance and classify individuals into risk-tolerance categories. To achieve

this objective, it has processed through the questionnaire which is analyzed and presented in graphical and tabular form. Then the major  the cross tabulation for the study are done in order to make the comparison of the analysis of the results drawn from the SPSS 16.0 software and presented the data through Microsoft Excel. For further explanation, the data are presented and analyzed through the tables. Under the presentation of the data, cross tabulations are used for the tabular presentation of data.

The findings from this research will enhance the ongoing discussion concerning the use of demographics as investor risk-tolerance classification factors, and provide investment managers with an estimate of which demographics are statistically significant for use in assessing clientele risk tolerances during the input phase of the investment management planning process. Hence the research methodology is given high priority in this study.

# CHAPTER -IV

# DATA PRESENTATION AND ANALYSIS

## 4.1 Presentation of Data:

The presentation of the result can be of two types consisting of primary result and secondary result. However, under this study, the presentation of the result is only based on the primary data. These primary data were collected through the structures questionnaire (Appendix 1) in order to meet the main objective of the study

Profile of the Respondents

### 4.1.1.1 Gender of the Respondents:

The summary of gender of the respondents of the survey is shown in the following table.

**Table 1: Gender of Respondents**

| Gender of Respondents | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **Female** | 143 | 37.2 |
| **Male** | 241 | 62.8 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation:** Among the 384 respondent 143 were female and 241 were male. Therefore the percent of the female was 37.2 and the percentage of male was 62.8. This shows that the investors with male gender are more than that of female gender in Nepalese stock market.

### 4.1.1.2 Age Group of the Respondents:

The summary of the age group of the respondents of the survey is shown in the following table:

**Table 2: Age Group of the Respondents**

| Age of Respondents | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **<=24** | 29 | 7.5 |
| **25-34** | 170 | 44.3 |
| **35-44** | 108 | 28.1 |
| **45-54** | 42 | 10.9 |
| **=<55** | 35 | 9.1 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation**: Among the 384 respondent 44.3 percentage of the respondent were from age 25 to 34 years. And the least number-29 (7.5 percentage) of respondents were from the age group of less than or equal to 24 years. Similarly the number of respondents equal to or greater than 55 was only 9.1 percentages. So, we can see that most of the people from age 25 to 34 are trading in Nepalese stock market.

#### 4.1.1.3 Marital Status of the Respondents:

The summary of the marital status of the respondents are presented in the following table.

**Table 3: Marital Status of the Respondents**

| Marital Status of Respondents | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **Unmarried** | 181 | 47.1 |
| **Married** | 203 | 52.9 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation:** Among the 384 respondent, 181 were unmarried and 203 were married. The percentage of unmarried and married was 47.1 and 52.9 percentage respectively. This shows that most of the investors are married in Nepalese stock market.

#### 4.1.1.4 Education Status of the Respondents:

The summary of the education status of the respondents are presented in the following table.

**Table 4: Education Status of Respondents**

| Education Level of Respondents | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **Below or Equal to SLC** | 40 | 10.4 |
| **Higher Secondary/Diploma** | 74 | 19.3 |
| **Undergraduate** | 201 | 52.3 |
| **Graduate or professional Degree or Higher** | 69 | 18.0 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation:** Among the 384 respondent, 52.3 percentage had undergraduate degree. Similarly 19.3 percentage had Higher secondary/Diploma degree and 18 Percentage had Graduate or Professional or Higher Degree. Likewise 10.4 percentage of respondents were below or equal to SLC. This shows that most of the investors of Nepalese stock market are educated.

#### 4.1.1.5 Trading Behaviour of the Respondents:

When the 384 respondents were asked through questionnaire- How regularly do you trade in the stock market? The following responses were obtained. This question was asked to understand the trading pattern of the investors in the stock market.

**Table 5: Trading Behaviour of the Respondents**

| How regularly do you trade in the stock market? | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **More than once a month** | 234 | 60.9 |
| **Less than once a month** | 77 | 20.1 |
| **Once a year** | 73 | 19 |
| **Total** | 384 | 100 |

Source: Field Survey (Questionnaire)

Interpretation: Among the 384 respondent, 60.9 percentage respondents trade more than once a month. Likewise, 20.19 percentage respondents trade less than once a month and 19 percentage respondents trade once a year. This shows that most of the investors actively participate in trading at the Nepalese stock market.

#### 4.1.1.6 Decision Making of the Respondents:

When the 384 respondents were asked through questionnaire- Who is responsible for investment allocation decision in your household? The following responses were obtained. This question was asked to the respondents to understand who makes the investment decision.

**Table 6: Decision Making of the Respondents**

| **Who is responsible for investment allocation decision in your household?** | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **I/Myself** | 299 | 77.86 |
| **Family** | 61 | 15.88 |
| **Professional Advice** | 24 | 6.25 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

Interpretation: Among the 384 respondent, 77.86 percentage of respondents claimed that they themselves are responsible for the investment allocation decision in their household. Likewise, 15.88 percentage of respondents take family suggestion and their families are responsible for the investment allocation decision. Only 6.25 percentage of respondents take professional advice for the investment allocation decision. This shows that most of the investors of Nepalese stock market rely on their self knowledge and expertise and very few take help of professionals like investment manager etc.

#### 4.1.1.7 Objective of Investment of the Respondents:

When the 384 respondents were asked through questionnaire- What is your general objective for investment in stock market? The following responses were obtained. This question was

asked to the respondents to understand or what purpose they are making investment. Through there answer we can also identify their risk tolerance level as well.

**Table 7: Objective of Investment of the Respondents:**

| What is your general objective for investment in stock market? | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **Profit/Return** | 292 | 76.0 |
| **Dividend** | 88 | 22.9 |
| **Marketability** | 4 | 1.0 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation:** Among the 384 respondent, 76 percentage of respondents have invested in Nepalese stock market with an objective of Profit/Return. Similarly 22.9 percentage of respondent's general objective for investment in stock market is for getting Dividend and only 1 percent of respondent's general objective for investment in stock market is marketability. This shows that most of the investors expect to earn good profit/return from their stock price and always expect their share's value grow.

#### 4.1.1.8 Knowledge of Trading of the Respondents:

When the 384 respondents were given a statement through likert scale question in the questionnaire- I have strong knowledge about trading in stock market. The respondents were asked to choose between options like Strongly Agree/ Somewhat Agree/ Agree/ Somewhat Disagree and Disagree. The following responses were obtained.

**Table 8: Knowledge of Trading of the Respondents**

| I have strong knowledge about trading in stock market. | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **Strongly Agree** | 50 | 13.0 |
| **Somewhat Agree** | 45 | 11.7 |
| **Agree** | 278 | 72.4 |
| **Somewhat Disagree** | 11 | 2.9 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation:** Among the 384 respondents, 72.4 percentage of respondents agreed when they were given a statement- I have strong knowledge about trading in stock market. Likewise 13 percentage of respondents strongly agreed, 11.7 percentage of respondents somewhat agreed and 2.9 percentage somewhat disagreed upon the same statement. This shows that most of the investors possess knowledge of trading. If investors have sound knowledge of trading then there is possibility for stock market to grow.

#### 4.1.1.9 Predictable Income of the Respondents:

When the 384 respondents were given a statement through likert scale question in the questionnaire- **My source of income is predictable.** The respondents were asked to choose between options like Strongly Agree/ Somewhat Agree/ Agree/ Somewhat Disagree and Disagree. The following responses were obtained.

**Table 9: Predictable Income of the Respondents:**

| My source of income is predictable. | | |
|---|---|---|
| **Category** | **Frequency** | **Percent** |
| **Strongly Agree** | 43 | 11.2 |
| **Somewhat Agree** | 55 | 14.3 |
| **Agree** | 279 | 72.7 |
| **Somewhat Disagree** | 7 | 1.8 |
| **Total** | 384 | 100.0 |

Source: Field Survey (Questionnaire)

**Interpretation:** Among the 384 respondents, 72.7 percentage of respondents agreed when they were given a statement- My source of income is predictable. Likewise, 14.3 percentage of respondents somewhat agreed, 11.2 percentage strongly agreed and 1.8 percentage somewhat disagreed upon the same statement. This shows that most of the investors moderately believe that they have sound income and is predictable. This also shows that investors are gaining from the trading activities in Nepalese stock market.

## 4.2 Descriptive Analysis:

### 4.2.1 Cross Tabulation Analysis:

One of the objectives of this study is to find out the differentiating and classifying factors of risk tolerance of the investors of Nepalese stock market. For this relationship between variables is essential s to derived hence Cross Tabulation Analysis is used.

#### 4.2.1.1 Presentation of the Risk Tolerance Behaviour of the Respondents through Cross Tabulation:

The second part of the questionnaire was related to the risk tolerance of the respondents. The questions were asked through the questionnaire and requested to select their appropriate options. Following are the findings of the data related to risk tolerance of the respondents based on field survey. Here Q1, Q2, Q3…… are the questions available in the part B of the questionnaire.

**Cross Tabulation between Gender and Q1:**

**Table 10: Cross Tabulation-Gender and Word Risk.**

| Gender | Q1 | | | |
|---|---|---|---|---|
| | **Loss** | **Uncertainty** | **Opportunity** | **Total** |
| **Female** | 26 (18.2%) | 22 (15.4%) | 95 (66.4%) | 143 (100%) |
| **Male** | 16 (6.64%) | 37 (15.4%) | 188 (78.0%) | 241 (100%) |
| **Total** | 42 (10.9%) | 59 (15.4%) | 283 (73.7%) | 384 (100%) |

**Interpretation:** The table presented above shows the overall responses highlighting the cross tabulation analysis between Gender and Q1. From the analysis it can be said that out of 143 female respondents 66.4 percent respondents considered risk as opportunity. Likewise 15.4 percent respondents considered risk as uncertainty and 18.2 percent respondents considered risk as Loss. This shows that most of the female gender respondents were optimistic and risk taker. Similarly out of 241 male respondents 78.0 percent respondents consider risk as opportunity and 15.4 percent consider risk as uncertainty and 6.64 percent of the male respondents take risk as loss. From the above analysis we also can say then respondents with male gender were more risk tolerant since maximum (78.0 percent) had considered risk as opportunity then the female respondents.

**Cross Tabulation Between Gender and Q2:**

**Table 11: Cross Tabulation-Gender and chance of getting higher return with 30% probability**

| | Q2 | | | | |
|---|---|---|---|---|---|
| **Gender** | **Assume no more risk in your portfolio** | **Assume some additional risk with part of your portfolio** | **Assume some additional risk with all of your portfolio** | **Assume a lot more risk with all of your portfolio** | **Total** |
| **Female** | 35 (24.5%) | 20 (13.9%) | 85 (59.4%) | 3 (2.09%) | 143 (100%) |
| **Male** | 38 (15.7%) | 50 (20.7%) | 136 (56.4%) | 17 (7.05%) | 241 (100%) |
| **Total** | 73 (19.01%) | 70 (18.23%) | 221 (57.55%) | 20 (5.21%) | 384 (100%) |

**Interpretation:** The table presented above shows the overall responses highlighting the cross tabulation analysis between Gender and Q2. From the analysis it can be said that out of 143 female respondents 59.4 percent respondents were ready to assume some additional risk with all of their portfolio if taking more risk would increase the chance of getting higher return

with 30 percent probability. Likewise 24.5 percent respondents were not ready to assume any risk in their portfolio.

Similarly out of 241 male respondents 56.4 percent male respondents were ready to assume some additional risk with all their portfolio. 7.05 percent male respondents were ready to assume a lot more risk with all their portfolio. From the above analysis we also can say that respondents with male gender were more risk tolerant since 7.05 percent male and 2.09 percent female respondents were ready to assume some additional risk with all of their portfolio maximum(78.0 percent) had considered risk as opportunity then the female respondents.

**Cross Tabulation Between Gender and Q3:**

**Table 12: Cross Tabulation-Gender and Loss Tolerance capacity**

| | Q3 | | | | |
|---|---|---|---|---|---|
| **Gender** | **Five Percent** | **Ten percent** | **Twenty percent** | **More than twenty percent** | **Total** |
| **Female** | 66 (46.2%) | 52 (36.4%) | 14 (9.8%) | 11 (7.7%) | 143 (100%) |
| **Male** | 88 (36.5%) | 69 (28.6%) | 36 (14.9%) | 48 (19.9%) | 241 (100%) |
| **Total** | 154 (40.1%) | 121 (31.5%) | 50 (13.0%) | 59 (15.4%) | 384 (100%) |

**Interpretation:** The above table reveals that out of the 143 female respondents 46.2 percent respondents were only able to tolerate five percent loss and only 7.7 percent were able to tolerate more than twenty percent loss. Similarly, out of 241 male respondents 36.5 percent respondents were able to tolerate only five percent loss and 19.9 percent respondents were able to tolerate more than twenty percent. Here, we can see more percentage of male respondents were able to tolerate more than twenty percent than the female respondents percentage. Therefore we can conclude male are more risk tolerant

**Cross Tabulation Between Gender and Q4:**

**Table 13: Cross Tabulation-Gender and Option in TV game show**

| | Q4 | | | | |
|---|---|---|---|---|---|
| **Gender** | **Rs.1,000 in cash** | **A 50% chance at winning Rs.5,000** | **A 35% chance at winning Rs.10,000** | **A 5% chance at winning Rs.100,000** | **Total** |
| **Female** | 92 (64.3%) | 41 (28.7%) | 4 (2.8%) | 6 ( 4.2%) | 143 (100%) |
| **Male** | 19 (7.9%) | 29 (12.0%) | 44 (18.3%) | 149 (61.8%) | 241 (100%) |
| **Total** | 111 28.9% | 70 (18.2%) | 48 (12.5%) | 155 (40.4%) | 384 (100%) |

**Interpretation:** The above table reveals that out of the 143 female respondents, 64.3 percent respondents were no risk taker and wished to take Rs. 1000 in cash in the game show. Only 4.2 percent female respondents were risk taker and had chosen a 5 percent chance of winning Rs. 100,000. Likewise, out of 241 male respondents only 7.9 percent were no risk taker and had chosen Rs. 1000 in cash. But 61.8 percent male respondents and had desired to get a 5 percent chance of winning Rs. 100,000. Since many male respondents have chosen the option of high risk therefore we can say that male are more risk taker then female.

**Cross Tabulation Between Gender and Q5:**

**Table 14: Cross Tabulation- Gender and Rs.1000,000 to Invest**

| | Q5 | | | | |
|---|---|---|---|---|---|
| **Gender** | **Deposit it in a bank account.** | **Invest it stock of commercial bank** | **Invest it in speculative stock (say of finance company).** | **Invest it in highly volatile commodities like Gold.** | **Total** |
| **Female** | 71 (49.6%) | 72 (50.4%) | 0 (0.0%) | 0 (0.0%) | 143 (100%) |
| **Male** | 31 (12.9%) | 197 (81.74%) | 6 (2.49%) | 7 (2.90%) | 241 (100%) |
| **Total** | 102 (26.6%) | 269 (70.0%) | 6 (1.6%) | 7 (1.8%) | 384 (100%) |

**Interpretation:** The above table reveals that out of the 143 female respondents, 50.4 percent would invest in stock of commercial bank and 49.6 percent would deposit in bank account. Neither of any female respondents would take risk and invest in speculative stock or in commodities. However male respondents were risk taker and out of 241 male respondents 2.49 percent would invest in speculative stock and 2.90 percent would invest in highly volatile commodities market. This shows that male respondents were more risk taker than female respondents.

**Cross Tabulation Between Gender and Q6:**

**Table 15: Cross Tabulation-Gender and Reaction**

| | Q6 | | | | |
|---|---|---|---|---|---|
| **Gender** | **I would be extremely upset.** | **I would have some problems getting to sleep that night.** | **I would hope that it would recover soon, but would not be too worried.** | **I would look at this as an excellent buying opportunity and invest more money** | **Total** |
| **Female** | 8 (5.6%) | 48 (33.6%) | 55 (38.5%) | 32 (22.4%) | 143 (100.0%) |
| **Male** | 6 (2.5%) | 81 (33.6%) | 98 (40.6%) | 56 (23.3%) | 241 (100.0%) |
| **Total** | 14 (3.6%) | 129 (33.6%) | 153 (39.8%) | 88 (22.9%) | 384 (100.0%) |

**Interpretation:** The above table shows that out of 143 female respondents, 38.5 percent of female respondents were optimistic and would hope that the 15 percent overnight drop in their portfolio would recover soon however 40.6 percent of male respondents would do the same. This shows that male respondents were more optimistic and had high risk tolerant capacity then female respondents.

**Cross Tabulation Between Gender and Q7:**

**Table 16: Cross Tabulation- Gender and Investment Option**

| | Q7 | | | | |
|---|---|---|---|---|---|
| **Gender** | **A savings account.** | **A fund that owns stocks and bonds in equal proportion** | **A equity portfolio of 15 % common stocks** | **Commodities like gold, silver, and oil.** | **Total** |
| **Female** | 71 (49.6%) | 72 (50.4%) | 0 (0.0%) | 0 (0.0%) | 143 (100.0%) |
| **Male** | 31 (12.8%) | 198 (82.2%) | 5 (2.1%) | 7 (2.9%) | 241 (100.0%) |
| Total | 102 (26.6%) | 270 (70.3%) | 5 (1.3%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 143 female respondents, 50.4 percent would invest in stock and bond in equal proportion and 49.6 percent would deposit in bank account. Neither of any female respondents would take risk and invest in portfolio of 15 percent common stock or in commodities. However male respondents were risk taker and out of 241 male respondents 82.2 percent would invest in portfolio of 15 percent common stock and 2.9 percent would invest in commodities. This shows that male respondents were more risk taker than female respondents.

**Cross Tabulation Between Gender and Q8:**

**Table 17: Cross Tabulation-Gender and Appealing investment Choice**

| | Q8 | | | | |
|---|---|---|---|---|---|
| **Gender** | **60% in low-risk investments 30% in medium-risk investments 10% in high-risk investments** | **30% in low-risk investments 40% in medium-risk investments 30% in high-risk investments** | **10% in low-risk investments 40% in medium-risk investments 50% in high-risk investments** | **5% in low-risk investments 30% in medium-risk investments 65% in high-risk investments** | **Total** |
| **Female** | 27 (18.9% | 102 (71.3%) | 2 (1.4%) | 12 (8.4%) | 143 (100.0%) |
| **Male** | 16 (6.6%) | 190 (78.8%) | 3 (1.2%) | 32 (13.3%) | 241 (100.0%) |
| Total | 43 (11.2%) | 292 (76.0%) | 5 (1.3%) | 44 (11.4%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 143 female respondents, 8.4 percent were risk taker hence would like to invest Rs.1000,000 in 65 percent high risk investment. Likewise out of 241 male respondents 13.3 percent were risk taker hence would like to invest Rs.1000,000 in 65 percent high risk investment. The percent of high risk taker of male is more than that of female respondents hence can be concluded that male respondents were more risk taker then female respondents.

**Cross Tabulation Between Gender and Q9:**

**Table 18: Cross Tabulation- Gender and Friend's Venture With High Risk and High Return**

| | Q9 | | | | |
|---|---|---|---|---|---|
| **Gender** | **Nothing** | **One month's salary** | **Three month's salary** | **Six month's salary** | **Total** |
| **Female** | 33 (23.1%) | 98 (68.5%) | 2 (1.4%) | 10 (7.0%) | 143 (100.0%) |
| **Male** | 29 (12.0%) | 160 (66.4%) | 13 (5.4%) | 39 (16.2%) | 241 (100.0%) |
| **Total** | 62 (16.1%) | 258 (67.2%) | 15 (3.9%) | 49 (12.8%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 143 female respondents, 7.0 percent were risk taker and would invest six months' salary in a situation to make invest at their friends gold mine venture whose chances of success is only 20 percent however also had chance to pay back 50 to 100 times if successful. Similarly, out of the 241 male respondents, 16.2 percent were risk taker and would invest six months salary in a situation to make invest at their friends gold mine venture whose chances of success is only 20 percent however also had chance to pay back 50 to 100 times if successful. Therefore it can be said that male respondents were more risk taker then female respondents.

**Cross Tabulation Between Gender and Q10:**

**Table 19: Cross Tabulation-Gender and Reaction After Portfolio Dropped By 11%**

| | Q10 | | | | |
|---|---|---|---|---|---|
| **Gender** | **Immediately sell all my investments and transfer money to another financial management company** | **Redefine investment strategy, sell all investments and restructure to a more conservative portfolio** | **Wait until market recovers, sell some of my investments, and establish lower risk investment strategy** | **Hold current portfolio and possibly take action to buy more at lower price to lower my average cost.** | **Total** |
| **Female** | 9<br>(6.3%) | 48<br>(33.6%) | 54<br>(37.8) | 32<br>(22.4%) | 143<br>(100.0%) |
| **Male** | 6<br>(2.5%) | 81<br>(33.6%) | 98<br>(40.6%) | 56<br>(23.2%) | 241<br>(100.0%) |
| **Total** | 15<br>(3.9%) | 129<br>(33.6%) | 152<br>(39.6%) | 88<br>(22.9%) | 384<br>(100.0%) |

**Interpretation:** The above table show that out of 143 female respondents 37.8 percent were optimistic and risk taker as they would wait until the recovery of the market if their portfolio dropped by 11 percent after investing for six months. Likewise, out of 241 male respondents 40.6 percent were optimistic and risk taker as they would wait until the recovery of the market if their portfolio dropped by 11 percent after investing for six months. This shows that male respondents were more risk taker than female respondents.

**Cross Tabulation Between Age and Q1:**

**Table 20: Cross Tabulation-Age and Word Risk.**

| Age | Q1 | | | |
|---|---|---|---|---|
| | **Loss** | **Uncertainty** | **Opportunity** | **Total** |
| **<=24** | 6 (20.7%) | 3 (10.3%) | 20 (69.0%) | 29 (100.0%) |
| **25-34** | 15 (8.8%) | 30 (17.6%) | 125 (73.5%) | 170 (100.0%) |
| **35-44** | 9 (8.3%) | 19 (17.6%) | 80 (74.1%) | 108 (100.0%) |
| **45-54** | 7 (16.6%) | 5 (11.9%) | 30 (71.4%) | 42 (100.0%) |
| **=<55** | 5 (14.3%) | 2 (5.7%) | 28 (80.0%) | 35 (100.0%) |
| **Total** | 42 (10.9%) | 59 (15.4%) | 283 (73.7%) | 384 (100.0%) |

**Interpretation:** The above table shows that out of 29 respondents of age below and equal to 24, 69.0 percent consider the word risk as opportunity. Likewise, out of 170 respondents of age between 25 to 34, 73.5 percent consider the word risk as opportunity. Similarly out of 108 respondents of age between 35 to 44, out of 42 respondents of age between 45 to 54 and out of respondents of age equal to and greater than 55, 74.1 percent, 71.4 percent and 80.0 percent consider the word risk as opportunity respectively. This shows that majority of respondents of age equal to or more than 55 were risk taker.

**Cross Tabulation Between Age and Q2:**

**Table 21: Cross Tabulation-Age and chance of getting higher return with 30% probability**

| | Q2 | | | | |
|---|---|---|---|---|---|
| **Age** | **Assume no more risk in your portfolio** | **Assume some additional risk with part of your portfolio** | **Assume some additional risk with all of your portfolio** | **Assume a lot more risk with all of your portfolio** | **Total** |
| **<=24** | 8 (27.6%) | 6 (20.7%) | 13 (44.8%) | 2 (6.9%) | 29 (100.0%) |
| **25-34** | 25 (14.7%) | 38 (22.3%) | 97 (57.0%) | 10 (5.9%) | 170 (100.0%) |
| **35-44** | 21 (19.4%) | 17 (15.7%) | 64 (59.2%) | 6 (5.5%) | 108 (100.0%) |
| **45-54** | 11 (26.25) | 5 (11.9%) | 25 (59.5%) | 1 (2.4%) | 42 (100.0%) |
| **=<55** | 8 (22.8%) | 4 (11.4%) | 22 (62.8%) | 1 (2.8%) | 35 (100.0%) |
| **Total** | 73 (19.0%) | 70 (18.2%) | 221 (57.5% | 20 (5.3%) | 384 (100.0%) |

**Interpretation:** The above table shows that out of 29 respondents of age below and equal to 24, 6.9 percent were high risk taker and ready to consider a lot of risk with all of their portfolio. Likewise, out of 170 respondents of age between 25 to 34, 5.9 percent were high risk taker and ready to consider a lot of risk with all of their portfolio. Similarly out of 108 respondents of age between 35 to 44, out of 42 respondents of age between 45 to 54 and out of respondents of age equal to and greater than 55, 5.5 percent, 2.4 percent and 2.8 percent were ready to consider a lot more risk with all their portfolio. This shows that respondents of age equal to or less than 24 were more risk taker.

**Cross Tabulation Between Age and Q3:**

**Table 22: Cross Tabulation-Age and Loss Tolerance capacity**

| | Q3 | | | | |
|---|---|---|---|---|---|
| **Age** | **Five Percent** | **Ten percent** | **Twenty percent** | **More than twenty percent** | **Total** |
| **<=24** | 9 (31.0%) | 6 (20.7%) | 3 (10.3%) | 11 (38.0%) | 29 (100.0%) |
| **25-34** | 64 (37.6%) | 60 (35.3%) | 24 (14.1%) | 22 (12.9%) | 170 (100.0%) |
| **35-44** | 46 (42.6%) | 32(29.6%) | 9 (8.3%) | 21 (19.5%) | 108 (100.0%) |
| **45-54** | 22 (52.4%) | 9(21.4%) | 9 (21.4%) | 2 (4.8%) | 42 (100.0%) |
| **=<55** | 13 (37.1%) | 14 (40.0%) | 5 (14.2%) | 3 (8.6%) | 35 (100.0%) |
| **Total** | 154 (40.1%) | 121 (31.5%) | 50 (13.0%) | 59 (15.4%) | 384 (100.0%) |

**Interpretation:** The above table shows that out of 29 respondents of age below and equal to 24, 38.0 percent were high risk taker and ready to tolerate more than 20 percent loss. Likewise, out of 170 respondents of age between 25 to 34, 12.9 percent were high risk taker and ready to tolerate more than 20 percent loss. Similarly out of 108 respondents of age between 35 to 44, out of 42 respondents of age between 45 to 54 and out of respondents of age equal to and greater than 55, 19.5 percent, 4.8 percent and 8.6 percent were high risk taker and ready to tolerate more than 20 percent loss. This shows that respondents of age equal to or less than 24 were more risk taker.

**Cross Tabulation Between Age and Q4:**

**Table 23: Cross Tabulation-Age and Option in TV game show**

| Age | Q4 | | | | |
|---|---|---|---|---|---|
| | **Rs.1,000 in cash** | **A 50% chance at winning Rs.5,000** | **A 35% chance at winning Rs.10,000** | **A 5% chance at winning Rs.100,000** | **Total** |
| **<=24** | 10 (34.5%) | 4 (13.8%) | 2 (6.9%) | 13 (44.8%) | 29 (100.0%) |
| **25-34** | 57 (33.5%) | 33 (19.4%) | 20 (11.8%) | 60 (35.3%) | 170 (100.0%) |
| **35-44** | 19 (17.6%) | 24 (22.2%) | 16 (14.8%) | 49 (45.4%) | 108 (100.0%) |
| **45-54** | 12 (28.6%) | 4 (9.5%) | 6 (14.3%) | 20 (47.6%) | 42(100.0%) |
| **=<55** | 13 (37.1%) | 5 (14.3%) | 4 (11.4%) | 13 (37.2%) | 35 (100.0%) |
| **Total** | 111 (28.9%) | 70 (18.2%) | 48 (12.5%) | 155 (40.4%) | 384 (100.0%) |

**Interpretation:** The above table shows that out of 29 respondents of age below and equal to 24, 44.8 percent were high risk taker and accepted 5 percent chance of winning Rs. 100,000. Likewise, out of 170 respondents of age between 25 to 34, 35.3 percent were high risk taker and accepted 5 percent chance of winning Rs. 100,000. Similarly out of 108 respondents of age between 35 to 44, out of 42 respondents of age between 45 to 54 and out of respondents of age equal to and greater than 55, 45.4 percent, 47.6 percent and 37.2 percent were high risk taker and accepted 5 percent chance of winning Rs. 100,000.

**Cross Tabulation Between Age and Q5:**

**Table 24: Cross Tabulation- Age and Rs.1000,000 to Invest**

| | Q5 | | | | |
|---|---|---|---|---|---|
| **Age** | **Deposit it in a bank account.** | **Invest it stock of commercial bank** | **Invest it in speculative stock (say of finance company).** | **Invest it in highly volatile commodities like Gold.** | **Total** |
| **<=24** | 8 (27.6%) | 20 (69.0%) | 1 (3.4%) | 0 (0.0%) | 29 (100.0%) |
| **25-34** | 51 (30.0%) | 115 (67.6%) | 3 (1.8%) | 1 (0.6%) | 170 (100.0%) |
| **35-44** | 28 (26.0%) | 73 (67.6%) | 2 (1.9%) | 5 (4.6%) | 108 (100.0%) |
| **45-54** | 7 (16.7%) | 34 (81.0%) | 0 (0.0%) | 1 (2.4%) | 42 (100.0%) |
| **=<55** | 8 (22.9%) | 27 (77.1%) | 0 (0.0%) | 0 (0.0%) | 35 (100.0%) |
| **Total** | 102 (26.6%) | 269 (70.1%) | 6 (1.6%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** The maximum number of the respondents were between the age group of 35-44. Out of 108 total respondents of this group 4.6 percent were high risk taker as they would invest in highly volatile commodities like gold if they unexpectedly received Rs. 1000,000. Similarly 67.6 percent of respondents of age group 25-34 and 35-44 would take little risk and invest in stock of commercial bank.

**Cross Tabulation Between Age and Q6:**

**Table 25: Cross Tabulation-Age and Reaction**

| Age | Q6 | | | | |
|---|---|---|---|---|---|
| | **I would be extremely upset.** | **I would have some problems getting to sleep that night.** | **I would hope that it would recover soon, but would not be too worried.** | **I would look at this as an excellent buying opportunity and invest more money** | **Total** |
| **<=24** | 2 (6.9%) | 10 (34.5%) | 7 (24.1%) | 10 (34.5%) | 29 (100.0%) |
| **25-34** | 6 (3.5%) | 54 (31.8%) | 77 (45.3%) | 33 (19.4%) | 170 (100.0%) |
| **35-44** | 4 (3.7%) | 37 (34.3%) | 40 (37.0%) | 27 (25.0%) | 108 (100.0%) |
| **45-54** | 1 (2.4%) | 14 (33.3%) | 17 (40.5%) | 10 (23.8%) | 42 (100.0%) |
| **=<55** | 1 (2.9%) | 14 (40.0%) | 12 (34.3%) | 8 (22.9%) | 35 (100.0%) |
| **Total** | 14 (3.6%) | 129 (33.6%) | 153 (39.8%) | 88 (23.0%) | 384 (100.0%) |

**Interpretation:** Out of the total 29 respondents of age equal to less than 24, 34.5 percent would look the 15 percent overnight drop in their portfolio as an excellent buying opportunity and invest more money. This shows that most of the respondents of age group equal to less than 24 are high risk taker. Likewise,25 percent of the total respondents of age group 35-44 also are high risk taker. Similarly 23.8 percent and 22.9 percent of the respondents of age group 45-54 and equal to greater than 55 respectively are high risk taker.

**Cross Tabulation Between Age and Q7:**

**Table 26: Cross Tabulation- Age and Investment Option**

| | Q7 | | | | |
|---|---|---|---|---|---|
| **Age** | **A savings account.** | **A fund that owns stocks and bonds in equal proportion** | **A equity portfolio of 15 % common stocks** | **Commodities like gold, silver, and oil.** | **Total** |
| **<=24** | 8 (27.6%) | 20 (69.0%) | 1 (3.4%) | 0 (0.0%) | 29 (100.0%) |
| **25-34** | 51 (30.0%) | 116 (68.2%) | 2 (1.2%) | 1 (0.6%) | 170 (100.0%) |
| **35-44** | 28 (26.0%) | 73 (67.6%) | 2 (1.9%) | 5 (4.6%) | 108 (100.0%) |
| **45-54** | 7 (16.7%) | 34 (81.0%) | 0 (0.0%) | 1 (2.4%) | 42 (100.0%) |
| **=<55** | 8 (22.9%) | 27 (77.1%) | 0 (0.0%) | 0 (0.0%) | 35 (100.0%) |
| **Total** | 102 (26.6%) | 270 (70.3%) | 5 (1.3%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** Out of the total 29 respondents of age group less than equal to 24, 27.6 percent are low risk taker and none are high risk taker. Similarly, out of the total 170 respondents of age group 25-34, 30 percent are low risk taker and only 0.6 percent are high risk taker. Likewise, from 108 respondents of age group, 26 percent are low risk taker and 4.6 percent are high risk taker. Only 16.7 percent are low risk taker and 2.4 percent are high risk taker among the total 42 respondents of age group 45-54. Likewise, 22.9 percent were low risk taker and none were high risk taker from the age group of equal to greater than 55.

**Cross Tabulation Between Age and Q8:**

**Table 27: Cross Tabulation-Age and Appealing investment Choice**

| | Q8 | | | | |
|---|---|---|---|---|---|
| **Age** | **60% in low-risk investments 30% in medium-risk investments 10% in high-risk investments** | **30% in low-risk investments 40% in medium-risk investments 30% in high-risk investments** | **10% in low-risk investments 40% in medium-risk investments 50% in high-risk investments** | **5% in low-risk investments 30% in medium-risk investments 65% in high-risk investments** | **Total** |
| **<=24** | 0 (0.0%) | 24 (82.8%) | 0 (0.0%) | 5 (17.2%) | 29 (100.0%) |
| **25-34** | 15 (8.9%) | 123 (72.4%) | 2 (1.2%) | 30 (17.6%) | 170 (100.0%) |
| **35-44** | 8 (7.4%) | 89 (82.4%) | 3 (2.8%) | 8 (7.4%) | 108 (100.0%) |
| **45-54** | 7 (16.7%) | 34 (81.0%) | 0 (0.0%) | 1 (2.4%) | 42 (100.0%) |
| **=<55** | 13 (37.1%) | 22 (62.9%) | 0 (0.0%) | 0 (0.0%) | 35 (100.0%) |
| **Total** | 43 (11.2%) | 292 (76.0%) | 5 (1.3%) | 44 (11.5%) | 384 (100.0%) |

**Interpretation:** Out of the total 170 respondents of age group 25-34, 17.6 percent were high risk taker and 2.8 percent were moderate risk taker. Maximum respondents were ready to take little risk hence have selected to invest in 10%high risk investment.

**Cross Tabulation Between Age and Q9:**

**Table 28: Cross Tabulation- Age and Friend's Venture With High Risk and High Return**

| Age | Q9 | | | | |
|---|---|---|---|---|---|
| | Nothing | One month's salary | Three month's salary | Six month's salary | Total |
| **<=24** | 6 (20.7%) | 22 (75.9%) | 0 (0.0%) | 1 (3.4%) | 29 (100.0%) |
| **25-34** | 28 (16.5%) | 112 (65.9%) | 8 (4.7%) | 22 (13.0%) | 170 (100.0%) |
| **35-44** | 13 (12.0%) | 68 (63.0%) | 5 (4.6%) | 22 (20.4%) | 108 (100.0%) |
| **45-54** | 9 ((21.4%) | 31 (73.8%) | 1 (2.4%) | 1 (2.4%) | 42 (100.0%) |
| **=<55** | 6 (17.1%) | 25 (71.4%) | 1 (2.9%) | 3 (8.6%) | 35 (100.0%) |
| **Total** | 62 (16.1%) | 258 (67.2%) | 15 (4.0%) | 49 (12.8%) | 384 (100.0%) |

**Interpretation:** Among the 108 respondents of age group 35-44, 20.4 percent were high risk taker. Similarly from the 170 respondents of age group 25-34, 13.0 percent were high risk taker since they will spend their six month's salary in a friend's venture which is of high return but have chances of success only 20 percent. Majority of the respondents of all age group were little risk taker and had chosen to invest their one month's salary.

**Cross Tabulation Between Age and Q10:**

**Table 29: Cross Tabulation-Age and Reaction After Portfolio Dropped By 11%**

| | Q10 | | | | |
|---|---|---|---|---|---|
| **Age** | **Immediately sell all my investments and transfer money to another financial management company** | **Redefine investment strategy, sell all investments and restructure to a more conservative portfolio** | **Wait until market recovers, sell some of my investments, and establish lower risk investment strategy** | **Hold current portfolio and possibly take action to buy more at lower price to lower my average cost.** | **Total** |
| **<=24** | 2 (6.9%) | 10 (34.5%) | 7 (24.1%) | 10 (34.5%) | 29 (100.0%) |
| **25-34** | 6 (3.5%) | 54 (31.8%) | 77 (45.3%) | 33 (19.4%) | 170 (100.0%) |
| **35-44** | 5 (4.6%) | 37 (34.3%) | 39 (36.1%) | 27 (25.0%) | 108 (100.0%) |
| **45-54** | 1 (2.4%) | 14 (33.3%) | 17 (40.5%) | 10 (23.8%) | 42 (100.0%) |
| **=<55** | 1 (2.9%) | 14 (40.0%) | 12 (34.3%) | 8 (22.9%) | 35 (100.0%) |
| **Total** | 15 (4.0%) | 129 (33.6%) | 152 (39.6%) | 88 (23.0%) | 384 (100.0%) |

**Interpretation:** Out of the 170 respondents of age group 25-34, 45.3 percent were optimistic and would wait until market recovers, sell some of their investments and would establish lower risk investment strategy. Similarly 36.1 percent, 40.5 percent and 34.3 percent of

respondents of age group 35-44, 45-54 and of age group equal to greater than 55 would do the same. 6.9 percent,3.5 percent, 4.6 percent, 2.4 percent and 2.9 percent of respondents of age group equal to less than 24, 25-34, 35-44, 45-54 and age group equal to or greater than 55 respectively were no risk taker and would sell all their investment immediately.

**Cross Tabulation Between Marital Status and Q1:**

**Table 30: Cross Tabulation-Marital Status and Word Risk.**

| | Q1 | | | |
|---|---|---|---|---|
| **Marital Status** | **Loss** | **Uncertainty** | **Opportunity** | **Total** |
| **Unmarried** | 15 (8.3%) | 29 (16.0%) | 137 (75.7%) | 181 (100.0%) |
| **Married** | 27 (13.3%) | 30 (14.8%) | 146 (72.0%) | 203 (100.0%) |
| **Total** | 42 (11.0%) | 59 (15.4%) | 283 (73.7%) | 384 (100.0%) |

**Interpretation:** The table presented above shows the overall responses highlighting the cross tabulation analysis between marital status and Q1. From the analysis it can be said that out of 181 unmarried respondents 75.7 percent respondents considered risk as opportunity. Likewise 16.0 percentage of respondents considered risk as uncertainty and 8.3 percent of respondents considered risk as Loss. This shows that most of the unmarried respondents were optimistic and risk taker. Similarly out of 203 married respondents 72.0 percent respondents consider risk as opportunity and 14.8 percent consider risk as uncertainty and 13.3 percent of the married respondents take risk as loss.

**Cross Tabulation Between Marital Status and Q2:**

**Table 31: Cross Tabulation-Marital Status and chance of getting higher return with 30% probability**

| | Q2 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **Assume no more risk in your portfolio** | **Assume some additional risk with part of your portfolio** | **Assume some additional risk with all of your portfolio** | **Assume a lot more risk with all of your portfolio** | **Total** |
| **Unmarried** | 36 (19.9%) | 36 (19.9%) | 100 (52.2%) | 9 (5.0%) | 181 (100.0%) |
| **Married** | 37 (18.2%) | 34 (16.7%) | 121 (59.6%) | 11 (5.4%) | 203 (100.0%) |
| **Total** | 73 (19.0%) | 70 (18.2%) | 221 (57.6%) | 20 (5.2%) | 384 (100.0%) |

**Interpretation:** The table presented above shows the overall responses highlighting the cross tabulation analysis between Marital Status and Q2. From the analysis it can be said that out of 181 unmarried respondents 52.2 percent respondents were ready to assume some additional risk with all of their portfolio if taking more risk would increase the chance of getting higher return with 30% probability. Likewise 19.9 percent of the unmarried respondents were not ready to assume any risk in their portfolio. Similarly out of 203 married respondents 59.6 percent respondents were ready to assume some additional risk with all their portfolio. 5.4 percent married respondents were ready to assume a lot more risk with all their portfolio.

**Cross Tabulation Between Marital Status and Q3:**

**Table 32: Cross Tabulation-Marital Status and Loss Tolerance capacity**

| Marital Status | Q3 | | | | |
|---|---|---|---|---|---|
| | **Five Percent** | **Ten percent** | **Twenty percent** | **More than twenty percent** | **Total** |
| **Unmarried** | 73 (40.3%) | 50 (27.6%) | 24 (13.3%) | 34 (18.8%) | 181 (100.0%) |
| **Married** | 81 (40.0%) | 71 (35.0%) | 26 (12.8%) | 25 (12.3%) | 203 (100.0%) |
| **Total** | 154 (40.1%) | 121 (31.5%) | 50 (13.0%) | 59 (15.4%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried respondents 40.3 percent respondents were only able to tolerate five percent loss and only 18.8 percent were able to tolerate more than twenty percent loss. Similarly, out of 203 married respondents 40.0 percent respondents were able to tolerate only five percent loss and 12.3 percent respondents were able to tolerate more than twenty percent. Here we can see more percentage of unmarried respondents were able to tolerate more than twenty percent loss than the married respondents.

**Cross Tabulation Between Marital Status and Q4:**

**Table 33: Cross Tabulation-Marital Status and Option in TV game show**

| | Q4 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **Rs.1,000 in cash** | **A 50% chance at winning Rs.5,000** | **A 35% chance at winning Rs.10,000** | **A 5% chance at winning Rs.100,000** | **Total** |
| **Unmarried** | 57 (31.5%) | 32 (17.7%) | 16 (8.8%) | 76 (42.0%) | 181 (100.0%) |
| **Married** | 54 (26.6%) | 38 (18.7%) | 32 (15.8%) | 79 (39.0%) | 203 (100.0%) |
| **Total** | 111 (29.0%) | 70 (18.2%) | 48 (12.5%) | 155 (40.4%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried respondents, 31.5 percent respondents were no risk taker and wished to take Rs. 1000 in cash in the game show. 42.0 percent unmarried respondents were risk taker and had chosen a 5% chance of winning Rs. 100,000. Likewise out of 203 married respondents 26.6 percent were no risk taker and had chosen Rs. 1000 in cash. But 39.0 percent married respondents had desired to get a 5% chance of winning Rs. 100,000.

**Cross Tabulation Between Marital Status and Q5:**

**Table 34: Cross Tabulation- Marital Status and Rs.1000,000 to Invest**

| | Q5 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **Deposit it in bank account** | **Invest it stock of commercial bank** | **Invest it in speculative stock (say of finance company).** | **Invest it in highly volatile commodities like Gold.** | **Total** |
| **Unmarried** | 50 (27.6%) | 124 (68.5%) | 4 (2.2%) | 3 (1.7%) | 181 (100.0%) |
| **Married** | 52 (25.6%) | 145 (71.4%) | 2 (1.0%) | 4 (2.0%) | 203 (100.0%) |
| **Total** | 102 (26.6%) | 269 (70.1%) | 6 (1.6%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried respondents, 68.5 percent would invest in stock of commercial bank and 27.6 percent would deposit in bank account. Only 1.7 percent of married respondents would take risk and invest in speculative stock or in commodities. However married respondents were risk taker and out of 203 married respondents 71.4 percent would invest in speculative stock and 2.0 percent would invest in highly volatile commodities market.

**Cross Tabulation Between Marital Status and Q6:**

**Table 35: Cross Tabulation-Marital Status and Reaction**

| | Q6 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **I would be extremely upset.** | **I would have some problems getting to sleep that night.** | **I would hope that it would recover soon, but would not be too worried.** | **I would look at this as an excellent buying opportunity and invest more money** | **Total** |
| **Unmarried** | 8 (4.4%) | 62 (34.3%) | 72 (39.8%) | 39 (21.5%) | 181 (100.0%) |
| **Married** | 6 (3.0%) | 67 (33.0%) | 81 (40.0%) | 49 (24.1%) | 203 (100.0%) |
| **Total** | 14 (3.6%) | 129 (33.6%) | 153 (39.8%) | 88 (23.0%) | 384 (100.0%) |

**Interpretation:** The above table shows that out of 181 unmarried respondents, 39.8 percent of female respondents were optimistic and would hope that the 15 percent overnight drop in their portfolio would recover soon however 40.0 percent of married respondents would do the same. Likewise, 4.4 percent of unmarried respondents and 3.0 percent of married respondent would be extremely upset. Similarly, 21.5 percent of unmarried respondents and 24.1 percent of married respondent would be look this as an excellent buying opportunity and invest more money.

**Cross Tabulation Between Marital Status and Q7:**

**Table 36: Cross Tabulation- Marital Status and Investment Option**

| | Q7 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **A savings account.** | **A fund that owns stocks and bonds in equal proportion** | **A equity portfolio of 15 % common stocks** | **Commodities like gold, silver, and oil.** | **Total** |
| **Unmarried** | 50 (27.6%) | 125 (69.1%) | 3 (1.7%) | 3 (1.7%) | 181 (100.0%) |
| **Married** | 52 (25.6%) | 145 (71.4%) | 2 (1.0%) | 4 (2.0%) | 203 (100.0%) |
| **Total** | 102 (26.6%) | 270 (70.3%) | 5 (1.3%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried respondents, 69.1 percent would invest in stock and bond in equal proportion and 27.6 percent would deposit in bank account. 1.7 percent each of the total respondents would take some risk and invest in portfolio of 15 percent common stock or in commodities. However, married respondents were risk taker and out of 203 married respondents 1.0 percent would invest in portfolio of 15 percent common stock and 2.0 percent would invest in commodities. Likewise, 25.6 percent of married respondents would invest in saving account and 71.4 percent of married respondents would invest in fund that owns stock and bonds in equal proportion.

**Cross Tabulation Between Marital Status and Q8:**

**Table 37: Cross Tabulation-Marital Status and Appealing investment Choice**

| | Q8 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **60% in low-risk investments 30% in medium-risk investments 10% in high-risk investments** | **60% in low-risk investments 30% in medium-risk investments 10% in high-risk investments** | **10% in low-risk investments 40% in medium-risk investments 50% in high-risk investments** | **5% in low-risk investments 30% in medium-risk investments 65% in high-risk investments** | **Total** |
| **Unmarried** | 15 (8.3%) | 136 (75.1%) | 2 (1.1%) | 28 (15.55) | 181 (100.0%) |
| **Married** | 28 (13.8%) | 156 (76.8%) | 3 (1.5%) | 16 (7.9%) | 203 (100.0%) |
| **Total** | 43 (11.2%) | 292 (76.0%) | 5 (1.3%) | 44 (11.5%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried respondents, 15.5 percent were risk taker hence would like to invest Rs.1000,000 in 65 percent high risk investment. Likewise, out of 203 married respondents 7.9 percent were risk taker hence would like to invest Rs.1000,000 in 65 percent high risk investment. Similarly, 8.3 percent of the unmarried respondents were low risk taker and 13.8 percent of married respondents were of low risk taker category. Most of the married and unmarried respondents have taken little risk and invested in 30 percent high risk investment.

**Cross Tabulation Between Marital Status and Q9:**

**Table 38: Cross Tabulation- Marital Status and Friend's Venture With High Risk and High Return**

| | Q9 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **Nothing** | **One month's salary** | **Three month's salary** | **Six month's salary** | **Total** |
| **Unmarried** | 28 (15.5%) | 125 (69.1%) | 5 (2.8%) | 23 (12.7%) | 181 (100.0%) |
| **Married** | 34 (16.7%) | 133 (65.5%) | 10 (5.0%) | 26 (12.8%) | 203 (100.0%) |
| **Total** | 62 (16.1%) | 258 (67.2%) | 15 (4.0%) | 49 (12.8%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried female respondents, 12.7 percent were risk taker and would invest their six month's salary in a situation to make invest at their friends gold mine venture whose chances of success is only 20 percent however also had chance to pay back 50 to 100 times if successful. Similarly, out of the 203 married respondents, 12.8 percent were risk taker and would invest six months salary in a situation to make invest at their friends gold mine venture whose chances of success is only 20 percent however also had chance to pay back 50 to 100 times if successful. Most of the both married and unmarried respondents were low small risk taker hence have decided to invest their one month's salary knowing the return would be much higher to the amount of investment.

**Cross Tabulation Between Marital Status and Q10:**

**Table 39: Cross Tabulation-Marital Status and Reaction After Portfolio Dropped By 11%**

| | Q10 | | | | |
|---|---|---|---|---|---|
| **Marital Status** | **Immediately sell all my investments and transfer money to another financial management company** | **Redefine investment strategy, sell all investments and restructure to a more conservative portfolio** | **Wait until market recovers, sell some of my investments, and establish lower risk investment strategy** | **Hold current portfolio and possibly take action to buy more at lower price to lower my average cost.** | **Total** |
| **Unmarried** | 8 (4.4%) | 62 (34.3%) | 72 (39.8%) | 39 (21.5%) | 181 (100.0%) |
| **Married** | 7 (3.4%) | 67 (33.0%) | 80 (39.4%) | 49 (24.1%) | 203 (100.0%) |
| **Total** | 15 (4.0%) | 129 (33.6%) | 152 (39.6%) | 88 (23.0%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 181 unmarried respondents, 39.8 percent would wait until market recovers, sell some of their investment and establish lower risk investment strategy if their portfolio gets dropped by 11 percent after investing for six months. This means 39.8 percent unmarried respondents were slightly risk taker. Likewise, out of the 203 married respondents, 39.4 percent would wait until market recovers, sell some of their investment and establish lower risk investment strategy if their portfolio gets dropped by 11 percent after investing for six months. This means 39.4 percent unmarried respondents

were slightly risk taker. Similarly, 4.4 percent of the unmarried respondents and 3.4 percent of the married respondents were no risk taker hence would immediately sell all their investment.

**Cross Tabulation Between Education Status and Q1:**

**Table 40: Cross Tabulation-Education Status and Word Risk.**

| Education | Q1 | | | |
|---|---|---|---|---|
| | **Loss** | **Uncertainty** | **Opportunity** | **Total** |
| **Below or Equal to SLC** | 8 (20.0%) | 2 (5.0%) | 30 (75.0%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 16 (21.6%) | 9 (12.2%%) | 49 (66.2%) | 74 (100.0%) |
| **Undergraduate** | 15 (7.5%) | 31 (15.4%) | 155 (77.1%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 3 (4.3%) | 17 (24.6%) | 49 (71.0%) | 69 (100.0%) |
| **Total** | 42 (11.0%) | 59 (15.4%) | 283 (73.7%) | 384 (100.0%) |

**Interpretation:** The table presented above shows the overall responses highlighting the cross tabulation analysis between Education and Q1. From the analysis it can be said that out of 201 undergraduate respondents 77.1 percent respondents considered risk as opportunity. Likewise, 15.4 percentage of the undergraduate respondents considered risk as uncertainty and 7.5 percent of respondents considered risk as Loss. This shows that most of the undergraduate respondents optimistic and risk taker. Similarly out of 69 graduate or higher

degree holder respondents 71.0 percent respondents consider risk as opportunity and 24.6 percent consider risk as uncertainty and 4.3 percent take risk as loss.

**Cross Tabulation Between Education Status and Q2:**

**Table 41: Cross Tabulation-Education Status and chance of getting higher return with 30% probability**

| | Q2 | | | | |
|---|---|---|---|---|---|
| **Education** | **Assume no more risk in your portfolio** | **Assume some additional risk with part of your portfolio** | **Assume some additional risk with all of your portfolio** | **Assume a lot more risk with all of your portfolio** | **Total** |
| **Below or Equal to SLC** | 9 (22.5%) | 3 (7.5%) | 28 (70.0%) | 0 (0.0%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 16 (21.6%) | 11 (14.9%) | 43 (58.1%) | 4 (5.4%) | 74 (100.0%) |
| **Undergraduate** | 44 (21.9%) | 32 (16.0%) | 118 (58.7%) | 7 (3.5%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 4 (5.8%) | 24 (34.8%) | 32 (46.4%) | 9 (13.0%) | 69 (100.0%) |
| **Total** | 73 (19.0%) | 70 (18.2%) | 221 (57.5%) | 20 (5.2%) | 384 (100.0%) |

**Interpretation:** The table presented above shows the overall responses highlighting the cross tabulation analysis between demographic factor Education and Q2. From the analysis it can be said that out of 201 respondents with undergraduate degree, 58.7 percent respondents were ready to assume some additional risk with all of their portfolio if taking more risk would

increase the chance of getting higher return with 30% probability. Likewise, 21.9 percent of those respondents with undergraduate degree were not ready to assume any risk in their portfolio. Similarly out of 74 respondents with higher secondary or diploma degree, 58.1 percent were ready to assume some additional risk with all their portfolio and 5.4 percent respondents were ready to assume a lot more risk with all their portfolio.

**Cross Tabulation Between Education Status and Q3:**

**Table 42: Cross Tabulation-Education Status and Loss Tolerance capacity**

| Education | Q3 | | | | |
|---|---|---|---|---|---|
| | **Five Percent** | **Ten percent** | **Twenty percent** | **More than twenty percent** | **Total** |
| **Below or Equal to SLC** | 22 (55.0%) | 10 (25.0%) | 3 (7.5%) | 5 (12.5%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 37 (50.0%) | 25 (33.8%) | 6 (8.1%) | 6 (8.1%) | 74 (100.0%) |
| **Undergraduate** | 74 (36.8%) | 64 (31.8%) | 24 (12.0%) | 39 (19.4%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 21 (30.4%) | 22 (31.9%) | 17 (24.6%) | 9 (13.0%) | 69 (100.0%) |
| **Total** | 154 (40.1%) | 121 (31.5%) | 50 (13.0%) | 59 (15.4%) | 384 (100.0%) |

**Interpretation:** The above table reveals that out of the 40 respondents with Degree below or equal to SLC, 55.0 percent respondents were only able to tolerate five percent loss and only 12.5 percent were able to tolerate more than twenty percent loss. Similarly, out of 201 respondents with undergraduate degree, 36.8 percent respondents were able to tolerate only five percent loss and 19.4 percent respondents were able to tolerate more than twenty percent.

From the table we can see that respondents with higher degree are ready to tolerate high level of risk.

**Cross Tabulation Between Education Status and Q4:**

**Table 43: Cross Tabulation-Education Status and Option in TV game show**

| | Q4 | | | | |
|---|---|---|---|---|---|
| **Education** | **Rs.1,000 in cash** | **A 50% chance at winning Rs.5,000** | **A 35% chance at winning Rs.10,000** | **A 5% chance at winning Rs.100,000** | **Total** |
| **Below or Equal to SLC** | 9 (22.5%) | 10 (25.0%) | 8 (20.0%) | 13 (32.5%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 30 (40.5%) | 17 (23.0%) | 8 (10.8%) | 19 (25.7%) | 74 (100.0%) |
| **Undergraduate** | 58 (28.9%) | 26 (13.0%) | 25 (12.4%) | 92 (45.8%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 14 (20.3%) | 17 (24.6%) | 7 (10.1%) | 31 (45.0%) | 69 (100.0%) |
| **Total** | 111 (29.0%) | 70 (18.2%) | 48 (12.5%) | 155 (40.4%) | 384 (100.0%) |

**Interpretation:** The above table shows that cross tabulation between Education and Q4. Where out of total 69 respondents with Graduate or Professional or Higher Degree 45.0 percent were high risk taker hence have chosen a 5 percent chance of winning Rs. 100,000 from the TV game show option. Likewise, 45.8 percent of the total 201 respondents with undergraduate degree had also chosen a 5 percent chance of winning Rs. 100,000. 40.5 percent of the total 74 respondent with Higher secondary/ Diploma degree were no risk taker hence had chosen Rs. 1000 in cash.

**Cross Tabulation Between Education Status and Q5:**

**Table 44: Cross Tabulation- Education Status and Rs.1000,000 to Invest**

| | Q5 | | | | |
|---|---|---|---|---|---|
| **Education** | **Deposit it in a bank account.** | **Invest it stock of commercial bank** | **Invest it in speculative stock (say of finance company).** | **Invest it in highly volatile commodities like Gold.** | **Total** |
| **Below or Equal to SLC** | 9 (22.5%) | 30 (75.0%) | 1 (2.5%) | 0 (0.0%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 29 (39.2%) | 42 (56.8%) | 1 (1.4%) | 2 (2.7%) | 74 (100.0%) |
| **Undergraduate** | 54 (26.9%) | 139 (69.2%) | 3 (1.5%) | 5 (2.5%0 | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 10 (14.5%) | 58 (84.1%) | 1 (1.4%) | 0 (0.0%) | 69 (100.0%) |
| **Total** | 102 (26.6%) | 269 (70.1%) | 6 (1.6%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** Respondents with Below or Equal to SLC and respondents with Graduate or professional degree or higher neither of any were high risk taker and none had decided to invest Rs. 1000,000 in highly volatile commodities. 75.0 percent, 56.8 percent. 69.2 percent and 84.1 percent of the respondents respectively of education status below or equal to SLC, Higher Secondary/ Diploma, Undergraduate and Graduate or professional Degree or Higher had chosen to invest Rs. 1000,000 in stock of commercial bank taking slightly risk.

**Cross Tabulation Between Education Status and Q6:**

**Table 45: Cross Tabulation-Education Status and Reaction**

| Education | Q6 | | | | |
|---|---|---|---|---|---|
| | I would be extremely upset. | I would have some problems getting to sleep that night. | I would hope that it would recover soon, but would not be too worried. | I would look at this as an excellent buying opportunity and invest more money | Total |
| **Below or Equal to SLC** | 1 (2.5%) | 17 (42.5%) | 17 (42.5%) | 5 (12.5%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 2 (2.7%) | 25 (33.8%) | 23 (31.1%) | 24 (32.4%) | 74 (100.0%) |
| **Undergraduate** | 10 (5.0%) | 63 (31.3%) | 87 (43.3%) | 41 (20.4%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 1 (1.4%) | 24 (34.8%) | 26 (37.7%) | 18 (26.1%) | 69 (100.0%) |
| **Total** | 14 (3.6%) | 129 (33.6%) | 153 (39.8%) | 88 (23.0%) | 384 (100.0%) |

**Interpretation:** This table shows the cross tabulation between Education and Q6 where 43.3 percent of the total 201 respondents with undergraduate degree were risk taker and would have hope that the market would recover. However, 5.0 percent of the same undergraduate respondents were risk averse and would be extremely upset if there happens a 15 percent decline in their portfolio. Similarly, 32.4 percent of the total 74 respondents with Higher secondary/ Diploma degree were high risk taker and would take the situation as excellent buying opportunity.

**Cross Tabulation Between Education Status and Q7:**

**Table 46: Cross Tabulation- Education Status and Investment Option**

| Education | Q7 | | | | |
|---|---|---|---|---|---|
| | A savings account. | A fund that owns stocks and bonds in equal proportion | A equity portfolio of 15 % common stocks | Commodities like gold, silver, and oil. | Total |
| **Below or Equal to SLC** | 9 (22.5%) | 30 (75.0%) | 1 (2.5%) | 0 (0.0%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 29 (39.2%) | 42 (56.8%) | 1 (1.4%) | 2 (2.7%) | 74 (100.0%) |
| **Undergraduate** | 54 (26.9%) | 140 (69.7%) | 2 (1.0%) | 5 (2.5%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 10 (14.5%) | 58 (84.1%) | 1 (1.4%) | 0 (0.0%) | 69 (100.0%) |
| **Total** | 102 (26.6%) | 270 (70.3%) | 5 (1.3%) | 7 (1.8%) | 384 (100.0%) |

**Interpretation:** The table revels the cross tabulation between education and Q7 which shows that neither any respondents of education below or equal to SLC or respondent with graduate or professional degree or higher are risk taker hence have not desired to invest in

commodities like gold, silver etc. Most of the respondents of all education level have decided to invest in stock and bonds in equal proportion taking little risk.

**Cross Tabulation Between Education Status and Q8:**

**Table 47: Cross Tabulation-Education Status and Appealing investment Choice**

| | Q8 | | | | |
|---|---|---|---|---|---|
| **Education** | **60% in low-risk investments 30% in medium-risk investments 10% in high-risk investments** | **30% in low-risk investments 40% in medium-risk investments 30% in high-risk investments** | **10% in low-risk investments 40% in medium-risk investments 50% in high-risk investments** | **5% in low-risk investments 30% in medium-risk investments 65% in high-risk investments** | **Total** |
| **Below or Equal to SLC** | 10 (25.0%) | 28 (70.0%) | 0 (0.0%) | 2 (5.0%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 10 (13.5%) | 55 (74.3%) | 1 (1.4%) | 8 (10.8%) | 74 (100.0%) |
| **Undergraduate** | 17 (8.5%) | 154 (76.6%) | 4 (2.0%) | 26 (13.0%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 6 (8.7%) | 55 (79.7%) | 0 (0.0%) | 8 (11.6%) | 69 (100.0%) |
| **Total** | 43 (11.2%) | 292 (76.0%) | 5 (1.3%) | 44 (11.5%) | 384 (100.0%) |

**Interpretation:** This table shows the cross tabulation between Education and Q8 where out of 201 undergraduate respondents, 13.0 percent were high risk taker and would have invested Rs. 1000,000 in 65 percent high risk investment. 79.7 percent of the total 69 respondents with graduate or professional or higher degree were slightly risk taker and would have invested Rs. 1000,000 in 30 percent high risk investment.

**Cross Tabulation Between Education Status and Q9:**

**Table 48: Cross Tabulation- Education Status and Friend's Venture With High Risk and High Return**

| Education | Q9 | | | | |
|---|---|---|---|---|---|
| | **Nothing** | **One month's salary** | **Three month's salary** | **Six month's salary** | **Total** |
| **Below or Equal to SLC** | 5 (12.5%) | 30 (75.0%) | 1 2.5%) | 4 (10.0%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 13 (17.6%) | 53 (71.6%) | 2 (2.7%) | 6 (8.1%) | 74 (100.0%) |
| **Undergraduate** | 34 (17.0%) | 128 (63.7%) | 9 (4.5%) | 30 (15.0%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 10 (14.5%) | 47 (68.1%) | 3 (4.3%) | 9 (13.0%) | 69 (100.0%) |
| **Total** | 62 (16.1%) | 258 (67.2%) | 15 (4.0%) | 49 (12,8%) | 384 (100.0%) |

**Interpretation:** The above table shows the cross tabulation between Education and Q9, where out of 201 undergraduate respondents 15.0 percent were high risk taker as they would invest their 6 months' salary in their friend's venture which is of high return but had chances of success only 20 percent and 17.0 percent were low risk taker as they won't invest any amount. Similarly, out of 74 respondents with Higher secondary/ Diploma education 8.1 percent were only high risk taker and 17.6 percent were low risk taker.

**Cross Tabulation Between Education Status and Q10:**

**Table 49: Cross Tabulation-Education Status and Reaction After Portfolio Dropped By 11%**

| | Q10 | | | | |
|---|---|---|---|---|---|
| **Education** | **Immediately sell all my investments and transfer money to another financial management company** | **Redefine investment strategy, sell all investments and restructure to a more conservative portfolio** | **Wait until market recovers, sell some of my investments, and establish lower risk investment strategy** | **Hold current portfolio and possibly take action to buy more at lower price to lower my average cost.** | **Total** |
| **Below or Equal to SLC** | 1 (2.5%) | 17 (42.5%) | 17 (42.5%) | 5 (12.5%) | 40 (100.0%) |
| **Higher Secondary/Diploma** | 2 (2.7%) | 25 (33.8%) | 23 (31.1%) | 24 (32.4%) | 74 (100.0%) |
| **Undergraduate** | 11 (5.5%) | 63 (31.3%) | 86 (42.8%) | 41 (20.4%) | 201 (100.0%) |
| **Graduate or professional Degree or Higher** | 1 (1.4%) | 24 (34.8%) | 26 (37.7%) | 18 (26.1%) | 69 (100.0%) |
| **Total** | 15 (4.0%) | 129 (33.6%) | 152 (39.6%) | 88 (23.0%) | 384 (100.0%) |

**Interpretation:** The above table shows the cross tabulation between Education and Q9, where out of 201 undergraduate respondents 42.8 percent will wait until market recovers, sell some investment and establish lower risk investment strategy; and 20.4 percent were high risk taker and would buy more in the situation when their portfolio has dropped by 11 percent. Most of the respondents were able to tolerate only little risk hence have selected second options.

# Chapter V

# MAJOR FINDING, CONCLUSION AND RECOMMENDATIONS

## 5.1 Major Finding:

This study mainly aims at finding about the study of differentiating and classifying factors affecting Risk tolerance of Nepalese stock market investors. For this, four demographic variables /Factors were used. They are age, gender, marital status, and education. The major finding on the basis of variables can be presented as follows.

**a) Age:**

Age is found to be the most important determinants of investor to study about the risk tolerance. Age is a common and major factor which helps to identify whether how much investor can tolerate the risk in his/her in the particular age. Many researchers has said that young people are less risk averse than elder people. Similarly early research has indicated that older individuals were less risk tolerant than younger individuals. In this study, ages are divided into five categories;

i) Below and equal to 24
ii) 25 to 34
iii) 35 to 44
iv) 45 to 54
v) Equal to and greater than 55

With the help of above ages, it is easy to find out the investor risk tolerance. For this, cross tabulation were made with investment risk tolerance questionnaire. The major finding from this study is that, ages between below and equal to 24 and 25 to 34 ages of investors were more risk taker than others. But other ages of investors were also taking risk by analysing the situation. But compareting ages of 24 from 25 to 34 of investors were seems to be more risk taker.

**b) Gender:**

A gender is one of the most important factors to determine the risk attitude of individual investors. Likewise, it is very essential factors in determinants of investor's risk attitude. Many researchers had concluded that men were more willing than women to take financial risk. Similarly in reporting finding from a survey concluded that women are less risk tolerant

than men. In this study, whether the man or women tolerate more risk, gender were categories in two parts.

i. Male

ii. Female

To identify the investor risk tolerance, cross tabulation were made with risk tolerance questionnaire. The major finding from this study is that female respondents have not much more effort to take risk with comparison to male whether there is a better opportunity. In this study, while measuring the risk tolerance of investors by questionnaire female respondents are not able to take risk. Therefore, we conclude male are more risk tolerant.

**c) Marital Status:**

Marital status is a major factor that significantly influence risk and return. Likewise, marital status represents the married and unmarried persons. It has found that non-married individuals take more investment risk than married individuals. Similarly, single females were less risk taker than single males. Basically, in this study marital status were categories in two parts;

i) Married

ii) Unmarried

To identify the investor risk tolerance, cross tabulation were made with marital status by risk tolerance questionnaire. In this study while measuring the risk tolerance of investors by asking question, unmarried respondents were able to tolerate more risk than the married respondents.

**d) Education:**

Education is most important factors to determine the risk tolerance. Education determines whether an investor is able to take the risk. It is used as investor risk tolerance research. Education is also a two type's i.e. higher education and general education. Higher education levels tended to invest in higher risk investment but general education levels was not always influence the investment decision. But measuring the risk tolerance of investors education are categories into four parts;

i) Below or Equal to SLC

ii) Higher secondary/ Diploma

iii) Under graduate

iv) Graduate or professional Degree or Higher

Above education level helps to find out the investor risk tolerance. Cross-tabulation was done with investment risk tolerance questionnaire for measuring investor risk. The major finding

from this study is that, education of under graduate level of investor were more risk tolerant than graduate and higher secondary level. However, graduate and higher secondary level of investor of taking risk is likely to be same. But education below or equal to SLC level of investor are risks averse.

**5.2 Conclusion:**

From the above study prepared, we can conclude that out of seventeen questions, i.e. Part 'A' seven and Part 'B' Ten all the statement got satisfactory results by large pool of investors. Besides it, Part 'A' got positive results in comparison with Part 'B'. Hence the level of investor satisfaction on the basis of risk tolerance questionnaire can be considered satisfactory.

Part 'A' is considered as differentiating and classifying factors of investors. Out of seven questions, five questions were asked to respondents. The target respondents were asked two questions to measure the views on trading behaviour and objective of investment. Both questions have got higher portion of doing trading and higher portion to earn profit/return. Among five questions, three questions were under of decision making, knowledge of trading and predictable income. Among these three question, majority portion of investors agree with decision making i.e. they were responsible for investment allocation decision by doing themselves rather than others i.e. family, professional advice etc. But in terms of knowledge and predictable income most of the investors majority portion is towards agree. That means they are not strongly agreed and not be disagree.

Similarly, Part 'B' is related to risk tolerance behaviour of investors. The question were asked through the questionnaire and requested to select their appropriate option. The questions were asked to investor's in terms of demographic variable (i.e. age, gender, marital status, education). The target respondents were asked two questions to measure the views on risk. Both questions have got higher portion of taking risk. That is, in age 25 to 34, in gender male, in marital status unmarried and in education under graduate took high portion of risk. Similarly, target respondents were asked three questions to measure the view on the investment. These questions have got higher portion of investment in terms with gender, age, and education with comparison to marital status. In age 25 to 34, in gender male and in education under graduate group take more investment while in marital status married and unmarried group do fifty-fifty proportion of investment. In regarding to risk tolerance behaviour of investor two questions were asked about the reaction of dropping portfolio. While dropping the portfolio age of 25 to 34, male, unmarried, and education level of under

graduate investor took more risk. It means they have positive reaction of dropping portfolio. Finally, three questions were asked to investor to measure the risk tolerance behaviour. Likewise, age of 25 to 34, gender- male, marital status-unmarried and education-under graduate took more risk to invest. They thinks that, ‘’When there is high risk there will be high return’’ and vice-versa.

At last from the site of conclusion, it seems that most of investor’s does not want to take more risk. It shows that they want to take safe landing for their investment. Therefore they ultimately want to gain higher amount of return at lower amount of risk.

**5.3 Recommendation:**

Considering the major finding and conclusion of this study some recommendations are presented. It is hoped that these recommendation will certainly be proved mile stone to overcome existing issues in this field.

- The study should focus on to welcome to new investors in the stock market.
- New investors should take the adequate knowledge about stock market from other investors or through from training institute because mostly investors had little knowledge about stock market, therefore they are not able to tolerate risk.
- The study shows that the Nepalese stock market is slow in motion because mostly investors were uneducated and unskilled and they have not any general idea of trading. So they were fair to tolerate risk.
- Due to unclear plans and policies of government about share market the share market is declining day by day as a result investor were afraid to tolerate risk.
- Due to the current political scenario of country, share market is declining since from 12 month and there is no sign of improvement in this sector. So nobody can want to tolerate risk.
- The study focus on factor affecting risk tolerance. They were age, gender, marital status and education. From the study it shows most of respondents are not able to tolerate risk.
- During the study of risk tolerance behaviour of investors, male, age of 25 to 34 and 35 to 44, education of higher secondary and graduate and unmarried investors were seems to taking high risk. But female, married, education level of below or equal to SLC and age of <=24 and <=55 seem to taking low risk. This indicates that they have not got better opportunities for investment or they are afraid to take risk. So these investors should be given a better opportunity or should be encouraged by their own family members and from their relative. Besides it, fruitful and kindly environment

should be created by government and related sector which ultimately helps in economic development of the nation.

From the part of recommendation, it is better to recommended to all demographic variables (i.e. age, gender, marital status, education) of investor which have different level because from the given level of demographic variables of investor only the little much group of investor are able to tolerate high risk rather than all. So rather to say why other investor does not tolerate the risk, it is better to examine why they are not able to tolerate risk. Therefore it is a part of analysis ,so well-knowledge investor, their family person, professional person and private as well as government sector should encouraged and should be given knowledge and education about Nepalese stock market to these level of investors.

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