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Impact of Financial Literacy and Investment Experience on Risk Tolerance and Investment Decisions: Empirical Evidence from Pakistan

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ABSTRACT

Investment decision making is a very crucial process which is influenced by many factors. An important thing which is necessary to understand is the degree to which an investor can absorb the risk. This intensity of risk which can be of minimal, maximum or mediocre level, defines the strategies regarding the decisions of investment. A determinant of investment decisions needs special consideration to be understood by investors. This paper helps to determine those variables by constructing a theoretical model. After studying the past researches and theories certain conclusions are drawn whether which are the factors that impacts the decision making process. This paper is structured as follows. The first part describes relevant literature and devises hypotheses. Section 2 describes the model, methodology, data source and the variables measurement. Section 3 is based on a discussion and concludes and provide with future implications.

Keywords: Risk Tolerance, Investment Decision Making, Investment Experience, Financial Literacy
JEL Classifications: G02, G11, G110

1. INTRODUCTION

Investment decision making process is a critical process which depends upon various factors that may vary among individuals. While making any types of decisions in life people use to behave differently. Some make decision based on judgment while others consider many other factors that direct them to act upon such appropriate decision. The process of decision making becomes easy when all the confounding variables are well recognized by investors. The variables which direct them to make the right decision so that the losses can be avoided or reduced in the future.

During the period of investment decision making, investors' encounter highly complex factors such as risk, ambiguity, and choice overload. These are challenging for financial professionals, experienced investors, and especially the ordinary private households. Investors have to chase risks in their financial decisions. This can lead them to earn profits. On the other hand any decision made by investors on the basis of poor or misleading information or on the basis of poorly analyzed information may leads towards imperfect outcomes. Investment as expense made now can make profits in future. A company may be dealing with foreign institutions like World Bank, European Commission, European Bank for Reconstruction and Development and others. These are the institutions which formulate some specific processes to handle investment decisions. The investment expenses are made to attain gains and they can be achieved through two ways. The first way is investments in fix assets like buildings, machinery or plants. While the second may be investments in terms of money such as stocks, bonds etc. Both forms of investment can make a corporation flourish.

Financial literacy is valuable. Information has a criticality on the decision to the clue. A positive signal can make an investor make a good decision. The investor should decide regarding his investment risk based on the clues he receives. Information can be significant if some of the clues will change the decision, or information can be worthless. The value of the information is coming from the way it is utilized by the decision maker regarding the investment. An informed decision maker can always act like a non-informed one by ignoring the coming information. A good investment decision can be made by an experienced investor by building confidence or by utilization of experience or by managing risk appropriately.

Doing the good investment is challenging for people with minimal or without having know how and experience about investing. Severe losses can be the result of not making right decisions because investment is related with risk and it is an important element that depicts the investor's decision to invest. Risky investment generates magnified outcomes either in form of gain or loss. In other hand less risk associated with investment will leads towards minimal gain to neutralize for the low risk related with the investment. Information regarding different variables and investment experience has major impact on risk perception and in turn on investment decisions. So the financial literacy and investment experience are supposed to be the important factors having impact on risk tolerance and investment decisions. As the information used to make financial decisions is being collected from different sources. The sources were categorized as: Secondary sources, medium, and the World Wide Web, friends, family and professional financial services providers or many others to gain information regarding diversification, interest rates and inflation and many other economic indicators as well. Investor's subjective knowledge and wealth were supposed to impact their decisions of whether to use which sources of information. Previous studies depict that seminars, written communications and website information are good methods in conveying financial education. So this paper will reveal that whether the financial literacy and investment experience helps to define the risk tolerance which leads towards making investment choices and decision.

2. PROBLEM STATEMENT

We are trying to discover the factors having impact on risk tolerance and investment decisions; there are many factors that affect an investor decision making process like demographics, income level, qualification, financial knowledge and previous experience with investment. Many studies are supposed to be done on finding the factors that affects the ability to take risk and make investment decisions accordingly but here we will consider the influence of financial literacy and investment experience on risk perception and investment decisions.

3. RESEARCH GAP

Making decisions regarding investment is a sensitive process because an investor is not only investing his/her money but a good worth of time as well. Risk is always associated with that in every aspect, coping up in that situation they have to consider all factors related with that. As in Pakistan where economy is not strong and political instability is there, put the investors in precautionary zone to which extent they can chase risk and make risky investment. Income level is also the determinant of decisions but economic and political circumstances make them conscious to invest or not because economic conditions are usually influenced by political circumstances. Researchers are always in a surge to determine indicators and factors that impact the investment decision process in many countries of Asia and other continents but Pakistan as varying in many ways from other countries having its own determinants. It is important to explore those variables that help Pakistani investors in decision making process like demographics, income level, qualification, financial knowledge and previous experience with investment but their effect yet not find with special reference to Pakistan. The previous studies lack the focus in Pakistani context; most of the researchers have only covered other Asian countries like china and have explored many psychological factors and some materialistic factors. In this research we start up with important factors like financial literacy and investment experience and then we will discuss how these factors impact the risk tolerance level and investment decisions. It is necessary to learn how much the literacy of finances impact the investment decisions, this will help institutions to equip themselves with such sources which are supposed to fascinate with financial education especially to investors in different dimensions like how they can utilize their knowledge to manage their risk bearing capacity and to end with healthy investment. Investment experience proves to be a best tool to deal with risky investments because it enhances the confidence level of investor.

Experienced investors have a portfolio of good and bad experience. A wise investor learns from past experience to tackle risky situations and to handle it properly, when he learn a lot, so s/he can jump into risky investment to earn high returns by managing it efficiently. Our research proves to be valuable to explore those impacts as well.

This study proves to be a milestone for future researchers while incorporating risk and other factors that affect the investor's decision making process in Pakistan. On the other hand it will help investors as well on how much knowledge they should have to cope up with risky situation and how investment experience helps to handle risky investments. Little attention has been given in Pakistan to determine factors that affect decision making process. Financial literacy proves to be an important determinant, while further research is required to explore more dimensions which can influence investment decisions.

4. LITERATURE REVIEW

4.1. Financial Literacy, Risk Tolerance and Decision Making

It is evident from literature that financial literacy can be taken as of mathematical capability and the knowhow of financial wording. According to this financial literacy is high for people having age of 50 and 60 years, professionals, business and owners of farm, and university or college graduates (Worthington, 2001)† literacy of financial education can also described as the capability of individuals to go for financial decisions by keeping in view their own best short term and long-term interests (Mandell, 2008). It is evident that financial experience leads towards financial knowledge creating awareness for self-education or make the financial literacy programs more significant. Even the stock market games provide the opportunity to gain effective exposure and experience (Frijns et al., 2014).

Hence literacy can also be enhanced by the people who have enough resources and utilize these resources to obtain financial information for implying better outcomes from investment decisions. Wealthier households can spend more money to get access to financial information. By using this information they are usually less uncertain about the risky assets as they are aware of all the information about the financial market. As the wealth of investor increases, his absolute risk tolerance will also increase because he can have every type of information by using his money, but on the other hand less wealthy individuals are uncertain because they can't purchase that much information (Makarov and Schornick, 2010).

There is a significant relationship among financialeducation and monetary accumulations because individuals having knowledge about how to take benefit of the stock premium on equity investment. Financial literacy is positively related with planning of retired income behavior (Lusardi, et al., 2007; Lusardi and Mitchell, 2009; 2011a). Empirical results suggest that respondents with more confidence in their financial knowledge show a higher degree to plan.

Financial illiteracy is very high among specific age, gender, income and qualification (Lusardi and Mitchell, 2007b; 2008) Evidence of less education and less financial sophistication is also shown in less age respondents. Financial illiteracy has important consequences; those who lack literacy will not be able to makeplan for retirement (Lusardi and Mitchell, 2006; 2007a; 2007c), will have less wealth near to retirement thus will be having less ability to invest in stocks (Vaan Rooij, et al., 2007; Kimball and Shumway, 2006; Yoong, 2007), and will borrow at high interest rate (Lusardi and Tufano, 2009).

Present studies shows that less knowhow of financial education is very common and people don't have knowledge of even basic dimensions which are related to Economics. So to achieve potential results financial know how seems to be important (Chan and Stevens, 2008). (Bernheim and Garrett, 2003) said that those people save more who got qualification in high school or in the workplace. Competition gets enhanced by the people having financial knowhow. This helps to innovate and therefore boosts growth economically (OECD, 2005). (Chan and Stevens, 2008) presented that individual running homes making pension and retirement saving decisions on basis of limited and oftentimes pension knowledge which is not right.

It can also improve performance health of company as Joo (1998) described that financial knowledge enhances workers performance and decreases turnover to cope with personal financial issues which can arise due to absence from work. Some people encounter maximum risks of having insufficient financial qualification and skills to face the challenges in good manner imposed by the reformed system of pension. While an enhanced level of financial knowledge can be good generally.

After retirement people use to go for investment plans it is evident that when they obtain economic and organization based qualification their financial knowhow get improved. Financial knowhow is an important variable of planning about retirement. It is also demonstrated that a negative impact of participation in capital market caused by less education of financial knowledge and it will lead to loss in the long term (Cocco et al., 2005). To invest successfully, financial literacy should be enhanced (Agnew and Szykman, 2005).

In the questionnaire certain variables used to measure the extent of financial literacy which refers to the knowhow of variables such as inflation, compound interest and diversification of risk. It is the demand of more complex markets to be equipped with financial literacy education. (Braunstein and Welch, 2002; Lusardi, 2008). Financial literacy is also having an impact on portfolio decisions. While making decisions with regards to whether to go for risky or riskless security, this will also refers to further quest for financial advice that helps in decision making. Calcagno and Monticone (2015) argued that financial literacy is a necessary element of financial Decision making, and many low age people having desire of getting financial qualification. Major proportion of college students said they required more education on managing finances, many would like to get information about financial management topics in high school, and less proportion would desire to get such information as college (Mae, 2009).

Fewer studies have considered the impact of financial literacy at work place on nonpublic savings or contributions to pension funds. Results show that there is a significant influence of financial education on the decisions made for savings and pensions. These results also show that the type of education used for decision making does matter. As, (Bernheim and Garrett, 2003) and (Bayer, et al., 1996) found that opportunities that are contingent on print media (newsletters, plan description, etc.) have no impact on contributions or pension participations, in spite of the fact that the quality of financial information do matter (Clark and Schieber, 1998). In opposite, conferences on retirement are considered worthwhile, but these seminars appear to impact only specific features of attitude, like participation of pension and the volume of contributions, but it does not effect the level of total savings (Bernheim and Garrett 2003; McCarthy and Turner, 1996).

According to findings of Clark and Schieber (1998) people with less financial education have more saving habits (Gustman and Steinmeier, 1999). Reported that most of people are not properly equipped about the outcomes of their pension and the benefits of social security and are usually not aware of the forms of pension plan available to them and the paybacks related with that plan.

Benefits of financial knowledge are that it decreases the costs of obtaining and processing information and minimizes the obstacles to invest in the equity market (Haliassos and Bertaut, 1995; Vissing-Jorgensen, 2004).

Yong age people were not only less in education, but also have a minimal knowledge of basic economics dimensions such as interest rate compounding (Lusardi and Mitchell, 2007a). Financial illiteracy can have many long run financial outcomes or may end up in deficits (Lusardi, 2008). As, people who undermine the strength of compounding the interest rate will come up with large number of debt (Lusardi and Tufano, 2009). Individuals who cannot refinance the returns successfully or to incorrectly forecast the amount by which interest rates can vary will pay very much in the form of mortgage interest (Campbell, 2006).

Financial literacy is related with a broader range of financial decisions, such as equity market participation, diversification of portfolio and the ability to avoid extreme indebtedness (Kimball and Shumway, 2007; Guiso and Japelli, 2008; Lusardi and Tufano, 2008; van Rooij et al., 2011). Those people who possess financial literacy commonly believe that many consumers can't go for critical financial decisions in their best benefits because they lack the financial education required to go for those decisions (Perry, 2008; Braunstein and Welch, 2002). Financial literacy has significant effect on individual financial behaviors as it will give favorable results (Hilgert et al., 2003). By integrating the factors we can hypothesize that:

H1: Financial literacy is positively related with investment decisions due to risk tolerance

4.2. Investment Experience Risk Tolerance and Investment Decisions

In fact, without being knowledgeable about how the users of financial reports consider risk, this will prove difficult for people managing and regulating to understand either risk related informationis working as expected or they operate in unexpected manner (Gomes et al., 2004). That's why people who managing and regulating utilize this findings of financial risk judgments to make more effective decisions. Small and medium investors are more attracted towards higher rate of return (Ji, 2011).

(Kahneman and Tversky, 1979) gives the definition financial risk tolerance as a psychological element of decision making under financial ambiguity a situation in which a person estimate the probability of possible outcomes and their chances of occurrence. Another approach to get people know about risk related with investment is to give them complete knowledge of financial markets by providing brochures or booklets. In German booklet of more than 150 pages with ''fundamental information'' about economic associations, chances and risks of instruments is given to every single investor who wants to invest in stocks or funds (Bank, 2005).

Different risks related to investment can be categorized as issuer risk, exchange risk, and inflation risk. Many single investors may be bombarded by this broader value of information and by its unclear form. Moreover, this vide variety of information does not seem to be helping when going for specific investment decision, because this kind of general information ignore many experience levels and financial education of the customers. Through that vary perspective there is a chance that degree of decision quality effected by this large amount of information is called excess information (Hwang and Lin, 1999).

Studies done by customer protection organizations reveal that adaptability of information to the individual requirements of the customer is minimal. Demographical characteristics of the customer also impact the way information is analyzed or perceived. Moreover previous investment patterns also reflect how financial reports users think about risk management and regulation. Research shows that individual investment decision making is directly influenced by the risk perceptions of the individuals (Coombs, 1975; March and Shapira, 1987).

From a theory view, the primary focus of financialstudies on risk is the role of decision theory factors, results in risk perception and probabilities (Libby and Fishburn, 1977; Lipe, 1998). So far a Trimpop (1994) study reflects that risk seekers are psychologically elastic. They are normally having good knowledge about risk, having successful history of risk tolerance, tolerate unclearity, obtain novel experience, and give rapid response to stimulus.

We can also associate knowledge with experience as well. As Agarwal et al., (2007) found that mostly financial blunders are made by individuals, who are exposed to lowest amount of financial knowledge. To some extent, poor financial decisions are the reason of failure to appreciate economic vulnerability. Education can solve that issue by providing knowledge and financial decision doing skills. (Bernheim and Garrett, 1994) To understand the basic features of their retirement plans, retirement-age adults must be financial literate (Lusardi and Mitchell, 2009). Moreover (Bernheim et al., 2001) considers middle age individuals save high proportion of their incomes because in high school they took a personal financial management course. Many households don't invest equity market because they have less knowledge of shares, the working of the stock market, and pricing process of asset.

(Grable and Lytton, 1998) suggest that in a financial planning perspective, tolerance related to financial risk has a critical part in directing individuals toward a psychologically satisfactory and suitable investment. Xiao and Anderson (1997) predict a significant relationship between one demographic element like age and risk tolerance and base their description on the assumption that, other things being equal, age is a proxy for wealth. A research was done on the hardships that a single person may face in making decisions for pensions and for the savings along with the way they tackle the complications of making plans of saving, those hardships are true and should be taken under consideration while making saving and decisions of investment. Financial counseling impacts financial decision making towards good saving and investment decisions (Lusardi and Mitchell, 2005).

Lack of experience sometimes leads towards lack of innovation in decisions and high level of risk exposure. As study suggests People don't save enough for retirement and outcome they gather more debt, and of not taking benefit of financial breakthrough (Lusardi and Mitchell, 2007b; Campbell, 2006). People with less literacy are most likely to depend on family and friends as their main source of financial counseling. The financial condition of today's youthis showing big levels of debt. The heavy impacts of gathering more levels of liabilities include bankruptcy (Roberts and Jones, 2001). A mismatch normally found among what individual think to know and how concisely measured financial knowledge (Agnew and Szykman, 2005).

(Chou et al., 2010) emphasize that behavior of investor is influenced by past experience. An experienced investor has more tendency of selecting risky portfolio, because he gone through experiences how to tackle it properly. Good or not better experience of investor will impact the risk tolerance degree of investor and investment decisions. Successful past investment experience promising towards high risk tolerances which generate high returns evidently. So the past investment behavior is positively related with risk tolerance which in face effect investment decisions

It has been revealed by the work of (Corter and Chen, 2006) that here is a relationship between investment experience and risk tolerance during investment decision process. But they take the sample of 63 graduate students and conclude that an experienced investor sow he attitude of high risk tolerance by choosing risky portfolio of investment.

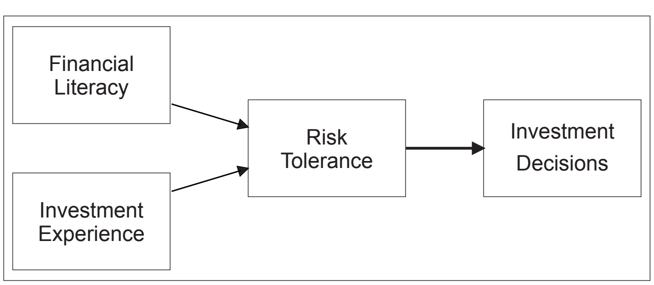
(Roszkowski and Davey, 2010) also support this finding that experienced investors having more ability to hold risky investment than investor having no experience. An experienced investor is confident about the skills and past experience he has which make him known with the condition. With enough financial qualification, information and also experience investor will help manage to manage pool investment according to desired objectives and in accordance with time match with bigger degree of risk tolerance. As an outcome risk tolerance and experience with investment having significant correlation, where higher investment experience it lead the investor towards high risk tolerance. On the basis of above empirical analysis we can formulate following hypothesis.

H2: Investment experience is positively related with investment decisions mediated by risk tolerance.

5. METHODOLOGY

5.1. Empirical Model

on the basis of above hypothesis we can formulate a general model showing the mediating relationship of risk tolerance between financial literacy, investment experiences and investment decisions.



5.2. Variables

1. Financial literacy (IV)
2. Investment experience (IV)
3. Risk tolerance (mediating)
4. Investment decisions (DV).

The model gives the demonstration of variables and the relationship among them. hypothesis are devised on the basis of model which after testing concludes that Financial literacy and investment experience in the presence of risk tolerance leads towards better investment decisions.

6. CONCLUSION AND FUTURE IMPLICATIONS

This paper tries to construct a theoretical model that proves to be useful for the investors while making the investment or designing portfolio. The process of decision making becomes easy when all the confounding variables are well recognized by investors that direct them to make the right decision and hence losses can be avoided or reduced in the future. During the period of investment decision making, investors' encounter to highly complex factors such as risk, ambiguity, and choice overload. These are challenging for financial professionals, experienced investors, and especially the ordinary private household.

Investors have to chase risks in their financial decisions. Higher investment experiences and financial literacy will lead to greater risk tolerance and investor then have to choice risky investment securities to match with their high level of risk tolerance experienced investors have a portfolio of good and bad experience. A wise investor learns from past experience to tackle risky situations and handle it properly. By the increased level of knowledge about financial information and the increased ability of analyzing that information, investor can improve the capacity jump into risky investments for earning high returns by managing investment efficiently. Our research proves to be valuable as it has explored this impact as well. Financial literacy which is also related with the knowhow of factors such as inflation, compounding interest and diversification of risk, as the analysis of these factors also helps to go for appropriate decisions.

This study proves to be a milestone for future researchers while incorporating risk and other factors that affect the investor decision making process in Pakistan. Moreover for investors this research is helpful while acquiring financial information they would be aware that how much knowledge they must have to cope up with risky situation and how investment experience would help them to handle risky investments. Little attention has been given in Pakistan to determine factors that affect decision making process. Financial literacy proves to be an important determinant while further research is required to explore further dimensions like influence of investment experience. Area of investment experience with its own dimensions either positive or negative need to be explored more.

As in previous studies only questionnaires were used as instrument, there must be the usage of other research tools to make the data more authentic. Because of the economic and political instability of Pakistan the results might vary in context of other economies having different economic and political conditions. Qualitative studies like interviewing the investors to get insight about how these factors are impacting and many other factors that influence the investment decision making can be explored.

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