Understanding the Stock Market Investment Decisions of Bangladeshi Investors: A Thematic Content Analysis Approach

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Abstract

The study looks to explore decision making behavior of Bangladeshi stock market investors. We interview 15 investors currently holding stock portfolio in the Dhaka Stock Exchange (DSE) to understand their choices and decision process. Using a Thematic Content Analysis method we analyze contents of the interviews to identify "themes" regarding various aspects of investment behavior. Based on the findings, we propose an Ethnographic Decision Tree Model (EDTM) of Stock Selection. We find that a stock usually comes to an investor's attention through news/rumors/suggestions received from family/friends/broker or from previous experience. Information use often depends on trust and the necessity to act on it immediately. In an active search process, "filter' criteria are used to reduce the choice set for further evaluation. The nature of evaluation depends on whether investors look to invest for long or short term. Finally, stock selection depends on whether investors perceive the stock to be undervalued and whether the stock fits her/his investment strategy. The paper proposes that collective intelligence affects an individual's investment decision. It also identifies trustworthiness of information sources as a key issue in determining investment behavior of an individual. The study brings forward different facets of investment behavior and thereby enriches our overall understanding of investment in the context of Bangladesh. Findings of this study can be used as a basis for investor-centric policy framework which can help the formulation and evaluation of effective policies. The study introduces a relatively new approach to analyze investment behavior and generates useful insights that can be the basis for future research on investment decisions.

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Introduction:

Market efficiency has received significant attention from scholars since the introduction of Efficient Market Hypothesis by Eugene Fama (1970). Market efficiency is an important feature which determines the effectiveness of the stock market in economic development (Hassan et al., 2000). It is often argued that capital markets in developing countries are inefficient or weak-form efficient. A number of empirical studies support this argument. Several studies on Bangladeshi Capital Market have also drawn the same conclusion (e.g. Hassan et al., 2000; Mobarek et al., 2008). Along with lack of proper regulatory framework and monitoring, lack of investor knowledge and rationality is also cited as a reason for inefficiency of Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE). One of the reasons behind the 2011 stock market crash is argued to be a huge surge of demand for stocks. Most of these new investors did not have enough knowledge about the stock market but invested most or all of their savings in the market (Saha, 2012).

Majority of the studies regarding Bangladesh stock markets focus on market efficiency and regulations on information disclosure requirement (Hassan et al., 2000; Mobarek et al., 2008). These do not take into account information processing and decision making behavior of the investors. A number of innovative studies have been undertaken in order clarify our understanding of the investor information processing and decision making behavior (e.g. Clarkson & Meltzer, 1960; Slovic et al., 1972; Bouwman et al., 1987, Nagy & Obenberger, 1994; Loibl & Hira, 2009). Such studies are rare if not non-existent in Bangladesh capital market context. This research endeavor looks to explore decision making behavior of Bangladeshi stock market investors. In contrast to many studies done in this line, the focus is on the 'why' and 'how' more than 'what' in order to have a fuller understanding of the decision making process of investors. These questions are addressed by interviewing individual investors regarding various aspects of their decision making process and assess these contents for recurring themes that will enable us to hypothesize about capital market investment decisions of investors.

The purpose of this study is threefold: i) exploring the information search and decision making behavior of Bangladeshi investors in order to identify possible patterns, biases etc. that affect individual investment decision, ii) establishing an understanding of Bangladeshi investors'

decision making behavior which will work as a guide for future research in investment decision making in Bangladeshi context, iii) introduction of a new approach to study investment behavior.

The rest of the paper is organized as follows. Section 2 discusses some of the literature on decision making process and factors affecting investment decisions. Section 3 discusses briefly the purpose and use of the methods employed to conduct this study. Section 4 presents the Findings of the study in details. Section 5 presents and discusses an Ethnographic Decision Tree Model (EDTM) for Stock Selection based on the findings of this study. Section 6 and 7 discusses some of the important findings and their implications and concludes the paper.

Literature Review:

Factors Affecting Investment Decisions:

The literature on utility theory does not typically address individual's investor decision processes. Rather, it focuses on the development and refinement of "macro" models that explain aggregate market behavior (Nagy & Obenberger, 1994). Classical theory of portfolio choice has strong assumptions e.g. no transaction cost, awareness of all assets available and knowledge of their risks and returns etc. If all the investors face the same distribution of returns and have the same information set, in equilibrium, they select the same set of risky assets. Difference in risk attitude affects the allocation of wealth between safe and risky assets but not the assets selected. But empirical studies have shown significant heterogeneity in household portfolio holdings, inconsistent with the uniformity expected by the theory (Guiso & Jappelli, 2004).

A number of empirical studies have tried to elicit factors that explain the difference in investment behavior among individuals. In order to develop a client specified valuation model Baker and Haslam (1974) look into factors that cause investors to vary in their perception of desirability of a particular stock and whether the factors systematically connect to their socioeconomic and behavioral characteristics. They find that perceived importance of 3 factors: Dividends, Future Expectations and Financial Stability differed greatly among investors. These factors are correlated with different socioeconomic and behavioral characteristics. For example, Dividend and Financial Stability are associated with investors who are older, female and seek

high dividend income. On the other hand, Future Expectations is related to investors who seek high increase in their stocks' value and have a moderately high amount of common stock holdings. They identify two distinct types of investors: i) those who prefer dividend and ii) those who prefer capital appreciation. The first group's decision variables are related to the factors Dividends and Financial Stability whereas the second group is more reliant on Future Expectations. Investors are not homogenous. Rather, certain types of stocks are more attractive to certain types of investors.

Nagy and Obenberger (1994) like Baker and Halsam (1974) use a questionnaire approach. By undertaking factor analysis, they group 34 different variables that may influence investment decision into 7 categories: neutral information, accounting information, self-image/firm-image coincidence, classic, social relevance, advocate recommendation and personal financial needs. They report that classic wealth maximization criteria e.g. expected earnings, diversification need, minimizing risk etc. are important to investors, even though investors use diverse criteria when selecting stocks. Contemporary concerns such as local or international operations, environmental track record etc. are only given a cursory consideration. Financial Advice from brokers, family members etc. are, in most cases, not given much consideration. A large portion of the respondents reported that they do not use any type of valuation models when evaluating stocks.

Lewellen et al. (1977) undertook a more rigorous approach to understand the factors affecting investment decision by using both questionnaire and transaction data of the respondents. They looked at four broad elements of investment activity: i) basic portfolio objectives, ii) information collection and decision mechanics, iii) instrument selection and portfolio composition and iv) return perceptions and market attitudes. They report strong indication of systematic changes in investment objectives and risk preference across age brackets and, to a milder extent, income classes. Sex, family size, education etc. are also reported as causes of systematic difference in investment activity in some cases. These are reflected in differences in investment tactics, portfolio composition and environmental attitudes.

Cohn et al. (1975) provide evidences for decreasing relative risk aversion i.e. as wealth increases higher proportion of total asset is invested in risky assets. Riley Jr. and Chow (1992) also examine the factors affecting the relative risk aversion of investors. They find that risk aversion

decreases with age, education, wealth and income. They also find that risk aversion increases significantly after the age 65, decreases as one passes the poverty level and significantly decreases as individual's wealth rises to the top 10% of the population.

Al-Tamimi (2006) follows a similar approach to Nagy and Obenberger (1994) to study the factors affecting investors in the UAE market. The most influencing factor was in order of importance: expected corporate earnings, get rich quick, stock marketability, past performance of the firm's stock, government holdings and the creation of the organized financial markets. On the other hand, five factors were found to be the least influencing factors on the UAE investor behavior. The least influencing factors in order of importance were: expected losses in other local investments, minimizing risk, expected losses in international financial markets, family member opinions, gut feeling on the economy. Two factors had unexpectedly least influence on the behavior of the UAE investors, namely the religious beliefs and the family member opinions.

Kabra et al. (2010) looks at the factors influencing Indian investors. Using factor analysis they identify 6 factors: security, opinion, awareness, hedging, duration and benefits. By doing a age group wise regression they find while the factor "benefits" dominates younger age group (22-40), "hedging" influences the decision of the older age groups the most. This suggests young investors are relatively more risk taking in nature. Sex wise regression presents that male group is significantly affected by the factor "awareness" whereas female group is affected by "benefits" and "hedging". The authors suggest that males are more risk taking and eager to know about different schemes available in market whereas female are relatively more risk averse.

Decisions Making Process and Biases:

Normative theories of decision making under uncertainty are almost always variants of expected utility rule put forward by Von Neumann and Morgenstern in 1944. But rational choice theory does not provide an adequate foundation for descriptive theory for decision making. The deviations of actual behavior from the normative model are too widespread to be ignored, too systematic to be dismissed as random error, and too fundamental to be accommodated by relaxing the normative system (Tversky and Kahneman, 1986). With the expansion of traditional cost-benefit analysis of decision making, researchers find decision making heuristics insightful to explain consumer decision making behavior (Lee and Marlowe, 2003).

Past researches, usually in the field of consumer choice, have studied different decision making heuristic models e.g. linear compensatory, additive difference, conjunctive, disjunctive, elimination by aspect, lexicographic etc. These strategies can be grouped in two ways. One is by type of comparison: alternative by alternative/ inter-dimensional evaluation strategy (consumers evaluate one alternative at a time) and attribute by attribute/ intra-dimensional evaluation strategy (attribute by attribute comparisons across alternatives). Secondly, these can be grouped by compensatory nature of the decision making i.e. whether the consumer uses "Compensatory Strategy" that allows trade-off between different attributes of an alternative or "Non-compensatory Strategy" where consumers do not compensate one attribute with another (focuses on one or a subset of dimensions and eliminate all the alternatives that do not meet consumer's desired level on those dimensions) (Payne, 1976; Lee and Marlowe, 2003).

Payne (1976) finds that a decision maker's information processing leading to preferential choice will vary as a function of task complexity. Lee and Geistfeld (1998) propose two types of model. "Ideal Choice Model" represents "true preference" which is well developed, stable and not distorted by cost elements of the decision making process. On the other hand, "Descriptive Model" describes how and why consumers think and act. In an environment with no search costs, descriptive choice models will likely coincide with ideal choice models. Task/Decision Complexity is identified as an important element causing descriptive model to differ from ideal choice model. Factors affecting decision complexity include the number of alternatives in a choice set, the number of attributes for each alternative, the relationships among attributes, and the amount of time available for making a decision. Payne (1976) found that consumers faced with two alternative choice problems employed a decision strategy which employed same amount of information search for each alternative. This suggests the use of compensatory decision models in this scenario. But when consumers faced more complex task with 6 or 12 alternatives, they exhibited variable information search across alternatives which suggests the use of non-compensatory decision models. The findings validate the author's hypothesis that increase in complexity of a decision situation will result in decision makers using choice heuristic to reduce cognitive strain. Payne et al. (1988) report that under moderate time pressure subjects accelerate their processing and, to a lesser extent, focus on a subset of the available information. Under severe time pressure, people accelerate their processing, focus on a subset of the information, and change their decision strategies. There is slightly more attribute-based

processing and more variance in the proportion of time spent on various attributes as time pressure increases. They also find that people are highly adaptive in their responses to changes in the nature of alternatives available to them. Subjects acquire less information, spend less time overall and less time per acquisition, use more attribute-based processing, and display greater variance in the proportion of time spent on the various alternatives and attributes in situations where the context variable of variance in the weights (probabilities) is high rather than low. Overall, the results provide strong evidence for adaptivity in decision making.

Bouwman et al. (1987) study in depth the investment screening process of financial analysts. The authors try to generalize the findings and draw attention to 3 major aspects of the investors' behavior: information search strategies, the vehicles used to guide information search and task-specific knowledge. The "information search strategies" of the experts vary along two dimensions: i) the extent to which specific information is searched and ii) ease with which the search is interrupted due to change in objective. In the first dimension, an investor has either a "Directed" approach where they look for specific information or "Sequential" approach where the information pieces are examined one by one. The analysts mostly employ the directed strategy as it is less time intensive and it enables them to view only the information which they believe to be important for decision making. Some of them have employed sequential search strategy only in order to check whether they have missed any key piece of information. In the second dimension, an investor pursues either an "Active" strategy in which analyst quickly changes his/her objective or "Methodical" strategy in which analyst completes the current goal before starting a new one. The analyst in study varied considerably in this dimension. Those pursuing active strategy reached to decision faster than others. The authors identify 3 vehicles that determine the direction of analysts' search: "checklist" of important indicators, developing a "theme" of a company's nature and future prospects and "conditional checklist". All the analysts use checklists though its elements vary from analyst to analyst. Authors indicate that the variance in checklist maybe because of the lack of attention the checklist approach receives in financial training. The analysts hence build their own checklists from their experience. Conditional checklists contain those factors about which the analysts want to know more than what is available in the report. In such cases, they are willing to interrupt their current task to get the complete information. "Task-specific knowledge" is also an important determinant of analysts' information search. An analyst usually resorts to "financial templates" which are memory

structures based on his/her accumulated experience. Financial templates are complex structures that contain a variety of knowledge: industry specific standards of what is acceptable, "pictures" of typical company behavior, typical problems for that type of company or industry, and ready-made evaluations of the attractiveness as an investment.

Daniel et al. (2002) review evidences of psychological biases that affect investors. Since human information processing capacity is finite due to limited cognitive resources such as time, memory and attention, there is a need for imperfect decision making procedure; the authors call it "Heuristic Simplification". This has been identified as a source of psychological bias along with self-deception and emotion based judgment. Heuristic simplification helps explain many different documented biases, such as salience and availability effects (heavy focus on information that stands out or is often mentioned, at the expense of information that blends in with the background), framing effects (wherein the description of a situation affects judgments and choices), money illusion (wherein nominal prices affect perceptions), and mental accounting (tracking gains and losses relative to arbitrary reference points).

They cover a number of investor biases which have been covered in existing literature. A significant portion of the article is presented here. Firstly, investors often do not invest in different asset or security categories. They invest only in stocks that are "on their radar screens". Many investors entirely neglect major asset classes (e.g. commodities, stocks, bonds, real estate), and omit many individual securities within each class. Investors are strongly biased toward investing in stocks based in their own home country. Investors with more social ties are more likely to participate in the stock market. Employees tend to invest in their own firm's stocks and perceive this stock as low risk. A focus on salient features, familiarity or 'mere exposure' effects, (e.g. a perception that what is familiar is more attractive and less risky) and ambiguity aversion are cited as possible causes for such behaviors.

Secondly, investors exhibit loss averse behavior. Individuals are concerned about gains and losses as measured relative to an arbitrary reference point. These psychological effects help explain the disposition effect i.e. investors are more prone to realizing gains than losses. Odean (1998) shows that the individual investors trading through a large discount brokerage firm are more likely to sell their winners than their losers.

Thirdly, investors use past performance as an indicator of future performance in mutual fund and stock purchase decisions. Sirri and Tufano (1998) provide evidence that flows into mutual funds are concentrated among those funds which have had extraordinarily high performance. This evidence suggests that investors are naively extrapolating past mutual fund success, when empirical evidence suggests that there is little or no persistence in performance. The fact that the flows are concentrated among the top performing mutual funds in each category is potentially consistent with limited attention/ salience effects.

Fourthly, investors trade very aggressively. It has been argued that the volume of trade in speculative markets is too large, and overconfidence of traders has been advanced as an explanation. Evidence suggests that more active investors earn lower returns as a result of incurring higher transaction costs. Barber and Odean (1999) find that investors who have experienced the greatest past success in trading are the most likely to switch to online trading, and will trade the most in the future. This evidence is consistent with self-attribution bias, meaning that the investors have likely attributed their past success to skill rather than to luck. Also, there is some evidence that access to internet trading appears to encourage more active trading.

Fifthly, investors make large errors. Rietz (1998) reports that some prevalent and persistent arbitrage opportunities are virtually never exploited by subjects in the Iowa political stock markets. Investors are subject to the status quo bias in their retirement investment decisions. Madrian and Shea (2000) found that people tend to stick to the default offered by their firm in deciding on 401(K) participation and saving. This is consistent with investors having limited attention and processing power, and with their interpreting the status quo option as an implicit recommendation. Many investors diversify in their retirement plans naively, for example by dividing their contributions evenly among the options offered.

Sixthly, there is evidence that investors sometimes fail to form efficient portfolios. Several experimental studies examined portfolio allocation when there are two risky assets and a risk-free asset and returns are distributed normally. People often invest in inefficient portfolios that violate two-fund separation. Also, herding behavior has been documented in the trading decisions of institutional investors, in recommendation decisions of stock analysts, and in

investment newsletters. Finally, finding suggests that investors may form theories of how the market works based upon irrelevant historical values.

Research Methods:

The main purpose of this study is the exploration of the decision making process of stock market investors. While questionnaires are relatively easy to administer and can be used to collect information of a large sample, it suffers a major drawback for which this method is not selected for the study. A questionnaire allows a respondent to answer only within a restricted set of responses. This cannot fully capture the thoughts and emotions of a respondent and hence loses a lot of meaning. Interviews and focus groups are most likely to provide the depth of information that might be useful. Interviews can be used as a primary data gathering method to collect information from individuals about their own practices, beliefs, or opinions. They can be used to gather information on past or present behaviors or experiences (Harrell & Bradley, 2009). In order to fully understand the nuances of individual decision making, a Qualitative approach has been deemed fit. Interview has been chosen as the method of inquiry. Though Qualitative studies in Finance are rare, there are not totally non-existent. Clarkson and Meltzer (1960) and Bouwman et al. (1987) employ "Protocol Analysis", a method where the decision maker is asked to verbalize each step of his/her decision making process and then analyzed to formalize the decision making process.

In order to make sense of the qualitative data, we resort to Content Analysis; more specifically Thematic Analysis/Thematic Content Analysis. Thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail. It involves the searching *across* a data set – be that a number of interviews or focus groups, or a range of texts – to find repeated patterns of meaning.

Thematic Analysis is useful as it can usefully summarize key features of a large body of data and/or offer a "thick description" of the data set, can highlight similarities *and* differences across the data set and most importantly can generate unanticipated insights (Braun & Clarke, 2006). If conducting exploratory work in an area where not much is known, content analysis may be suitable for the simple reporting of common issues mentioned in data (Vaismoradi et al., 2013). Given the exploratory nature of the research, we perform thematic content analysis to find

recurring themes from the interviews of the individual investors. We checked the interview data manually for patterns and differences. These were then analyzed and grouped to find underlying themes that help us towards our understanding of the stock market investment decision making process of the interviewees. We conduct semi structured interviews in order to capture rich and detailed responses from the investors holding stock portfolio in Dhaka Stock Exchange (DSE). We also present an Ethnographic Decision Tree Model (EDTM) of Stock Selection in this paper. The findings of the interviews guide the construction of this model. This captures and brings attention to the different aspects of the stock selection process of the investors.

Data:

Semi-structured interview was conducted on 15 investors (13 individual and 2 institutional investors) who hold stock portfolio in the Dhaka Stock Exchange (DSE). Due to time and resource constraints this sample was chosen for convenience. The interviewees were asked open ended questions regarding motivation to enter the market, information search and portfolio construction strategies, self-assessment of their knowledge, portfolio performance assessment, overall attitude towards investment in the stock market etc. The interview guide followed during the interview is provided in the Appendix. The interviews ranged from 29 minutes to 150 minutes with a mean of 81.36 and median of 78 minutes. All but one of the interviews was recorded. As a few of the interviewees requested anonymity, each investor interviewed has been given a code. Names starting with the letter "R" represent the Individual investors whereas the names starting with "I" are Institutional investors.

Additionally, investors were asked to fill up a questionnaire in order to accurately record their demographic and financial characteristics, awareness and use of information and concepts employed in investment decision making. To check the latter, investors were asked to rate 41 different types information and concepts (taken from the Dhaka Stock Exchange (DSE) website and Textbooks) in terms familiarity and use on a 4 point scale (0=Never heard of it, 1=Heard of it but do not use it, 2=Heard of it and often use it and 3=Use it frequently). These contain Market Information (e.g. Change in Price, Volume and Trade etc.), Accounting Information (Revenue, EPS, Dividend etc.), concepts (e.g. Efficient Market Hypothesis) and Macroeconomic Indicators

(e.g. Fiscal Policy, Interest Rate etc.). 13 questionnaire responses were collected as two of the interviewees could not send their answers.

Findings:

From the conversations with the interviewed stock market investors some common patterns as well as differences emerged. These findings can be grouped into two categories: i) Goals, Beliefs and Attitudes and ii) Decision Making Process of the investors. As the intention of the study is to understand why and how investors do what they do, it is essential to put an effort towards understanding not only the decision making process of investors but also how these goals, beliefs and attitudes are formed and how these shape the decision making process. Some of the recurring themes that are found in the interviews are discussed in this section. A summary of the responses collected from the interviewees through questionnaire are also presented in this section.

Demographic and Information Use Characteristics:

The group of investors interviewed mostly consist people of age group 21-30 (7). The next largest age group is 50+ (3). All of the respondents are Male. More than half of the respondents are Married. All of them are University graduates with three having Master's degree. One of them is a CFA charter holder. (See Appendix: Figure-1)

Most of the respondents in this group are private service holders (5) and students (3). The group also includes Banker, University Lecturer, Investment Analyst and retired Engineer. In terms of Monthly Income group, more than half the interviewees fall either in the group "Between Tk. 50,000 and 80,000" (4) or "Between Tk. 100,000 and 300,000" (4). The income group "Between Tk. 100,000 and 300,000" covers more than half the respondents when Monthly Family Income is considered. (See Appendix: Figure-2, Figure-3 and Figure-4)

The number of years involved in the stock market, total Financial Assets and Stock Market Investment varies a lot between investors. Total time involved in the stock market ranges from 4 months (investor R2) to 31 years (investor R11). Investor R9 ranks first both in terms of total Financial Assets (2.5 crore) and total Capital Market Investment (45 lakh). On the other hand, investor R3 ranks last in both categories with approximately 2 lakh and 1.2 lakh of total

Financial Asset and Capital Market Investment respectively. It is also important to see the portion of one's Financial Assets invested in the Stock Market. Investor R8 invested 100% of his capital in the stock market compared to investors R5 and R13 who invested only 10% of their total assets. 3 of the investors (I1, R7 and R11) did not report regarding their financial assets. (See Appendix: Figure-5 and Figure-6)

Investors were asked to rate information and concepts in terms familiarity and use on a 4 point scale (0=Never heard of it, 1=Heard of it but do not use it, 2=Heard of it and often use it and 3=Use it frequently). Based on the responses, the top 5 information used are: i) Change in Stock Price, ii) Earnings Per Share (EPS), iii) Revenue, iv) Profit for the Period, and v) Stock Category. On the other hand, the bottom 5 information used are; i) Risk Adjusted Returns (e.g. Sharpe Ratio), ii) Beta (CAPM Model), iii) Expected Return (CAPM Model), iv) Valuation Models and v) Business Cycle. It is important to note that all of the top 5 are available in the DSE website whereas the bottom 5 are not.

In order to have an overview of the percentage of the information/concepts understood and used in constructing portfolio by an investor, total points across 41 categories for each investor was calculated and converted into percentage of total possible score.

Percentage of Information Used

$$= \frac{\textbf{\textit{Sum of scores of 41 information and concepts based on its use by an investor}} * \mathbf{100}}{\textbf{\textit{Total Possible Score}}\ (\mathbf{41*3=123})}$$

Both mean and median of the Percentage Use is 66%. 5 of the investors score above this average. As expected, the ranking of users is topped by investors I2 (89%), I1 (88%) and R4 (74%). I1 and I2 are Investment Analysts whereas R4 is a University Lecturer teaching Finance. All of them are highly knowledgeable in the field of Finance and hence are expected to know more than an average investor. The investors with lowest percentage use are R2 (49%), R8 (53%) and R11 (55%). While R2 (4 months) and R8 (.9 years) are the least experienced in this group, third lowest ranked R11 (31 years) is the most experienced of the bunch. A possible explanation can be that as the measure captures a combination of both knowledge and use of information/concepts, investor R11 is not aware of many measures which were not readily available in 1986, when he started. (See Appendix: Figure-7)

Goals, Beliefs, and Attitude:

The first prerequisite to entering the stock market as an investor is the awareness of the market. When the investors were asked about how they came to know about the stock market, three sources were found: i) family/friends/acquaintances and ii) coverage of stock market in the news (especially the incidents of 1996 and 2010 stock market crashes) and iii) education (e.g. courses in school, college or university). The first two sources are the more prominent and in many cases, the awareness was the result of multiple sources working together.

R3: *The News always had a portion for stock market. I used to hear that this happened in DSE or that happened in CSE. Then I started wondering about stocks. When I started studying commerce in Class 9, I understood the basics of these. It was not fully clear to me back then. But when my father started investing, I got a better idea.*

R7: *I came to know about the stock market back in 2010 when the market crashed. I used read in the newspapers that people in the stock market were protesting. So, my introduction to it was in a negative way. Then there is a gap. I did not know about it and did not care either. But when I started my undergraduate degree in BBA, I decided that I will major in finance…. When I studied, I came to know about the stock market more deeply. Then I started to understand about the mechanism of the market, why people are protesting, why there is profit or loss etc.*

Investors mention several reasons for wanting to enter the market: i) to utilize idle money, ii) to develop an extra source of income and iii) to learn about the stock market.

R1: *After I started attending University, I started giving private tuition and earning money. Then I thought I should invest my earnings somewhere. I was earning around 30 to 40 thousand per month. I was not taking the money that my parents intended to send me. I was saving it. After sometime, when I saw that the saved amount was quite substantial, I thought it should not just be left to my father. So, I thought, why don't I invest it in the stock market?*

R6: *I was looking for a business opportunity. Finally, given the opportunity cost, I chose to invest in the stock market. So to develop a source of income along with my job, I got involved in the stock market.*

R4: *I have some experience in investing in stock market in London. I wished to know how the stocks in the Bangladeshi market perform. I want to know based on which criteria the stock market works i.e. whether the market operates on fundamental analysis, information or technical analysis. To find out these things, I invested in the stock market.*

It is also very interesting when we look at why the investors have picked stock market as a place to invest their idle money or as an alternative income source. A few of the investors explicitly mention that they find stock market to be 'easy' i.e. it is easy to earn money here. Some also cited liquidity and unwillingness to consume interest income as reasons to invest their savings in the capital market.

R1: *"Around 2012-13, I used to earn around Tk. 50,000 per month. It did not seem enough. I thought if I can earn 50,000, why can't I earn 1 lakh? One of the easiest ways to earn money is from the stock market."*

Upon further examination of the interviews it becomes quite clear that the 'ease' in most cases, whether mentioned explicitly or otherwise, is that of effort and involvement. Most of the investors specifically mentioned that they invested in stock market because it did not require much time and effort. Given the time and effort, the return from the market is quite high compared to other return generating savings instruments.

R3: *I started in 2010. I had the HSC exams in 2011. So I was very busy then. For my share business I only had to follow share price and the see how the Companies whose share I bought are doing. The return was very high from this business. But I did not have to spend much time behind this. I used to check the market in between my studies. It was easy for me as could do this from home. It is not possible get this much return with this less effort in other businesses.*

R6: *So I was thinking about alternative businesses that I can be involved with. I spend the time I have left after work in my home or with my friends. Except for my job, I cannot directly be involved with any other company. But share market is such an alternative where I may not be able to involve myself physically, but I can stay in touch using phone or the internet.*

Most investors also mention that their dependence on investment advice, in most cases, from broker, friends or family was considerably higher when they first entered the stock market than

now. Some of them were completely dependent on advice and only gradually they have started to operate on their own.

R1: *But back then I had no idea about these. I never knew that these stocks' value will rise. Mr. X* (pseudonym) *is the son of one of the largest investors of the country. His father has good connections with others and has traded since 1994. They trade in huge amounts. I used to get help from them. It is not like I had to pay them. He used to help me out as an elder brother. When I learned about how stock market works, I also suggested them. But I had no idea about these initial 4-5 stocks.*

R2: *No. I just used to listen to others. I asked others to learn which stocks were better. Then I used to buy and hold those stocks. I did not have any idea back then.*

A number of investors believe that a long term position can significantly reduce the risk of loss and ensure a good return. Their attitude is also reflected in their portfolio holdings.

R2: *I will get return out my investment if I maintain my time frame. If I intend to sell very quickly, I do not have the time to make up if I incur loss. If I take the time, I see that even if I do not a get very good return, I will receive an average return.*

R7: *I do not consider risk at all. Risk is non-existent to me as I invest for long term. In the long term, a share is bound to spike. So there is no question of risk here. In long term, there is always a benefit. If I have a concern that I require the money after 6 months, I am at a risk as my investment value could fall within 6 months. It could be that the share jumped so high that I exceeded my target. In the long term, each stock completes a cycle.*

Investors also acknowledged that control over emotions along with patience are important when investing in the stock market. This can ensure better decisions and higher return.

R5: *In context of Bangladesh, this is the biggest challenge. One can become moderately successful if he avoids emotional trading. If you can stop the rumors from coming to you, then you can trade in an unbiased way….If anyone follows the market trend of last 4-5 years, they can easily be successful. It is important not to switch.*

All the investors interviewed have expressed their concern about market manipulation. They believe that this is one of the main risks of investing in the stock market and should be addressed by authorities to ensure investor welfare. Investor R2 gives us his opinion about market manipulation.

R2: *I do not specifically know about the government regulations in place. But I think there should be more. People even try to manipulate using Facebook. These are not being monitored. I do not know whether anyone is monitoring. But if there were regulations, people wouldn't have been able to do it. Market should be allowed to run efficiently without any manipulation and corruption. Many are taking advantage using corruption and manipulation. In Bangladesh, manipulation is lot more important than valuation.*

Again a number of investors expressed distrust of the financial information available. They hold the belief that in many cases the figures presented in the financial statements of the companies are incorrect. The concern has also been expressed by one of the Institutional Investors interviewed.

I2: *The biggest risk is the quality of financial information. I will make my decision based on the financial statements available in the annual report. For example, I see that a company has made 100 crore taka of profit. My analysis tells me that it will profit 120 crore taka next year. But the analysis will not work if the information is not correct.*

All of the investors identified that knowledge and experience in the stock market are important factors that affect an investor's success in the market.

R2: *To be successful, you need experience. And you need knowledge too. Both are necessary….The more a person knows about the 300 stocks in the market, the more is his chance of being successful. For example, you and I are both investors. I get news before you do. In that case, I have more advantage….You know how to do valuation. I do not. You have the advantage here.*

R6: *At the same time, the investors should study. They should know about the market and its movement. They should know about the companies. They should know as much as possible. Individual investors should know these things. It will boost their confidence.*

The Decision Making:

The criteria the investors use to evaluate a stock can be divided into two categories: i) Quantitative and ii) Qualitative. The investors report that both type of information play crucial role in their stock selection and portfolio construction process.

The Quantitative category can again be divided into two parts; this includes Accounting Information (used for Fundamental analysis) and Market Information (used for Technical analysis). The most common Accounting Information items discussed in the interviews are Earnings growth, Earnings per Share (EPS), Price to Earnings (P/E) Ratio, Retained Earnings and Dividend. Short and Long term debt and Net Asset Value (NAV) per share are also cited as important criteria by some of the interviewees.

R1: *Number one, look at how the company is growing. ACI showed an EPS of 84 taka in the last 18 months. The price of the company is currently 401 taka. The price of a company which has EPS of 84 taka should never be 401 taka…. Yes, I am talking about growth in terms of earning and also cash flow. ACI is one of those companies who do not keep anything in Accounts Payable regardless of the amount. And they have been growing. They have not shown any loss in the last 8 quarters. The have been growing by 20% consistently. This is common sense.*

R3: *I also look at how much dividend the company pays and whether give their shareholders any extra benefit…. I look at the dividend because the money is important to me. There are some companies which give dividends frequently. I always think about the how to take out a large amount of money in a very short time.*

R4: *And of course I look at the Price to Earnings (P/E) Ratio. As I do not have much experience of doing in depth fundamental analysis, I follow a few criteria. P/E ratio is one of them. From this I can find out whether the stock is overpriced or underpriced. If it is underpriced, I plan to purchase it. If it is overpriced, I do not even touch.*

R11: *First I used to look at the profitability of the company. If the company has past years' information, then I looked at the profit of those years. It may be so that the information tells me that they have earned good profit in the past i.e. the trend of the profit is good. They may also do well in the future. But a company with high profit might also have large capital. Then their*

Earnings per Share (EPS) will not be that high. But a company with good profit but small capital will have a higher EPS. So I looked at this too. I also look at the Reserve. The company may have profited in the last few years but did not give any dividend. They built up their reserve for the future. These are shareholders' money. So I looked at whether the company has a good Reserve.

While most of the investors' focus is on the Fundamental analysis, some support this with Market information or in cases depend solely on Technical Analysis. Most common of these is the use of Price Change and Price trend. Technical analysis is mostly used to determine the 'point of entry' or 'point of exit' i.e. when to buy or sell a stock. Its importance is nicely put by investor R6.

R6: *Now, before I buy anything, I always look at the fundamentals. Then I look at the technical analysis. I examine fundamentals to judge the quality of a stock. But I also look at technical analysis as it helps me to determine when to enter the market.*

The focus is often on the 'low' points of the price graph as investors deem it to be a good price to purchase a stock. Support and Resistance level, trade volume etc. are also considered by a few of the investors.

R9: *Before investing in a new stock, I look at the graphs of its price for last one or two years. I look at how it rises or falls. I buy the stock when its price is falling i.e. when it is close to year low.*

R8: *First I look at the sector which the company operates in. Then I look at what is its position within the sector. I try to look at the last 4-5 quarters' income. This includes Net Profit, EPS, and Price to Earnings (P/E) ratio. Then I look at how much the stock is traded in the market i.e. its average volume. I examine whether the price is near support or resistance level.*

Two of the investors rely more heavily on technical analysis than others. They both mentioned that they use 'AmiBroker', a technical analysis software. Whereas investor R6 looks at both fundamental and technical aspects, R5's sole focus is on the technical analysis. The charts they refer to include Moving Average Convergence Divergence (MACD), Candlestick, Relative Strength Index (RSI) and Money Flow Index (MFI).

R5: *There is one called Moving Average Convergence Divergence. There is RSI. It also shows Money Flow Index (MFI). Along with these there are Candle patterns. There are some bullish and bearish patterns. Mainly I check whether inverted hammer or a similar pattern has formed. For example, a stock is in a downtrend for many days and suddenly volume starts to rise. If there is an inverted hammer in this case, it is a good indicator. So I use a mixture of Candlestick and other quantitative indicators.*

One important thing here is that the focus on Technical Analysis is always associated with short term investments but never long term investments. Even those who use mostly fundamental analysis do not do such analysis when planning for short term investment. These short terms investments span from a day to a month depending on when they expect the price to fall and/or whether they have met their target return. For example, though investor R4 mainly resorts to fundamental analysis, when investing for short term only refers to the price of the stock.

R4: *For Z category stocks, I look at the 52 weeks range. I look at whether these are at 52 weeks or 2 years low. If I see that in last one month it fell by around 20% and the market has a tendency to rise, I buy the share. I do not even look at any other thing, neither income statement nor balance sheet. I just look at the price…. Let's say that a stock's price is at 52 weeks low. I then observe for a few days to see how the price behaves. The overall market is important too. When I see that the overall perception about the stock market is good and the market is steady, I buy the stock. It's a very short term investment, maximum 3 to 4 weeks. If I get 5-10% return within 3-4 weeks, I sell the stock.*

It is also important to note that those who use technical analysis have mentioned that they usually pair it with news and rumors they receive.

R5: *Now I look at rumor plus technical analysis. Suppose there is rumor and the technical analysis is also suggesting that this might go on an uptrend….For example, I get a rumor that a stock's price will move up from 30 to 40. Then I check how its chart position is. I look at whether it is in the distribution phase or is just starting to mark up. If I use only technical analysis, I may see after scanning 300 stocks that only about 20 stocks are or about to be in uptrend. From these 20, I do not have the capability to add more than 3 to 4 stocks to my portfolio. If I have to filter*

this 20 to 3-4 stocks, I have to add rumor. So, using a combination of these I choose 3-4 stocks, may be from 3 different sectors.

The Qualitative criteria are very important and in many cases hold more weight than the Quantitative information. The most cited Qualitative criterion is the investors' perception of the quality of the Management body. Most of the investors mentioned that they believe a strong Management body is essential for long term success. A number of investors also mention that they check a company's Shareholding Structure, particularly whether its stocks are held by institutional and foreign investors. Such stocks are considered less risky.

R7: *If the Management is strong, then I will invest. An example is Olympic Industry. They sell biscuits now. But when they first started out, they were a bad company. They used to sell battery then. The product did not have much value and much demand; there ratios were not good and their future was unclear. These three indicators are very poor but the Management is very strong. They are honest. I will invest here. Business can be bad. But it is the Management that turns this around…. Olympic was a battery company. The business was bad. Then they completely shifted their focus from battery to biscuit. The product may not have potential. Then change the product, change the industry. They shifted to food industry. Now they are doing very good in that industry. Battery is still there. They are currently selling battery, foods and they will also bring some new things into the market in the future. The company is performing better. This is because Management was very strong and had good business sense.*

R1: *Every company releases their statements every quarter. This mentions the shareholding structure. Foreign holding is factor. Those who are risk averse check whether there are any foreign holdings. Institutional holding is also important.*

'News' or 'Market Information' is also cited as an important factor that affects their decision making. It is important to understand that the word 'News' or 'Information' might have different meaning in different context. These words are used by different investors to explain different things. These include Price Sensitive information and Company Disclosure, articles and daily coverage of the stock market by newspapers, magazines, websites etc. and informal information i.e. rumors or suggestions. Often news can have profound effect on decision making. Investors

may quickly act on news without analyzing a stock in detail. Investor R1 shares his experience to describe the importance of news.

R1: *I have said that market news tops the decision chart of every investor. No. 2 is the valuation. No. 3 is whether a company is going into any new production. I can share one of my experiences. RAK Ceramics announced at 10:21 a.m. that they will start the operation of their new plant that day and this will result in their profiting 60 crore taka. As usual, almost all the investors did not care about that information. No one saw the news at 10:21. People thought that there is no news that day. So they traded with their previous stocks. But luckily I saw the information. I bought the share with my father's code. And I also told my fellow investors to buy the share. So, form this information, it is very clear that market information plays the most important role. Valuation and everything comes after that.*

As it is a rather difficult task for an individual investor to constantly monitor the 300+ company shares that are being traded, they use some criteria to 'filter' the alternatives and minimize their choice set. They eventually use further criteria to choose a number of stocks from the choice set to construct their portfolio. Such criteria mentioned by the investors include: Industry Nature and Prospect, Published News, Suggestions, Rumors and Reputation.

R6: *When you look at the 300 stocks industry wise, it comes to 10 to 15 companies….Then I analyze the industry; how are the movements of different industries….I look at what movements are there in the market and which industries have the possibility of future movements. Using some technical tools I look at the position the industries are in currently and what might their position be in the future. If I find out that an industry has the possibility of movement in the future, then I scan particular stocks from that industry using my fundamental and technical knowledge.*

R8: *There is a newspaper called Banik Barta. This paper contains about 2 pages covering stock market news. I read this more or less every day. You get an idea about what is happening or not. There are also a lot of Facebook pages that upload a summary at the end of the day e.g. top 10 gainers in terms of percentage and volume, top 10 losers etc. You can see who are gaining and why. You can get some idea by looking at the company names and sector. Again, I get news from those who are in the market, e.g. traders, friends. I focus in this way.*

R9: *I buy if I see it is a good share, has a good reputation, and has a chance of being held by foreign investors. I look at these things.*

R11: *First I look at the company names and its reputation. For example there is Square Pharma, Renata, Beximco etc. These companies have been in the market for a while and have a reputation. I look at these first. Then I look at what other companies there are in the market.*

Though not explicitly asked for, some of the investors, especially those who are experienced shared that they do not do in-depth analysis of the stocks about which they have ideas and experience. Many of them, based on a stock's reputation and past performance, have identified a set of stocks which are deemed 'Safe'.

R9: *I have observed over the years and know the companies which have good demand. For example there are companies now like Renata and Bata. I buy such companies which are purchased by foreign investors when they come to the market.*

R3: *I used to buy and sell stocks very recklessly before. Since the stock market crash, I invest in large and good companies whose financial conditions are known to me. For example, there is Beximco, Grameenphone, Square etc. I hold these stocks. This is because investment in these stocks is very safe. These companies do not get into trouble that easily. Even after the market crashed, these stocks had relatively high price. Though their price fell significantly, their condition was good.*

As mentioned before, industry nature and prospect are important criteria used by investors to scan for desirable stocks. Usually, investors prefer some specific industries over others based on their expectations regarding the future of that industry. Macroeconomic factors such as international oil price, exchange rate etc. are taken into account by only a few investors. The expectation is mostly regarding the future of the product the company is selling.

R2: *I focus on sector based on the microeconomic situation of Bangladesh. For example, there are Pharmaceutical, Cement, Steel etc. The market is good in Bangladesh for Pharmaceuticals. As we are a developing country with a lot of projects going on, the future of Cement is good. Food industry is good too….I do this analysis in my own way. I do not do this based on any news. For example, I was talking about Cement industries. As Bangladesh is a developing*

country, there will be a lot of work on infrastructure e.g. Padma bridge. So cement is required. Again, Bangladesh is exporting a lot of medicine. Bangladesh is a populous country. People are getting ill and buying medicine. Pharmaceuticals will perform well in the future. The industry is unlikely to drop unless something extraordinary happens.

Suggestion from family/friends/acquaintances/broker is an important factor in decision making. As mentioned before, it is evident from the interviews that investors gradually become less dependent on others' advices. But this does not mean that it is not regarded important by investors. Though the level of dependence and frequency varies, investors still consult with people they trust. These trusted sources range from knowledgeable friends or family members to connections they have built over the years. While some rely heavily on these advices when making decisions, others only refer to opinions to validate their analysis. Rumors should also be considered in this case as it often comes in form of suggestions.

R12: *Those of us who trade have made a lot of friends. We collect the information from them. The information is not like those which can be found searching the internet. Information e.g. a company will start another operation is not available in the internet. Those who know the company's directors or staffs collect the information. Then they buy the share. After they purchase, they suggest us to buy it.*

R4: *I have an individual analysis of each stock. If I believe that the stock is comparatively cheap, I consult with some of my friends who are working in different organization to get their opinion about it. If they give me some positive news and I see that the volume is rising, then it becomes easier for me to take the decision. I am then confident that I should buy this stock. This helps me a lot.*

A variety of responses were received when investors were asked whether they set a target return from their portfolio and how if so. A number of investors mentioned that they do not set a target return. It is important to point out that those who do not set a target return are mostly older investors whose stock market investment is a relatively small portion of their total financial asset. On the other hand, the targets of the investors those expect a certain level of return vary considerably. The reported target return ranges from 10% to 40%. Most of them set their target based on what they desire for their effort and the risk they assume. Return from bank savings,

Fixed Deposit or Savings Certificate act as a risk free benchmark based on which minimum target is set. Again, in most cases, the return is set for an individual stock, not for the entire portfolio.

R7: *As I invest for long term, I expect a bit higher return. Normally, I sell if I get 30-40% return…I want 30-40% return from each of my stocks, as I assess these stocks properly. For example, I got around 40% from Regent Textiles….This is the required rate of return i.e. I need this level of return….If I keep this in bank, I will get 6%. Again I am putting my effort behind this. So, I expect around 40%.*

R1: *This is the secondary source of money. This can grow at any rate. The only criterion is that it has to be more than the bank or bond rate. If the yield is higher than bond rate, I can buy the share. I don't have any problem even if it is 10%.*

One of the investors who invest for short term mentioned that he sets monthly targets. His target is based on what he believes to be possible to earn from this market.

R5: *Normally, my target is 10% per month. But it is sometimes difficult to achieve that….If anyone has patience in this market, higher return is possible….10% return here is easily possible if we can control our emotion.*

Again, sometimes the target is based on context. One of the investors talked about an incident where his requirement at that particular time decided what return he should realize.

R3: *As I do not have much knowledge and have a small portfolio, I just determine how much return I require. The last time when I sold some of the Grameenphone shares, I saw that I will make a profit of about 10,000 taka. I required only 8,000 taka at that time. So when I saw that I can make 10,000 taka, I immediately sold some stocks.*

One of the investors when asked about whether his target in the past was similar to his current target answered that he had a higher target from is investment in the past. This suggests that experience in the market often causes a change in expectation.

R8: *No, I had a much higher target. But after some losses I understood what my appetite should be.*

Most of the investors assess the risk of their portfolio qualitatively rather than quantitatively i.e. they identify whether a stock is risky or not and use strategies which they believe will reduce their risk but do not use any quantitative measures to evaluate the extent of their risk exposure. A couple of investors mention that they assess the downside they can face if things do not go according to plan.

R5: *I assess risk by looking at the support and resistance level. If it cannot break this level I may have to wait for the next support level. Or I may sell it for 5% loss. Otherwise I may have to incur more loss.*

As mentioned previously, investors look at certain criteria e.g. Management, Reputation etc. to identify companies which are safe for investment. Beside those, the most popular risk minimization strategies undertaken by investors are diversification and setting category criteria. Investors generally purchase a number of stocks from different industries to minimize risk. Many also strictly avoid risky categories of share e.g. Z category.

R11: *I can invest all my capital in one company. Even if the company is a good one and the market is well performing, the company might not perform well. Then I will incur a total loss. That is why I separate my funds. I may buy 5 different shares instead of one. My decisions may not always be correct. A company's price may fall or its return may fall below my expectation. If I invest in multiple companies, there is a chance that even if one does not work another will. On average, I will have a good return. This is how I minimize my risk.*

R1: *I do not know about portfolio construction strategies. But I always select an industry which is not dependent on oil. This is because oil price fluctuates. I also look at whether a company exports its products. For example, there is Keya Cosmetics. Their main business is export. Their products do not do well in Bangladesh. So, if I choose Keya, I will have to choose another company which does not export. Their goods are consumed internally. Olympic is such a company. Again, there is for example power generating company like KPCL. To minimize the risk I will have to buy an insurance company or a bank. Because, you do not know when the price of oil goes up.*

R3: *I look at the basic things like everyone. I check its condition, how much debt it has, whether it was in Z category at any time etc. I always check the category. I never buy Z category shares. This is a problem category. If there is any problem, the company goes into the Z category. It becomes difficult to sell it. It gets stuck then.*

Some of the investors seeking higher return use more elaborate strategies. One of the investors mention that though his strategies in the past involved choosing safe stocks, he now allocates a portion of his capital in risky stocks in order to generate higher return.

R4: *When I purchase 3 to 4 stocks, I pick a combination. I look at the stocks which are stable, which have the possibility of fluctuation and those which are riskier. If I buy 5 stocks, I choose such combination so there is a discipline in the portfolio….I used to purchase stocks which are fundamentally strong. I did not want to take risk.*

Another investor uses a strategy where he leaves 40% of his capital liquid and invests rest. The liquid fund is injected in the portfolio to bring down the average cost of purchase by buying more of a share in case its price falls down. The rest is divided into short, medium and long term investments. The allocation within these three types depends on the market situation. In a good market the focus is usually on short term investments whereas in a down market long term investment is preferred.

R6: *There will always be a risk factor in the market. When I invest, I keep 40% of my fund liquid. It is possible that the price of the stock falls….In such cases, I will need a backup. I invest the remaining 60%. I invest it in long, short and medium term stocks. I shape my portfolio this way.*

R6: *It depends on a lot of things. For example, the market now has a positive trend. People are getting good return from the market. Other things which influence the market are positive. In that case I will invest about 60% in short term. By short term I mean a month or 2-3 weeks i.e. I will buy today and sell within a month. So, I will allocate 60% in short term and 20% each for medium and long term….It depends on the market condition.*

One of the investors focuses on receiving dividends. In order to maximize on that, he constructs his portfolio based on the year end closing date of companies i.e. he will buy a stock a couple of

months earlier to the closing date of the company so that he can receive dividend. After that he focuses on other companies whose closing date is nearby.

R12: *There are companies which are June, March or December ending. For example, Banks and Insurance companies are December ending. We buy the December ending companies in October or November. These will disclose dividends in February or March. After receiving this, we go for June ending stocks. After this there is September ending; we go for that. After this we go for December ending companies. In this way we gradually construct our portfolio.*

All of the investors' responses give the idea that they buy shares in falling market and sell when the price is high. In general, the sale decision of a stock depends on the investors' expectation of overall market movement and individual stock price and whether the stock has reached the expected price/given the expected return. News regarding a company may also affect the sale decision.

R2: *I sometimes sell the stock if I see that it has brought good return. Again, even if I do not have any news and if I think that the company will perform better, I look at the technical analysis. If I think that the price will go up, I hold the stock. Again, in cases, I sell them too….I feel that I have received enough return from it. The price may fall at this point. I got the return I wanted.*

R4: *I do stock wise analysis i.e. should I hold it or not. If I think that the market psychology is good and the market is going up, I often hold stock giving me 20% return. I do it to get more return. But it depends on the market completely. Again, in cases where there is 15% return but the market condition is not good, I sell and take the return…. For example, I have a stock which has a -5% return. I then analyze to understand whether I should buy more stocks or sell it and incur 5% loss. I observe the market perception about the stock. For example, apart from a few, the market perception about banks is not good. If the market is good, I hold it for next 3 weeks to see what happens.*

While the decision making process of Institutional investors have a lot of similarities to Individual investors, some things stand out. The researchers working within an organization usually follow a well-defined process (though allowed flexibility under certain circumstances)

established by the top management of the company based on experience and industry practices. One of the rituals that these researchers follow is the valuation of a stock. Only one of the individual investors mentioned referring to valuation models. On the other hand it is a very important part of the process for an equity researcher. These institutions also have some regulations to follow which imposes some restrictions on their decisions.

I1: *The number one thing we look at is the management i.e. who is running the company. We look at their track record. Second thing is the sponsors i.e. who are the owners of the company. The third is their business model i.e. how competitive the business model is. Fourthly, you have the valuations i.e. basically the numbers. We mostly do DCF valuations. We also use relative valuation to see whether the stock is fairly valued.*

I2: *If you want to run a mutual fund, you have to follow some regulations. 60% of the capital in a mutual fund must always be invested in the capital market. You cannot invest more than 10% of your capital in a single company. You cannot invest more than 25% of your capital in a sector. We have research team which takes their decision after following these regulations…. There are regulations which we have to maintain when structuring the portfolio. This is the first criteria. Each AMC (Asset Management Company) has its own way of operating. We have a proprietary research process. On its basis, we do the analysis. After analysis, if we reach a decision that we will purchase a stock, then it goes to the Board. This Board consists of Senior Management and CEO. They decide how much exposure they will take.*

Whereas the individual investors usually focus on some specific industries when investing, their Institutional counterparts do not face such limitations as they hold much more capital than an individual investor and have dedicated analysts covering each of the sectors and the economy.

I2: *First, we look at the economy. We have a separate economic analyst who works on the economy. Depending on the economic condition we decide how much exposure we will have in capital market. Given the regulation, we decide whether we will invest our capital in the stock market or keep it in the bank. Then we have separate analysts for each sector. Our investment team has 6-7 analysts, each covers a sector. If the decision is taken that we will have exposure in a sector, then we look at stocks within that sector.*

One of the Institutional investors mentioned that he takes into account the historical return and nominal GDP return in order to set a benchmark for possible return from the market. Institutional investors commonly evaluate their portfolio performance relative to the market, which individual investors usually do not.

I1: *In case of return, another thing you look at is the nominal return of the economy and the historical return of DSE. If I look at the 20 year return profile of DSE, I will see that the average annual return is 18-20%. That sets the benchmark. If you are looking to investing in the stock market in 10 years horizon, you are looking at a similar return. That is close to our nominal GDP growth. We say that if you invest in the stock market, you should expect a return close to nominal GDP growth. If the GDP growth is around 7-8% down the line and inflation is 6%, you can expect a return of around 15%. This is the base case.*

I1: *There are two things to assess. One is how the stock has generated return compared to the market. Market plays a big role. For example, if the market is down by 20% and your portfolio is down by 10%, then you are very happy. You should be happy because you have outperformed the market.*

A Decision Tree Model of Stock Selection:

In order to summarize the findings and understand the factors affecting the stock selection decision of an investor participating in Bangladeshi Stock Market, an Ethnographic Decision Tree Model (EDTM) explaining whether a particular stock selected or not based on the investor preference is presented.

The decision tree has three outcomes: “Buy”, “Do Not Buy” and “Consider it for Later”. The last outcome is for cases where a stock fits the investor’s preference but the investor cannot purchase it at the moment due to financial constraints. From the interviews, three different ways by which stocks come to an investor’s attention are identified. These are Past Experience, News/Suggestion/Rumors and Active Search for stocks to invest in. The stocks an investor chooses usually fall in one of these three categories.

Investors, especially those who are experienced, know about some stocks in details. These are not analyzed as frequently or thoroughly as a stock new to them. They usually have a group of stocks that they have identified as 'Good' or 'Safe' stocks. In this stage, we make two assumptions: i) investors usually know more about the stocks they buy or identify them compared to those they avoid and ii) based on the previous point, if an investor knows about a stock in detail but does not identify it as desirable, it is undesirable and hence avoided.

The interviews also show that investors often choose a stock based on News/Suggestions/Rumors they receive from their family/friends/acquaintances/broker. Final decisions are often taken based on information even before it is verified or validated by the investor as they put their trust on these sources and believe that immediate action is necessary to benefit from the investment. Sometimes, investors often deem it necessary to study the stock before they act on the information.

Thirdly, investors often actively search for stocks they are going to invest in. As many of the individual investors do not have the time or capacity to look at all the stocks traded in the market, they use some 'filter' criteria to narrow down the choice set. From the interviews, the most common such criteria were 'Industry' and 'Share Category'. Findings show that investors prefer some industries over others based on their expectation of its future prospect. Some of the investors also report strict avoidance of certain category of stocks e.g. Z category. Hence these were used in the Decision Tree Model. Further studies may generate other such criteria.

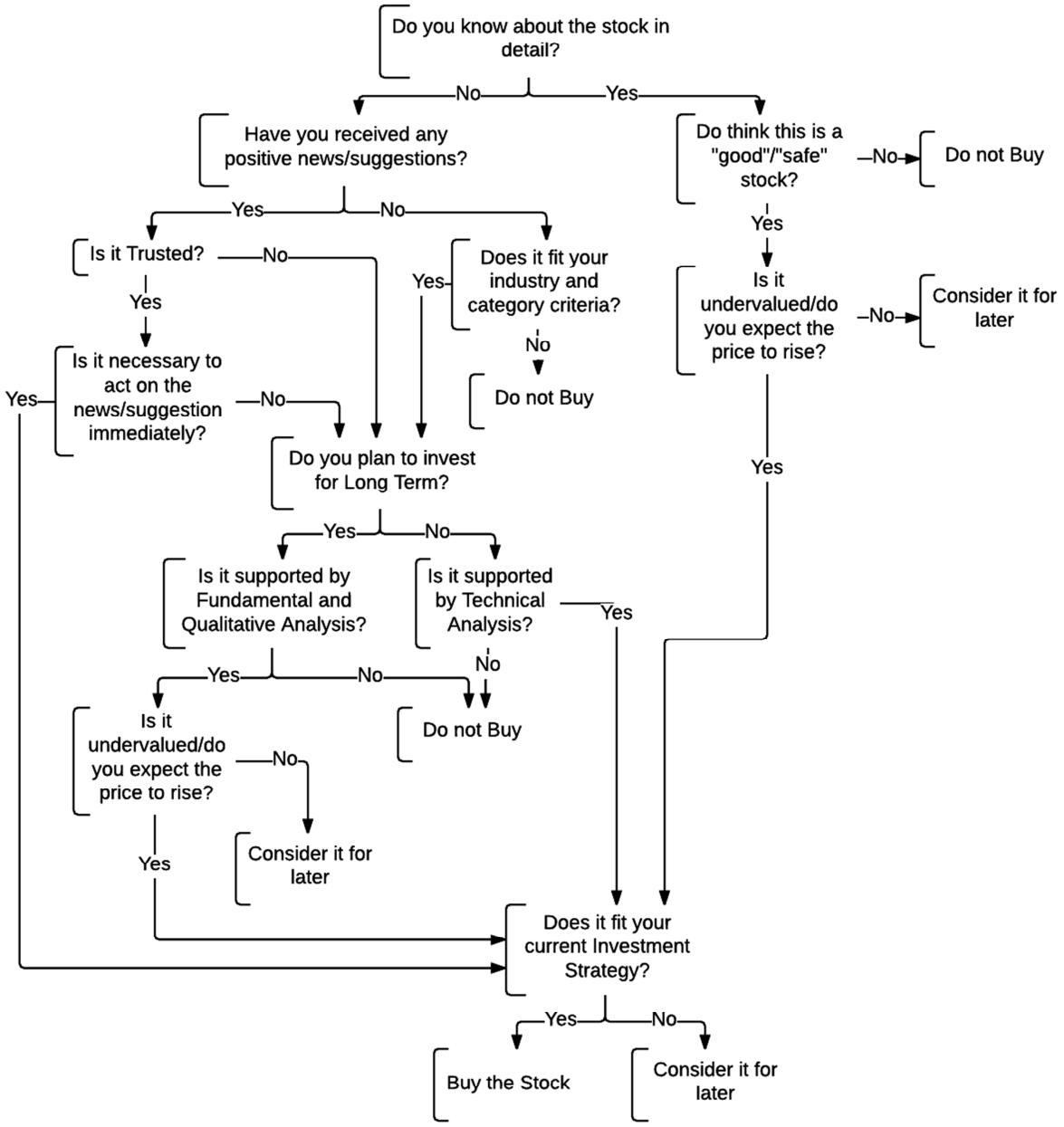

Figure: A Decision Tree Model of Stock Selection

The interviews show that the path of analysis of a stock is dependent on the plan of the investor. Investors intending to invest for Long term usually resort to Fundamental analysis along with other evaluation based on some Qualitative criteria e.g. Management Strength, Shareholding

Structure etc. On the other hand, shorter term investments are always associated with Technical Analysis.

The 'Point of Entry' i.e. when to buy is always dictated by whether the stock is or perceived to be undervalued or whether the stock's price is expected to rise in the future by the investor. A stock selected after analysis may not meet the point of entry criterion always. But rather than totally avoiding the stock, investors may consider it at point when the criterion is met. On top of that, an investor's current investment strategy may not allow the purchase of the stock (e.g. according to one's investment strategy, he/she should not exceed a level when investing in short term stocks).

It is important to note that the Decision Tree Model does not include mechanism that determines selection and allocation of funds to different selections in the presence of budget constraint. The gathered and analyzed interviews do not contain enough evidence on how investors determine the amount they invest in or the minimum volume they purchase for each stock. Further study is required in order to model this portion of the decision making.

The Decision Tree Model highlights the cause of differences between different types of investors. Investors usually use a combination Past Experience, News/Suggestion/Rumors and Active Search to identify which stocks are eligible for investment. But they are usually inclined to one or two of these sources. For example, an investor in most cases may resort to Active Search whereas another depends mostly on suggestions. The interviews show that different investors have a varied level of trust and dependence on suggestions. Again, different investors may have different 'filter' criteria or different definitions of Fundamental soundness of a company and consequently different definitions of a 'Good' company. Further inquiries are required to understand what determines differences in trust, analysis and definitions of desired and undesired stocks.

Discussion:

In constructing the Decision Tree Model, several sources of difference among investors have been identified: preference in mode of attention (i.e. whether the choices they evaluate are actively searched for, heard about from suggestions given by family/friends/broker or know about from experience), level of trust on the received news/rumors/suggestions, definition of a "Good" company, preference of choice set 'filter' criteria (e.g. Industry Nature, Share Category etc.), preference of investment term (Long or Short term) and choice evaluation criteria (Fundamental, Technical or other Qualitative criteria), definition of undervalued stock (process of determining value or formation of expectation about future price) and finally preference of portfolio construction strategy. The model effectively summarizes the findings of this study. But there is room for exploration as this model can be developed further to fully capture the dynamic nature of decision making and enhance the model's explanatory power.

Some of the findings of this study are supported by the literature. Barber and Odean (2008) proposes that agents faced with multiple alternatives consider primarily alternatives which have attention attracting qualities. When alternatives are many and search costs high, attention may affect choice more profoundly than preferences. This supports the finding that investors often base their decision on news, rumors and suggestions and on occasions these hold more weight than other criteria. Adaptivity in decision making process due to task complexity is addressed by Payne (1976) where he provides evidences of decision makers switching to non-compensatory from compensatory decision making as the number of alternatives increases. This study supports the concept of 'filter' mechanism proposed in the Decision Tree Model of Stock Selection. Bouwman et al. (1987) reports that financial analysts develop and use "Themes" based on company's nature and future prospects to guide analysis. The findings present similar results as it show that investors prefer some industries over others based on their expectation on its future prospects.

Collective Intelligence: Although, it was mentioned earlier that investors usually incline towards either experience, news/rumors/suggestions or Active search to guide their decision making process, it is not easy to group investors into these three categories as the decisions are mostly a combination of these factors. One of the major themes that the study has come across is

that stock market investment decision is rather a result of "Collective Intelligence" compared to Individual Intelligence. Whether active or not, each of the investors is part of a group or a network that shares information with each other. Though the information given or received is not always acted upon, news, suggestions and rumors always travel through this network. This group usually contains friends and family members who invest, brokers, fellow investors who use the same Brokerage house, members of share market related Facebook groups etc. In many cases, an individual entered the stock market with the help of his friends and family. We also find that at the initial stage, investors are more dependent on financial advices they received from different sources. This initial stage may shape an investor's decision making process along with education and experience. The nature of a group and its influence on the decision of its members are not always addressed in Finance and Economics literature, especially in Bangladeshi context. A further research focusing on this aspect may produce important results.

Collective Intelligence certainly has its advantages. It allows an individual investor to access information that he/she has not directly searched for or analyzed. If utilized properly, this can reduce the drawbacks an individual suffers due to time and resource constraints. Institutional investors enjoy the fruits of Division of Labor as they employ dedicated analysts for each sector. This allows them to access and analyze more information than an individual. Organization's structure assists them to pool information and plan their portfolio. Conscious recognition of this network and realization of its usefulness may enable investors to plan their investments more effectively. Nowadays a lot of investors and professionals are taking formal training in investment. This is likely to have a positive impact on the investment environment of Bangladesh as information shared by these qualified individuals may help to raise the quality of decision making of other investors.

Trust: The extent to which an individual will depend on news/rumors/suggestions may depend on the trust they put on their sources. While investors report that they receive news from a wide variety of sources, they usually do not act on it before they verify it. But even among them there are sources that they value and trust. Information received from such sources is often immediately acted upon.

Things become complicated due to the existence of Market Manipulation. Investors are concerned about such activities. This may make it difficult for investors to put their trust on a particular source as they fear the news they receive may not be very accurate. Investors have also expressed their distrust of published Financial Statements. Many of them believe the figures presented are often manipulated and do not provide an accurate picture of a company's financial health. Lack of trust on both Public and Private information may make it difficult for investors to define their preference for information and take effective decisions. This may result in ineffectiveness of disclosure policies and overall deterioration of Market Efficiency.

A few other findings, though not frequent enough to form a theme, are worth mentioning here. A subset of the interviewees who faced the stock market crash of 2010 reported that they did not consider risks at all when they invested before 2010. The high return they saw other people receiving by participating in the market attracted them. But they did not take the potential risks into account and became aware of the risks only when they experienced the 2010 crash. This brings forward the importance of studying investment risk communication methods in Bangladesh.

One of the Institutional investors interviewed identified Broker dependence as a major problem in the Bangladeshi Stock Market. He states that the Broker and the investor have conflict of interest as Broker's incentive is in trading but not in his client's profit. But, many investors in Bangladesh use Broker as their primary source of information. A naïve investor may not be aware that a Broker may present information which maximizes his/her goal rather than the client's. This is a problem that also requires attention.

Conclusion:

While most of the studies regarding Bangladesh stock markets address the issue of market efficiency, the nature of investors and their decision making processes are usually not taken into account. This study looks to close that gap by exploring different aspects of stock market investment decision making. 15 investors who are currently holding portfolio in Dhaka Stock Exchange (DSE) are interviewed regarding their choices and decision process. The contents of the interviews are analyzed to find recurring "themes" that can help us understand different aspects of investment decision making. Based on the findings, a Decision Tree Model of Stock Selection is presented which helps us to understand about different stages of decision making: how a stock comes to attention, how choice set is handled when actively searching for stocks, how plans for investment affects evaluation of a stock, and how expectation of price and investment strategy affects final choices. In addition, the study proposes that Collective Intelligence and Trust are two key factors that can influence decision making.

This study is small and exploratory in nature. In thematic content analysis, the researcher's interpretation of data also plays a big role. Hence, it is difficult to generalize the study's findings. One of the main contributions of this study is that it helps to identify factors specific to decision making in Bangladesh context more or less independently of existing theories in the field of Finance and Economics. These findings can serve as a repository of hypotheses that can be studied further and tested to understand its validity. The method followed in this study is very different from the traditional methods used in these disciplines. It has served its purpose of generating insights which would have been difficult to obtain using other methods.

The findings presented and the Decision Model presented in this paper can also serve as the basis of future researches regarding Bangladesh stock markets. As mentioned before, the study does not depend on any specific theoretical framework and hence can provide a different understanding of investor behavior. As it solely focuses on Bangladesh Market, the findings capture the nuances of Bangladeshi investors. By pairing the model with economic theory, a more robust understanding of investor decision can be achieved.

This study has identified some further questions e.g. how does information transmit within a group setting, what are the determinants of trust in an investment decision making setting etc. This research can be seen as a stepping stone to understanding a myriad of aspects regarding investment decision making.

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Appendix

Interview Guide (Individual Investors):

1. When did you first invest in stock market? How did you come to know about it? What were the reasons behind your investment in stock market? Did you have idea about alternative investment opportunities?
2. What was the goal of your investment? How did you form your goals? Did you have different goals when you first started? Do you change your investment goals with market situation? How?
3. Can you recall the first group of stocks that you invested in? If yes, what were they? Why and how did you select them? What information did you search for before making the decision? Which criteria did you emphasize on?
4. How did you structure your current portfolio? Did you evaluate all the alternatives? If yes/if not, how did you evaluate? Describe in steps if possible. Did you follow the same practices when you started?
5. Do you focus on some specific criteria/ do you have a checklist? Did you have a checklist when you started? If yes, how did you select such criteria? Is this list of criteria fixed or varies with context?
6. What are the information sources you primarily use? How did you come by these sources? Why do you use these sources? Have your preference for information sources changed over time? Why and how?
7. How knowledgeable are you about the stocks that are currently in the market? How have your knowledge different stocks and sectors changed with time? How did you become aware of the stocks you currently follow/know about?
8. How knowledgeable are you about all available information types? How has your knowledge about various types of information changed with time? How did you come to know about these? Which information do find more accessible than others?
9. Do you use computer and software to process information and reach to a decision?

10. Do you set a target return from portfolio? How? Do you calculate and take into account the expected return and risk of your portfolio? How? Did you follow such practices when you started?
11. Do you follow any strategies to minimize risk? Did you do so when you started? How did you form such strategies? Are you familiar with different investment strategies? What strategies do you use now? Did you use such strategies in the past?
12. Do you like to take risk if it brings higher return? Or do you prefer stability? Why? Has your preference been same over the years?
13. What is your current return on investment? Describe your portfolio performance over your total holding period.
14. What are your best and worst performing stocks? How did you select them?
15. Do you know how to assess a stock's intrinsic value? Did you know when you started? Do you take such information into account? How does it affect your decision?
16. Do you know about investment diversification? Do you diversify your investment? How? Did you do so when you started?
17. Do you consider industry nature and information before making an investment decision? Did you when you started?
18. For how many years have you held your portfolio? How actively do you manage it? How frequently do/did you assess your portfolio? How much time do/did you take to gather and process information? To make investment decision?
19. How did/do you assess your portfolio's performance? How did/do you define good/bad/average portfolio performance? How do you react to good/bad/average performance of your portfolio?
20. How frequently do you trade? Why? Is there any particular strategy you follow?
21. Do you take financial advice from other sources (e.g. portfolio managers)? If so, how dependent are you on that source? Compare.
22. How do you feel about the current state of your portfolio? Have you been able to achieve your investment goals? If no, what are the reasons?
23. Do you feel that stock market investment planning is difficult? Do you think the available information about a particular stock is too much to handle? Why? Do you think you have

enough time to look after your portfolio? How confident are you about handling your portfolio?

24. Do you actively plan about your future finances? Do you enjoy investing in the stock market? Have you studied or had training on 'Investment Theory'? Have you studied any books on this subject?
25. According to you, have you ever made any major mistake in managing your portfolio? How did you realize the mistake? How did you correct your mistake? How did you learn from it/ how did it affect your later decisions?
26. What are the main impediments in investment planning? What do you think are the main risks of having a portfolio in the stock market? What do you believe to be essential for success in stock market? What do think should be done in order to build investor's confidence in stock market?
27. Do you know anything about market manipulation and insider trading? Are you worried about such prospects? Does such knowledge affect your investment decision? How?
28. Were you a portfolio holder during the stock market crash of 1996 and/or 2010-11? If yes, how were you affected? How did you react after such incident?
29. What do you think about the current stock market situation? Why?

Interview Guide (Institutional Investors):

1. Please tell me briefly about your career as an investment expert.
2. Please tell me briefly about the portfolio management services brokerages or other institutions offer. How are these managed?
3. How do you structure your portfolio now? Did you evaluate all the alternatives? If yes/if not, how do you evaluate? Describe in steps if possible. Did you follow the same practices when you started?
4. Do you focus on some specific criteria/ do you have a checklist? Did you have a checklist when you started/was your checklist the same when you started? If yes, how did you select such criteria? Is this list of criteria fixed or varies with context?

5. What are the information sources you primarily use? How did you come by these sources? Why do you use these sources? Have your preference for information sources changed over time? Why and how?
6. How do you use/process the information gathered i.e. how do information translate into a decision? Did you follow similar procedures to come to a decision?
7. How do you set target return from portfolio? Why? Did you follow similar procedure in the past?
8. What strategies do you use to manage portfolio e.g. to maximize risk adjusted return? Did you use such strategies in the past? How did you form these strategies?
9. Do you like to take risk if it brings higher return? Or do you prefer stability? Why? Has your risk preference changed over time?
10. What is your current return on investment? Describe your portfolio performance over your total holding period.
11. What are your best and worst performing stocks? How did you select them?
12. Please briefly talk about the importance of following in investment management: intrinsic value, diversification, industry nature of a company
13. How did/do you assess your portfolio's performance? How did/do you define good/bad/average portfolio performance? How do you react to good/bad/average performance of your portfolio?
14. How frequently do you trade? Why? Is there any particular strategy you follow?
15. Do you take financial advice from other sources (if any)?
16. Does your clients' investment goal shape your investment goals and strategies? How?
17. How do you feel about the current state of your portfolio? Have you been able to achieve your investment goals? If no, what are the reasons?
18. According to you, have you ever made any major mistake in managing your portfolio? How did you realize the mistake? How did you correct your mistake? How did you learn from it/ how did it affect your later decisions?
19. What are the main impediments in investment planning? What do you think are the main risks of having a portfolio in the stock market? What do you believe to be essential for success in stock market? What do think should be done in order to build investor's confidence in stock market?

20. Do you know anything about market manipulation and insider trading? Are you worried about such prospects? Does such knowledge affect your investment decision? How?
21. Were you a portfolio holder during the stock market crash of 1996 and/or 2010-11? If yes, how were you affected? How did you react after such incident?
22. What do you think about the current stock market situation? Why?

Figures:

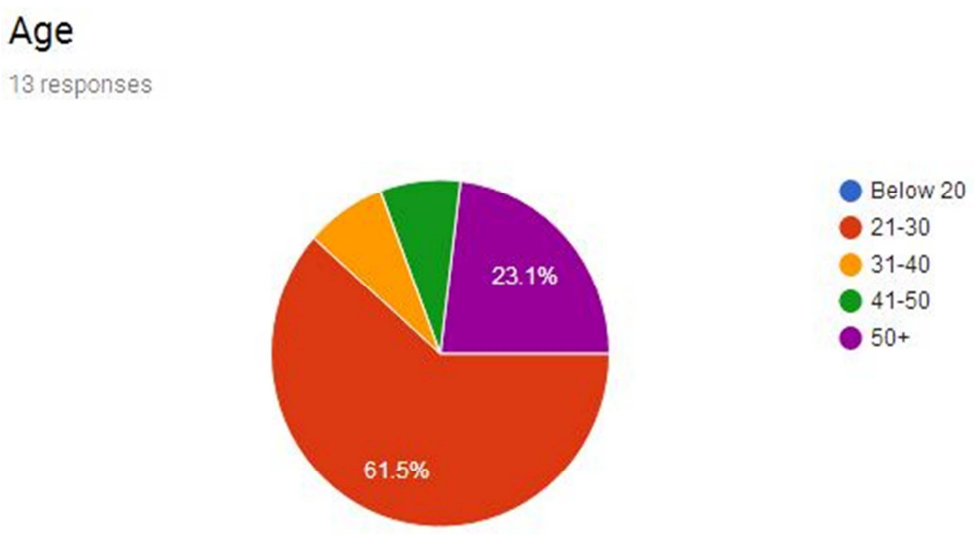

Figure 1: Age Distribution of the Interviewees

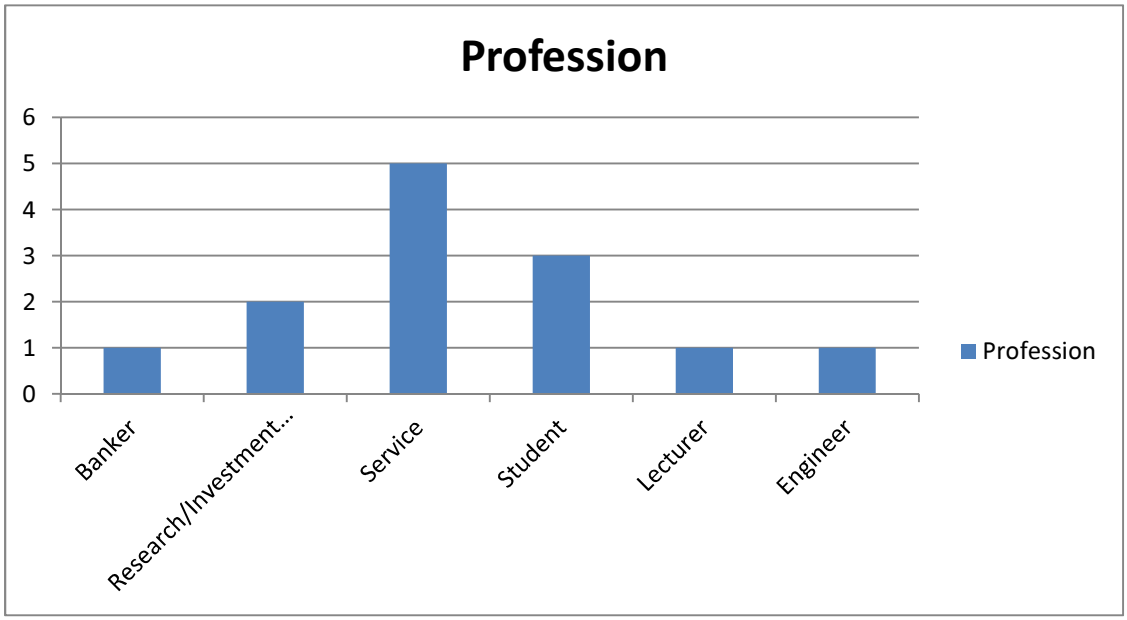

Figure 2: Professions of the Interviewees

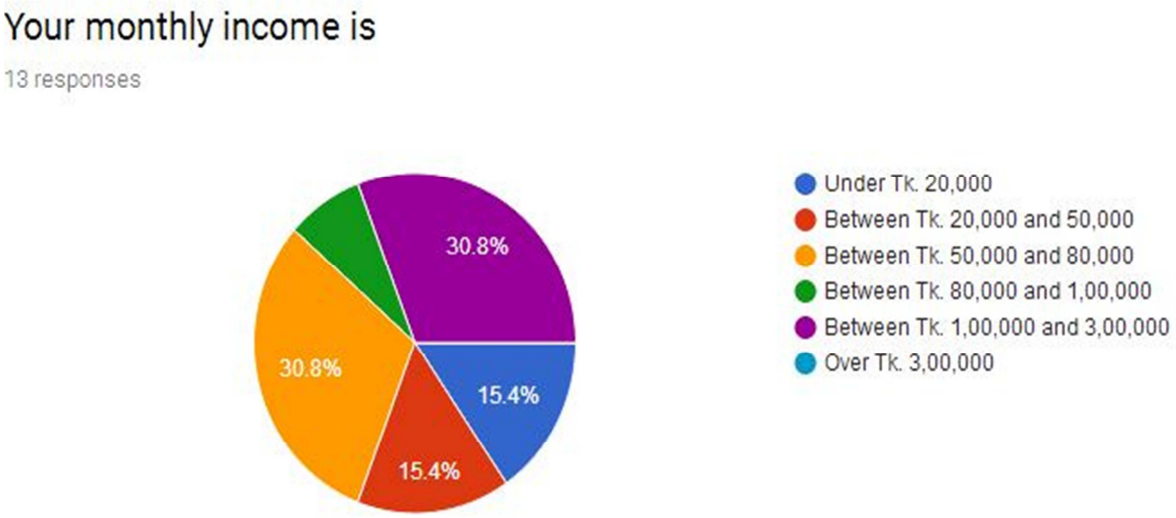

Figure 3: Monthly Personal Income Distribution

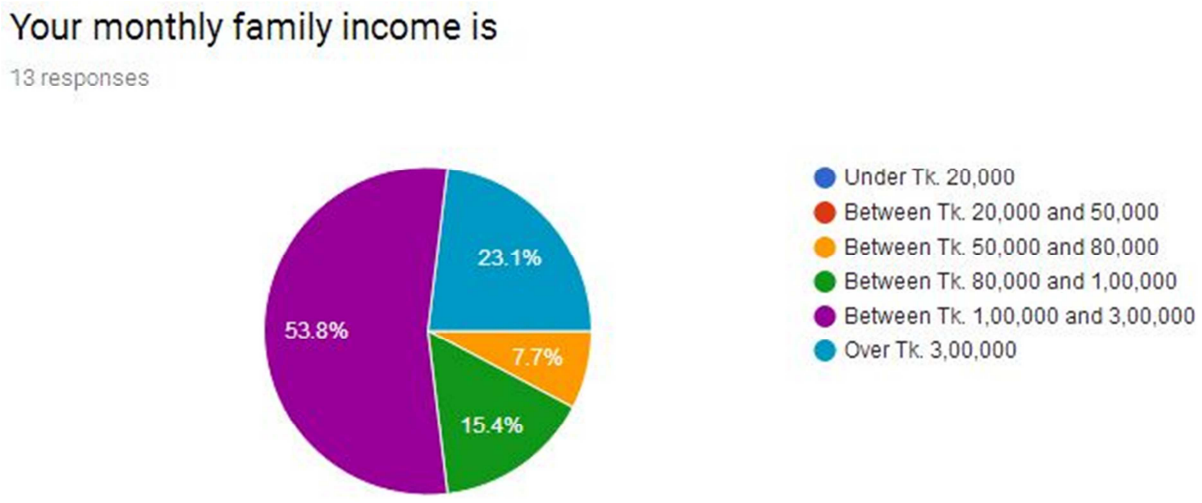

Figure 4: Monthly Family Income Distribution

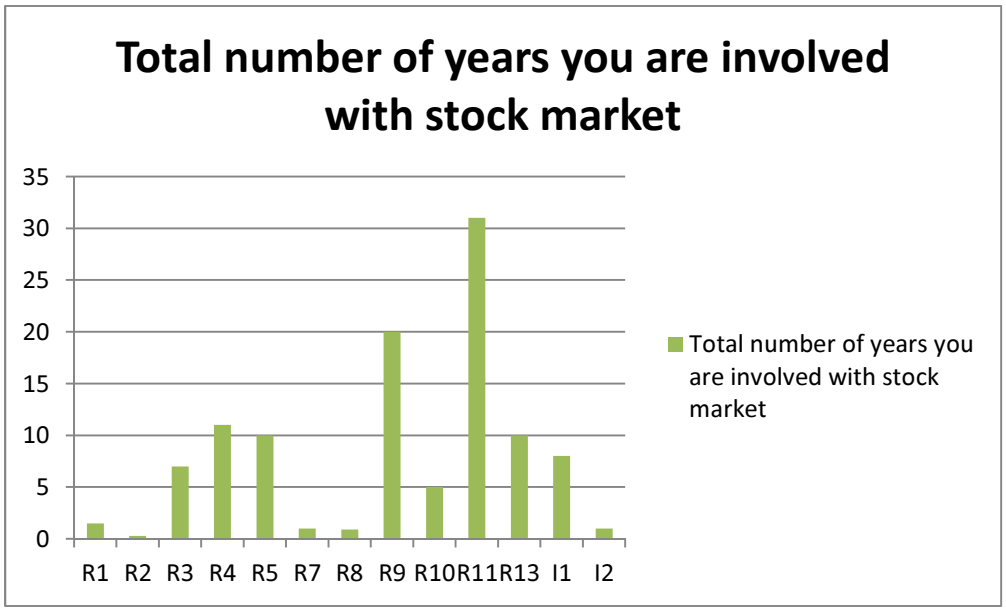

Figure 5: Total Number of Years Involved in the Stock Market

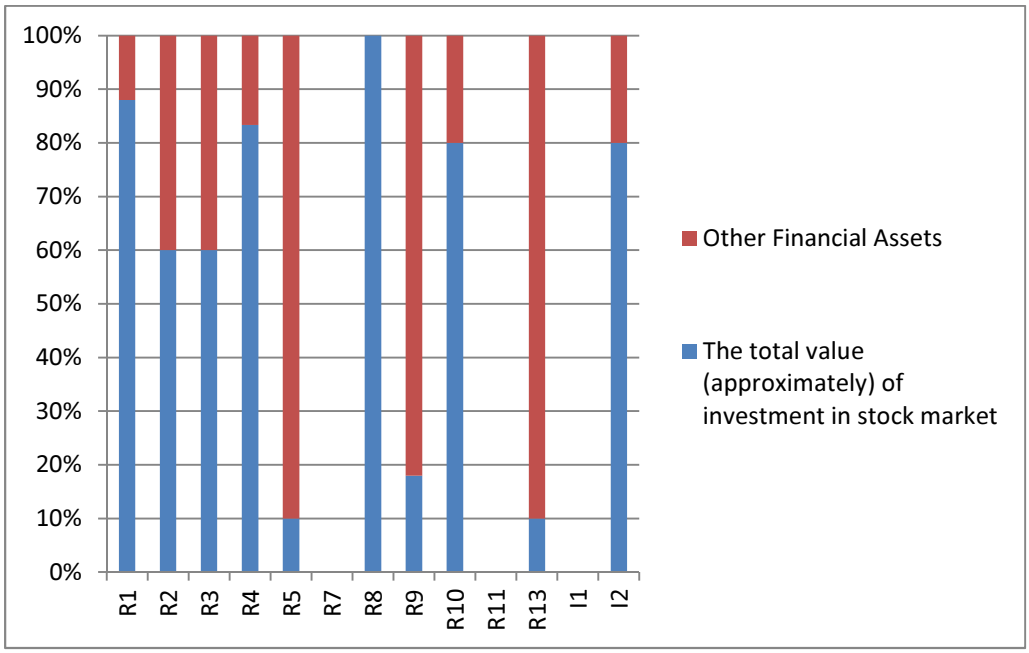

Figure 6: Percentage Allocation of Total Financial Assets

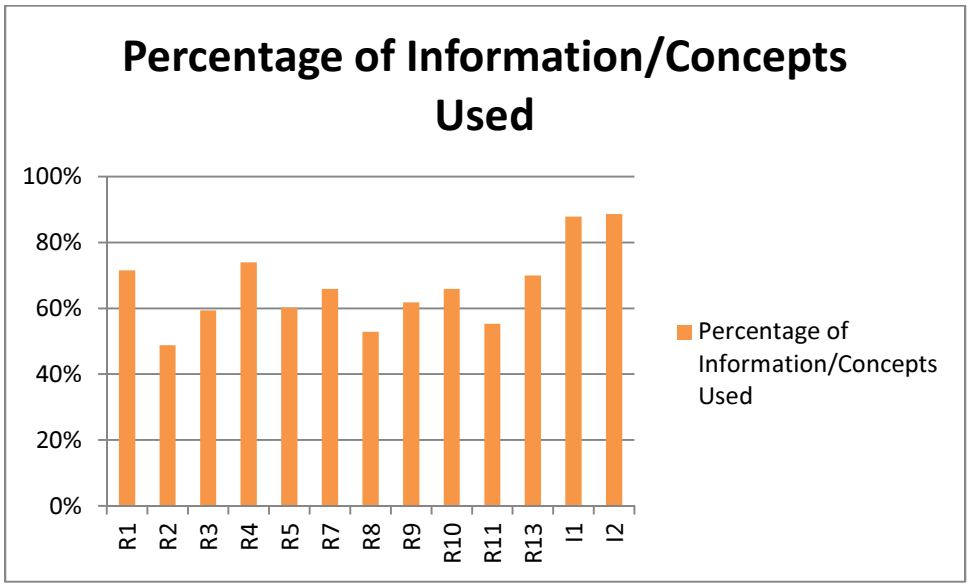

Figure 7: Percentage of Information/Concepts Used by Interviewees