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Impact of Financial Literacy and Financial Interest on Risk Tolerance

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Abstract

The level of financial literacy in Pakistan is the subject of this research. Financial literacy or financial knowledge is inherently used to measure the need for financial education and analyses shifts in financial risk-taking propensity. What the study shows is that those with more financial knowledge are the ones who save more. Investors and the general public cannot avoid having enough understanding and information regarding the working of financial institutions and markets, kinds of risks and return, which indeed is beneficial for the development of the economy. The research questions of this study are as follows: What is the role of financial literacy and financial interest in risk tolerance? In the present study, data was collected through structured questionnaires from 210 respondents of Pakistan through convenience sampling technique. In this work correlation and regression analysis were used to analyze the data. The result shows that financial literacy and financial interest has a positive impact on the investment decision. The use of convenience sampling methods as well as the use of a small sample size. The financial literacy is acknowledged as the primary competence of the people operating in the financial markets. It has a great importance in establishing the context that fosters the targeted financial behaviors. It assists people in reaching wise financial decisions that will not have them losing their hard-earned money. It is the issue for both developed and developing nations alike. In Pakistan financial illiteracy is considered as the primary cause of low level of Financial Inclusion.

***INDEX TERMS: F**inancial interest, Investment behavior, risk tolerance and Risk management*

INTRODUCTION

The financial risks remain a crucial component of the economic processes and impact the related decisions that concern risk taking behaviors (Kannadhasan, 2015). Risk tolerance therefore defines to what level of risk an individual will be able to take while decision making. It involves four dimensions: Financial, physical, social and ethical. It is well emphasized in professional practice and empirical research related to planning for retirement, savings, asset management and insurance. Economic status, age, and, in particular, marital status and financial literacy also affect decision making (De Bruin, Parkeer & Fischof, 2007; Stanovich & West, 2008). Advanced financial decisions involve skills or maybe undertook through an academic process for the best outcome.

Knowledge of financial matters is vital in the financial markets (Kefelaa, 2010). It helps to enhance the financial position of individuals because it helps them to determine high risks and/or the probable returns on investment. Investigations also underline the importance of financial literacy to enhancing total desirable monetary conduct (Grosman et al., 2016). Risk reduction can be achieved through educating people in that way people will be able to avoid making wrong decision (Kefelaa, 2010). Bannier and Neubert (2016) point out that the knowledge of financial risks, can contribute to the effectiveness of managing them. Individuals with high levels of financial literacy have a high tendency to patronage risky securities compared to those with low level of financial literacy (Asaad, 2015).

While financial literacy programs are recommended, their effect on behavior is still contentious. The randomized trial of Hetling et al. (2016) supports the notion that effective and engaging financial education is effective, applicable and financially effective. In the study, the survivors had the most to gain when the education was being accompanied with life ordinary support and advice. This corresponds with Babiarz & Robb's (2014) finding that access to advice enables people to apply financial information in their context, making it more appropriate. Financial interest according to Okičić and Selimović (2017) influence those with little information in them. Financial interest means the desire and interest an individual has in the economic markets which determine his or her tenacity in attaining financial success (Von Culin et al., 2014). It is consistent with intrinsic motivation, where people motivated by interest show more effort. Cognitive: Financial literacy is a/core knowledge while interest is a motivational factor that leads to participation (Schiefele, 1991).

PROBLEM STATEMENT

The first one is related to the low and diversified level of financial literacy and risk tolerance. This paper agrees with Eniola & Entebang (2016) where they pointed out that many people do not invest because they do not have adequate information. This is a big issue all over the world, but more so in countries like Pakistan that are still in the developing stage of their financial literacy, where only 13% of the population has a formal account in the bank (Ghaffar & Sharif, 2016). Lack of knowledge of stock markets as well as investment funds lowered risk taking behaviors. Previous literature focuses on financial literacy and interest but lacks studies that relate both to risk taking in Pakistan thus where this research seeks to fit in.

SIGNIFICANCE OF THE STUDY

One of the investment and savings decisions which requires understanding of the financial risk tolerance is saving on the household's level. Management of risk tolerance creates better risk diversification and portfolio management or asset allocation (Misra et, al., 201)9. Financial literacy enables persons to make the right decision with skills on how to minimize risks to enhance decision making skills (Maman and Rosenhek, 2020). More financial literacy improves people's ability to invest, save, and prevent theft as it hones retirement planning (Dickason & Ferreira, 2018). It is the intention of this paper to bring into focus the enhance of financial literacy and interest so as to foster better financial conduct and enhanced risk taking.

LIRATURE REVIEW

Financial risk tolerance according to Rabbani et al., (2017) is the fluctuation in returns that investors are ready to face at the time of the financial decision. Age, investment behavior and risk-taking aptitude influence the risk tolerance (Kannadhasan, 2015). Many other factors including income, education and others are used to identify risk taking ability with regards to socio-economic factors (Bucciol et. al, 2017).

Definition of Financial Literacy

Financial literacy entails knowledge that pertains to, expenditure, savings or budgeting (Kumari, 2020). They consist of finance knowledge and skill in the management and planning of resources (Garg & Singh, 2018). It helps people to develop some key competencies, including budgeting and investing, at the same time, one can grasp some fundamentals, including debt, interest, and planning (Firli, 2017).

This is true because obtaining financial literacy makes one an independent person, thus no making wrong credit decisions. The components that should be included in the quest for financial knowledge include spending plan, expense tracking, credit utilization, and one's financial future. There can be more inefficiency in the usage of money and financial resources in people who are not financially literate; on the other hand, more knowledge about finances allows achieving certain goals, being aware of fraud cases (Er & Mutlu, 2017).

Mitchell (1982) described motivation as the direction, intensity, persistence to achieve objectives that affects financial behavior. It has been established that motivation can be used to increase financial literacy (Mandell & Klein, 2007) and low motivation is likely to lead to low savings amongst families of low income (Hogarth & Angelo 2003). Motivation also influences financial behavior because people with financial objectives direct their activities efficiently (Locke et al., 1981).

Financial literacy differs from financial capacity: literacy is defined as the ability to comprehend financial instruments while capacity means the ability to handle financial information (Huhman & McQuitty, 2009). Literacy is a matter of memory while capacity is a matter of learning. Lack of reading skills hinders one from making sense of some of the most detailed financial ideas. Literacy tests used in research that measures financial literacy also involves test such as inflation knowledge test (Almenberg & Widmark, 2011).

Idea of Financial Interest

Financial interest means that a person is an active participant and a spectator in monetary markets and has a fascination with monetary affairs (Koch and Kuckertz, 2022). It can also mean equity holding where it contains obligations as well as rights connected to an investment (Collins, 2022). In the Marginalists' theory, financial interest off-sets consumer impatience by matching it with the returns from long-term investments (Rozak et. al, 2022).

The financial interest is a strong driver of people's engagement with financial products in decision-making processes regarding economic investments. In the case of auditors, there is conflict-free relationships with clients to eliminate compromise of independence in professional service. Interest in financial markets makes people act towards the achievement of economic growth and financial stability proactively.

Concept of Risk Tolerance

The author defined risk tolerance as the precise level of risk an individual is comfortable with in regard to the financial decisions being made (Kannadhasan, 2015). Research shows that generations with longer time horizons are more likely to be more risk taking, and men are more risk taking than women (Settersten et al., 2020). Nonetheless, according to McBride (2022), psychological factors, and market and gender determine how people manage risk.

Research by Snyder and Nicholson (2011) shows that most people are risk-adverse meaning they will avoid anything that

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can go wrong than to take a chance and end up failing or worse. Speculative people, however, prefer risky options when expected value is equal to that of a risky option (Weber and Milliman 1997). Risk neutral people nonchalant about guaranteed or risky outcomes acting solely in the best interest of their expected worth (Peroff, 2022).

Portfolio Theory

Modern portfolio theory lays more emphasis on the ability of the investment to add value to the portfolio (Sewando et al., 2022). To achieve higher returns while exposing oneself to less risk it is wise to invest in other securities. Corporate investors optimize their exposures to risks and returns having a target attitude toward risk, Desirable Returns, and Risk, DR and R.

According to Markowitz, reasonable investors want high return for high risk and so create their portfolio. The risk management process incorporates financial literacy as a major factor by improving the quality of decisions and increasing the yield. Portfolio management means identifying and including securities that would deliver anticipated return, without exceeding tolerable risk (Sewando et al., 2022).

As will be described below, risk tolerance can fluctuate due to the individual's circumstances and the state of the market. For instance, Hoffman, Post and Pennings (2013) found that in the Global Financial Crisis (GFC) risk appetite was more or less reduced for some time but was back to gradual normalcy as the markets began to gain stability. And while some of the works claim that risk tolerance is constant and does not depend on external conditions, others indicate that it is relative (Roszkowsky & Davey, 2010).

According to Cooper et al., (2014), attitude, knowledge, and capacity are fundamental dimensions of risk tolerance. Knowledge of these elements enables the detailed construction of risk profiles. Other variables include risk perception, risk preference and risk-taking propensity (Sitkin & Pablo, 1992). Risks perception is an assessment of certain risks, and risk appreciation is the attraction towards risks; risk eagerness is the degree of willingness to assume or avoid risks.

Overall, the expected utility model or a framework of evaluating financial risk tolerance implies that consumers make a choice that will yield the highest amount of expected value (Frank, 2009). Neumann and Morgenstern's theorem supports this assertion further points that people act rationally in conditions of risk by making efforts to maximize the utility.

Impact of financial literacy and risk tolerance

The primary aspect of financial literacy provides effective guidance of financial decisions and an individual's risk tolerance perspective, allowing the management of personal finances. This includes appreciation of some financial principles such as inflation, saving, investment and managing risks (Lusardi & Mitchell, 2014; World Bank, 2013). When people fail to manage money accordingly, they cannot live the best economic life since its meaning is not well understood by the users (Remund, 2010). Literacy financial makes the people to plan on the financial future, to aim at saving as well as to plan on future investments, thereby helping the people to make sound decisions on the finances (Braunstein & Welch, 2002).

An important correlation between financial literacy and investment activities is observed. People with a good amount of financial literacy invest more actively in high risk and high return options like stocks because they have knowledge about the risks involved in the market (Koomson et al., 2020). Nonetheless, financial literacy creates psychological and financial hurdles leading to market exclusion. Other barriers to investment include fixed costs which are incurred whenever one has to enter a market, for instance time and money. Financial literacy eliminates these hurdles making it easier for individuals to engage in the financial markets (Hc & Gusaptano, 2020).

The Greater Fool Theory postulates that people who understand finances make good, timely returns on market trends, while those who do not understand finances overestimate the risks, thus making poor decisions financially (Morgan & Long, 2020). In addition, financial literacy assists in eradicating the behavior gap that influences investment decisions and subsequently improve the management of financial risks (Hermansson & Jonsson, 2021).

With financial literacy as an established concept in influencing the risks and decisions of people in financial markets. The last findings reveal a significant relationship between financial literacy and risk taking suggesting that people with higher level of financial literacy are willing to accept risks associated with investment and are more likely to seek higher risks (Waheed et al., 2020). This relationship enhances financial conduct by making provision for wealth creation and planning for retirement.

The knowledge of finance enhances the ability of individuals to apply their knowledge in the market thus reducing psychological factors that hinder the market. Research shows that those with higher financial literacy have higher levels of risk taking, participate more actively in the purchase of stocks and various high-return financial assets (Hermansson & Jonsson, 2021). Enhanced literacy helps people to set proper expectations of market fluctuations and reduces irrational influence on investment actions (Morgan & Long, 2020).

A paper by Kadoya and Khan (2020), validates that financial literacy also improves risk taking capacity and results in improved financial performances such as savings and investments. This effect is well explained in the retirement planning where the financially literate are more likely to invest in pension funds and review their portfolio according to the market forces (Zaimovic et al., 2023). This adaptability can be explained by increased readiness to take financial risks, which is necessary to achieve stable financial security.

Research has found evidence to show that financial literacy is significantly related to risk Taking. Financial literacy

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increases the ability to accept investment risks and perform risk-taking activities (Waheed et al., 2020). Higher financial knowledge is not only useful for buying stocks of more risky portfolios but also for reaching long term financial goals. They endorse diversification and build trust in handling retirement funds so that people will be able to address market movements effectively (Zaimovic et al., 2023).

Requirements for participating in the stock market decrease significantly for financially literate people because they recognize complex securities. This knowledge eliminates the psychological factors that hinder investment such as market risks and low self-efficacy in finance (Kadoya and Khan, 2020). Information campaigns also help to decrease participation costs as people get the necessary knowledge and self-confidence for rational financial choices (Khorunzhina, 2013).

Hence hypothesis:
H1: Financial Literacy will have a significant impact on risk tolerance.

Impact of the financial interest and risk tolerance

A financial interest means a fiscal stake to be made from ownership of investments or business dealings. It is usually measured in percentage terms giving the extent of control or authorities shareholders have in a firm. Other determinants include cash availability also called liquidity, inflation levels, time horizon of the loan to be disbursed and chances of loan default. The relationship between self-interest and risk has received much attention from scholars and policy makers; hence, the way people manage financial risks and returns. Other research has highlighted some of the factors that underpin financial literacy with reference to financial interest and risk taking. Knowledge about financial instruments enables investors to make good decisions, especially on issues related to mutual funds and equities. A survey conducted in 2021 has further revealed that those with higher financial literacy risk taking propensity and use of financial instruments are higher. It prepares them better for the risk and return of financial products, thus enhancing their financial literacy, and financial quality (Hermansson et al., 2021). Prospect theory by Kahneman and Tversky which extends a criticism of the expected utility theory provides other concepts regarding risk taking. Relative to total gains, people measure change in gains and losses of wealth, and losses are valued negatively more than gains are valued positively. This behavioral approach reveals how cognitive errors influence the financial decision making and avers that knowledgeable investors may make unwise decisions at times. It is still relevant for the identification of non-standard behaviors in financial decision making that fall out of the purview of standard neo-classical economics (Kahneman & Tversky, 1979). Another finicky type of financial behavior is situational interest – temporary interest that originates from a new stimulus that is associated with strong emotions. For example, students who have no inclination towards science subjects can be motivated momentarily when they meet some interesting topics on television, but the interest is likely to die out quickly, if no further encouragement is given. Such a notion is backed up by the findings of educational psychology concerns regarding situational interest and its impact on cognitive presence and learning achievements (Hidi & Baird, 1986).

Research has pointed out that people with higher E.I. are more inclined to endure financial risks since E.I. helps one cope with the emotions of risks in investment. Financial literacy when combined with emotional intelligence improves financial behavior by helping people make better financial decisions under conditions of uncertainty, (Dhiman & Raheja, 2021).

The correlation between financial literacy, interest, and risk tolerance means that financial literacy should be popularized, especially with the young. As this research goes on, governments are also advised to incorporate financial literacy programs in curriculum, in order to improve financial decision making among individuals of different ages (Gerrans et al., 2023).

In psychology, intrinsic motivation describes the difference between the rewards (Internal& External).

H2: Financial Interest will have a significant impact on risk tolerance.

EMPIRICAL REVIEW

In the study conducted by Bellani & Arpino, (2022) on the subject of the importance of financial literacy & risk tolerance: a study of gender inequalities in Pakistan's textile industry, the researcher has elaborated the study objective as the focus on risk tolerance with emphasize of decision making. The findings are centered on longitudinal data from the Government of Pakistan as well as Surveys. Also, it looks at how gender differences in financial literacy and risk tolerance can act as a moderator along risk tolerance. According to this research, financial literacy had a favorable and strong association with risk tolerance; therefore, it has a considerable impact on investment decisions. Risk tolerance has a small but favorable influence on investment decisions.

According to Rabbani et al., (2017) the qualitative approach is used to interpret the summary of the interview data. This research empowers executives can provide employees with basic financial services. Management could be directed as to what should have been underlined and what needs to be changed to improve textile workers' financial literacy. Employers may play a critical role in raising employee awareness as well as educating them about financial Knowledge, financial planning, as well as retirement planning.

The influence of financial inclusions and financial literacy on stock exchange engagement in Ghanaian is investigated in this research. The researcher included a sample of 2000 respondents and used a bi-profit framework to examine the collected data. In contrast, a comprehensive profit model is employed to investigate the influence of financial inclusions and financial literacy on share price engagement separately as

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well as in combined. The result of research had concluded that financial inclusion positively impacted the financial literacy, but the financial literacy isn't a factor in share price engagement in Ghana, according to past research. Furthermore, share price engagement is highly influenced by financial inclusions through the use of a savings account. Lastly, there is little compelling evidence influence of financial literacy as well as financial inclusions on stock exchange engagement.

Furthermore, the study by Agustina, (2022) explains the 'Mediating Financials Literacy to Modify the Underlying Determinants of Financial Satisfactions.' The objectives of this research are to examine the financial problems, and household debt affects financial contentment, utilizing financial literacy as a mediator. Employing quantitative research approach, the study was conducted on Hasyim University academics and academic staff. Using a survey sample size of 50 participants, researchers tested hypotheses through the Partial least square method with structural equation modeling. Financial problems impact on financial satisfaction. Secondly, household debt isn't conclusively demonstrated to impact financial satisfaction, and financial literacy affects financial satisfaction. Lastly, the engagement among household debt & financial literacy does not have an impact on economic problems. The engagement among financial problems & financial literacy did not affect financial satisfaction, according to the findings of the study.

The impact of financial literacy on debt possession, financial distress, as well as tolerance for risk in older people is investigated in this study. The findings imply that financial literacy is critical for retirement preparedness in New Zealand, contrasting with previous data that financial literacy is not correlated with retirement income. The correlations between financial literacy as well as tolerance for risk, and also financial literacy & debt anxiety are complicated and fluctuate by sub-population cohorts, implying that presuming a simple nature among these variables could lead to erroneous relationships generalization as per the study by Noviarini et al., (2021).

Scientific Approach

The relationship between the theory and practice in the social sciences research field that is inductive and deductive approaches (Saunder et al., 2012). Induction is first to collect the data as the researcher to explore the phenomena and then to build a theory (Saunder et al., 2012, p.145). This approach is much more suitable when qualitative data collection is used (Saunder et al., 2012, p. 163). In contrast, the deductive approach is explained as the approach that is appropriate to use when the purpose of the research is to test the correlation between two variables by using the quantitative research method. In the deductive approach, as a researcher will start with a theory that is derived from literature and then designs a strategy to prove that theory (Bryman & Bell., 2011, p. 13). The main characteristic of the deductive approach is the aim of generalizing the outcomes that are received over the specific population; thus, the sample must be adequate size (Saunder et al., 2012, p. 146). So the deductive approach uses literature and previous studies, so it is the most suitable approach. In this approach, first we read the literature and past studies, then we process the theories. Then statistical test can be done to see the correlation between the different variables, and in the end, conclusion will be drawn from the results.

RESEARCH STRATEGY

Qualitative and quantitative methodologies are the two different methodologies in the research science (Bryman & Bell, 2011, p.26). In the qualitative method, generally, the researcher uses non-numeric data instead of numeric data (Saunders et al., 2012, p.161). In the qualitative method, rather than statistical data, it relies on the words (Bryman & Bell, 2011, p.27). The outcomes of the qualitative method cannot be generalized because the collection methods of the data often are restricted. This can also be due to the because of limited no of participants that are part of the study because of different methods used for the collection of data, for the instance, interviews and like that (Bryman & bell, 2011, p. 408). Whereas the quantitative method is mostly used for the collection of numeric data (Saunder et al., 2012, p. 161). Those who are using this approach are intended to generalize the findings, like the correlation between the different variables, by using the statistical measures (Bryman & Bell, 2011, p. 163-164). The most appropriate method for the usage in the research study is the quantitative method. As the purpose of this research study is to measure the association between the said variables by using the statistical analysis, which is consistent with per quantitative method, and if to do this research study with the qualitative research, it would be more difficult to interview for the instance to find the correlation between the variables due to limited sample size. The research studies that have a purpose of identifying the association between the said variables are usually linked with the explanatory study and are further used in this research report (Saunders et al., 2012, p.172). Case studies, surveys, and experiments, etc., are the different research strategies (Saunders et al., 2012, p.173). The benefits of the questionnaire are that it is cost-efficient, the interviewer effect is eliminated and that there is a larger sample size. Besides the benefits, it also has some drawbacks that are, for instance, the respondent cannot get the further explanation about the questions, and its drawback is also that it is not possible to say that the right person has answered the questionnaires (Bryman & Bell, 2011, p. 233). But their beliefs that the benefits of questionnaires are dominated for this type of research study.

Criticism of Sources

Literature sources available are mainly divided into three categories that are primary, secondary, and tertiary sources (Saunders et al., 2012, p.82). The source that occurs for the first time, like reports or some government publications, etc., is known as primary resources (Saunders et al., 2012, p.83). On the other hand, literature built on the basis of primary sources like books, articles, and journals is known as secondary sources (Saunder et al., 2012, p. 83). Tertiary literature is the last source which is designed to help out to find both the primary and secondary sources like indexes and

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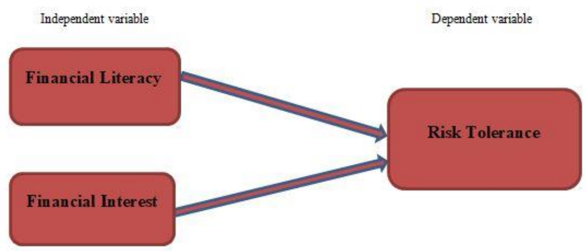
databases etc. (Saunders et al., 2012, p.83). Keywords that are used in this research were financial literacy, risk perception, financial risk tolerance, financial decision making, and behavioral finance. To keep the quality of the report and increase its reliability, only original source has been used in this research study.

Conceptual Framework



The conceptual framework presents the visual and graphical representation of the relationship between dependent and independent variables. The Financial Literacy and Financial Interest are the independent variables whereas, the Risk Tolerance is the dependable variable. According to Goyal & Kumar, (2021) the conceptual knowledge about financial elements, including skills such as investing, budgeting, lending, taxation, as well as private finance management, is referred to as financial literacy. Being financial illiterate refers to a lack of such skills. The Lusardii et al., (2021) explain that people who are well educated are well known to tackle the difficulties in managing the money and money deals. Loaned and credit/debit card investment, as well as medical insurance, financial literacy is critical in recent times.

As far as Financial Interest is concerned, according to Hermansson & Johnson, (2021), fiscal interests would be a share of ownership inside an entity's equity or debt asset, as well as the duties and rights to obtain such a share. Since these interests can affect the examiner's degree of objectivity in connection to the client, an auditor is keenly interested in the amounts and types of economic interests it possesses in an attest client. Due to a lack of independence, the researcher may be forced to discontinue a certification contract.

METHODOLOGY

The methodology that is conducted in this research study. It consists of population, sample, instrumentation, research design, data analysis procedure, and statistical tools which are used for the analysis.

Population and sampling

The population is a set of people, activities, and things connected with interests that the researcher wants to investigate (Sekaran, 2001). The population of this study is investors who trading in Pakistan stock exchange and banks. Pakistan stock exchange provides a reliable, liquid, and efficient marketplace where investors buy and sell stocks. Due to the large number of populations in this sector, it is not possible to cover all employees due to different constraints such as time scarcity, recourse scarcity and cost. Hence a sample was selected to collect data from this industry. The sample size selected from this study was 210. Using the convenience sampling technique, data for this study was collected from 250 respondents in Pakistan. A structured questionnaire was used to collect data from the respondents. A covered letter was attached, which explained to respondents that the purpose of study participation was voluntary confidentiality, and anonymity was ensured to the respondents. Distributed 250 questionnaires among the respondents, out of which 230 were received back out of those 210 were useable, so the response rate of the study is 84%.

In order to collect data from the selected sample, it is important to select a sampling strategy as well. The sampling strategy used in this study is non-probability sampling, i.e., convenient and judgmental sampling. The companies were first contacted by a reference person, and the respondents were requested to participate in a survey. Questionnaires were sent through emails and hard copies for their convenience.

Measures used

Dependent variable

Risk tolerance (RT) is related to the acceptance of the outcomes of risk should they occur and having the right resources and controls in place to absorb or "tolerate" the given risk, expressed in qualitative or quantitative risk criteria. Risk tolerance was measured using 03 items scale (Dohemen et al., 2011; Grable & Lytton, 1999).

1. I can accept losing part of my saving if the chance of getting a good return is great
2. I think one has to take risks to gain something
3. I would like to increase risk because the return is too low

The answers are indicated on a Likert scale where (1) strongly disagree, (2) disagree, (3) natural, (4) agree, (5) strongly agree respectively.

Independent variables

Financial literacy (FL) is the confident understanding of concepts including saving, investing and debt that leads to an overall sense of financial well-being and self-trust. Financial literacy was measured using 06 items scale of (cf. Gannarson & Wahlund, 1997).

1. How high is the central bank's inflation target?
2. If there is a risk that the inflation will exceed the inflation target, what should the central bank do?
3. If the nominal interest rate is 5% and the expected inflation is 2%, how high will the real interest rate be (approx.)?
4. A saving product where you will receive a guaranteed amount at maturity, and the return follows the equity market, is called:
5. Mutual funds have different risk levels; which of these mutual fund types is generally viewed as having the highest risk?
6. The definition of/E- ratio is:

Respondents were instructed to select one of the four alternatives, including the alternative "I don't know."

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Financial interest (FI) is an ownership stake in an equity security or debt security issued by an entity, including the rights and obligations to acquire an interest. Financial interest was measured using 03 items scale of (cf. Hidii, 1990; Schiefele, 1991).

1. I am interested in economic matters and financial markets
2. I follow the media about developments on the financial markets
3. I follow the media about the development of new saving products

The answers are indicated on a Likert scale where (1) strongly disagree, (2) disagree, (3) natural, (4) agree, (5) strongly agree respectively.

Research design

Research design is the plan of action. Zikmund, (2003) explains it as a researcher's plan in which all process and methods of collection and analyzing of the data is done. It includes the type of study, time horizon, and unit of analysis which are discussed below.

Type of study

This is a causal study where the impact of financial literacy and financial interest on risk tolerance was measured on the basis of self-reported perception.

Time Horizon

The data were collected in two months for this study; the data in nature cross-sectional and collected at one time.

Unit of analysis

It is defined as an individual or object which is further to be analyzed. It may be some group or consists of different groups, maybe some firm or country from which the data can be collected. In this research study, the unit of analysis is individual public and private financial base organization's employees from the twin cities of the Pakistan i.e., Rawalpindi and Islamabad.

Data analysis

Correlation and regression analysis were used to analyze the data. That model is very useful and easy to explain the study variables effectively. SPSS software is used for testing data.

Reliability of scales

The reliability of the variables is checked through the Cronbach's alpha. It shows the reliability and consistency in the scales of variables that are used for the measurements. If the value of the Cronbach's alpha is more than 0.7 then it is reliable (Nunnally and Bernstein, 1994).

Cronbach's Alpha
Table 3.1

Variables	Cronbach's alpha	No. of items
FL	0.761	6
FI	0.918	3
RT	0.866	3

FL=Financial Literacy, FI=Financial Interest and RT=Risk Tolerance

It means internal reliability of scale means all items of the questionnaire should measure the same thing so that they can correlate with each other. Usually, reliability tests are used to check the consistency of the results generated by any measuring tools and technique by using the same test twice or after some time/interval. Cronbach's alpha range is from 0 to 1.1 means higher reliability of the scale, and generally, above than 0.7 value is considered as reliable. The above table shows the internal consistency of the scales and shows that all variables have reliable alpha values, i.e., above than 0.7. 0.91 is the highest alpha's value and is used to measure the financial interest, whereas risk tolerances have 0.8 and financial literacy have 0.7 Cronbach's alpha value.

Econometric model

A model specified to test the hypothesis is as follows;

$RT=\beta_0+\beta_1FL+\beta_2FI+\varepsilon$

Were,

FL=financial literacy

FI=financial interest

RT=risk tolerance

ε = error term

RESULT AND DISCUSSION

The purpose of this section is to provide detailed empirical evidence of the study. This evidence is based on providing comprehensive results, which include descriptive statistics, correlation analysis and regression analysis.

Descriptive statistics

Table 4.1

Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
FLMEAN	210	1.00	4.00	2.2876	.71692	.708	.168
FIMEAN	210	1.00	5.00	3.0460	1.26940	-.094	.168
RTMEAN	210	1.00	5.00	3.0762	1.26605	-.304	.168

N=210, FLMEAN=Financial Literacy, FIMEAN=Financial Interest, RTMEAN=Risk Tolerance

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Table 4.1 shows the descriptive statistics. The minimum value of financial literacy was 1, and the maximum value was 4. The mean value of financial literacy was 2.28, whereas the standard deviation was 0.71. Standard deviation measures the dispersion among data sets. The result shows that there are 0.71 variations among the data set. The Skewness of financial literacy is 0.708, which is in between 0.5 and +1, which shows positively skewed, i.e., data is moderately skewed. The minimum value of financial interest was 1, and the maximum value was 5. The mean value of financial interest was 3.04, whereas the standard deviation was 1.26. The result shows that there are 1.26 variations among the data set. The Skewness of financial interest is -0.094 which is in between -0.5 and 0.5, which shows data is fairly symmetrical. The minimum value of risk tolerance was 1, and the maximum value was 5. The mean value of risk tolerance was 3.07, whereas the standard deviation was 1.26. The result shows that there are 1.26 variations among the data set. The skewness of risk tolerance is -0.304, which is in between -1 and -0.5, which is negatively skewed, and the data is moderately skewed.

Correlation analysis

Table 4.2

Variables	FL	FI	RT
FL	1		
FI	-0.022	1	
RT	-0.123	0.714**	1

FL=Financial Literacy, FI=Financial Interest, RT=Risk Tolerance

**. Correlation is significant at 0.01 level

Table 4.2 shows the correlation analysis between the variables that are financial literacy, financial interest, and risk tolerance. The correlation between the same variables always remains the tables 4.2 shows that the Pearson's R of financial literacy and financial interest, i.e., the correlation coefficient is -0.022, which means that it is negatively correlated with each other, whereas significant value, i.e., P=0.75, which is greater than 0.05, which shows that there is no statistically significant relationship between financial literacy and financial interest. The Pearson's R of financial literacy and risk tolerance, i.e., the correlation coefficient is -0.0123, which means that it is negatively correlated with each other, whereas significant value, i.e., P=0.075 which is greater than 0.05, which shows that there is no statistically significant relationship between financial literacy and risk tolerance. The Pearson's R of the financial interest and risk tolerance, i.e., the correlation coefficient is 0.714, which means it is positively correlated with each other. In contrast, the significant value, i.e., P=0.000, which is less than 0.05 which, shows that there is a statistically significant relationship between financial interest and risk tolerance i.e. increase or decrease in one variable, it relates to an increase or decrease in the second variable.

Regression Analysis

Table 4.3

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	1.350	0.253	5.330	0.000
FL	-0.019	0.085	-2.234	0.027
FI	0.709	0.0481	4.780	0.000
R				0.722
R-square				0.521
Adjusted R-square				0.516
F-statistics				112.509
Prob (F-statistics)				0.000
N				210

C=Constant, FL financial literacy, FI=financial Interest

In table 4.3, the model synopsis depicts the Pearson R is 0.722, and R Square is 0.521, and this quality is measured by taking R Square of the worth R=0.722, Adjusted R Square is 0.516, which is utilized to clarify the disparity in financial literacy, and financial interest is dictated by risk tolerance execution. I utilized Adjusted R Square to escape eager overestimation of right esteem in the population. This prescribes 51.6 varieties in financial literacy, and financial interests are elucidated by risk tolerance execution.

In the table, F quality is 112.5, F value greater than 1 yield efficient model, the F value is greater than 1. Hence, the model is good, and P is 0.000, which is less than 0.05, which shows that it is significant and illuminates that the model utilized as a part of this study clarified that there is a real significance impact on financial literacy and financial interest on risk tolerance shows the positive relationship.

Table 4.3 also describes the relationship between the independent variable and dependent variable with their coefficients. The T statistics is the coefficient divided by its standard error, and the standard error is the estimate of the standard deviation of the coefficient. The significance value of financial literacy is P=0.027 which is less than the significance worth 0.05, which demonstrates the critical impact between these variables. The Beta Coefficient is β -0.019, which shows that there is a significant negative impact of financial literacy on risk tolerance. The coefficient value explained as one level increase in financial literacy results in a decrease in 0.019 level in risk tolerance. The results are showing that H1: Financial literacy have a significant impact on risk tolerance is accepted as a result are showing a significant relationship between the said variables.

The findings of this study in respect of financial literacy and risk tolerance are consistent with the findings of empirical studies by Luhrmann et al., (2015) and (Nguyen, 2017).

Financial literacy has a significant impact on risk tolerance, and results show a significant relationship between the said variables. It means that if the people are getting financial knowledge, it must bring some change in the risk tolerance, and results show that the more the people literate more they

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will be well known to the risk tolerance Luhrmann et al., (2015) and (Nguyen, 2017).

The significance value of financial interest is P=0.000 which is less than the significance worth 0.05, that demonstrated the critical impact between these variables. The Beta Coefficient is β=0.709 which shows that there is a significant positive impact on risk tolerance. The coefficient value explained as one level increase in financial interest results in an increase in 0.709 level of risk tolerance. The results are showing that H2: Financial interest have a positive impact on risk tolerance and is accepted as a result are, showing a significant positive relationship between said variables.

The findings of this study in respect of financial interest and risk tolerance are consistent with the findings of empirical studies (Awais et al., 2016).

Financial interest has a positive impact on risk tolerance; result is showing a significant positive relationship between the said variables. It means that people have more financial interest shows the more risk tolerance, and results also show that those individuals that are well known to the financial interest can have more risk tolerance same those individuals who have less financial interest have the less financial risk tolerance. However, the changes in the risk tolerance due to the financial interest are minor, but they have much impact (Awais et al., 2016).

Demographic variables

Table 4.4

Gender		
	Frequency	Percent
Male	136	64.8
Female	74	35.2
Total	210	100
Marital Status		
Single	157	74.8
Married	53	25.2
Total	210	100
Age		
18-25	98	46.7
26-40	95	45.2
41-60	11	5.2
Over 60	6	2.9
Total	210	100

Table 4.4shows data regarding the demographic variables of the respondents. In the first section, the Total numbers of respondents are 210, of which 136 are Males, and 74 are Females. In percentage, it shows that there were 64.8% Male respondents and 35.2 % Female respondents in the total study.

The second section of the table shows the marital status of respondents. The total numbers of respondents are 210, of which 157 are single, and 53 are married. In percentage, it shows that there are 74.8% single respondents and 25.2% married respondents in the total study.

The third section of the table shows the age of the respondents. The total number of respondents is 210, of which 98 respondents are between 18-25 age, 95 respondents are between 26-40 age, and 11 respondents are between 40-60 age whereas only 6 are over 60 ages. In percentage, it shows that 46.7% of respondents are between the age of 18-25, 45.2% of respondents are between the age of 26-40, and 5.2% of respondents are between the age of 41-60, whereas only 2.9% respondents are over 60 ages.

Hypothesis testing

Table 4.5

No.	Hypothesis statement	Results
H1	Financial literacy have a significant impact on risk tolerance	Accepted
H2	Financial interest have a significant positive impact on risk tolerance	Accepted

Discussion

Financial risk tolerance can be defined as the larger value of the uncertainty in that someone agrees to accept for the decision-making process. This can be explained as the financial risk can play an important role in manually all-important economic decisions. This research study investigates and compares the effect of financial literacy and financial interest on individual risk tolerance.

Financial literacy refers to the awareness in the knowledge of individuals about the financial products, institutes, and terminologies that are used in daily life decisions making, i.e., inflation interest rate and return rate. Financial literacy may include the individual capability to keep records of daily payments, responsibility, and procedures about the planning of advertisement understanding of life and health insurance, and also planning of future plains and investment (Emmons, 2005). Financial literacy has an impact on individual financial decision-making. There is a strong relationship between wealth growth, financial decisions, and financial knowledge. Developed countries started financial education (Jappelli & Padula, 2013) in their high school to increase the ratio of financial literacy. A recent study by Lührmann et. al, (2015) states that financial education of the student increases their interest and motivation toward financial education and knowledge. These studies were held in german high schools, and these students can consider themselves as financial and the potential buyers. The conclusion of these research studies shows that for the effective financial decision, there must be financial literacy.

For the encouraging stock market participation, there were various programs and activities started to provide the financial education to educate the individual. Financial knowledge is considered as an important factor in the prediction of risk tolerance (Grable & Joo, 1999). Grable (2000) found that the combination of income, financial knowledge, employment, and education of the main influences on risk tolerance in daily life. In the previous literature, the relationship between these variables was also proved (Grable & Joo 1999, Grable, 2000, Grable, 2008; Frijns et al., 2008; Grable & Roszkowski, 2008; Gibson et al., 2013). It was founded in Australian students that those students who are more risk tolerant are usually those who have a high knowledge of finance and financial

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skills (Beal & Delpachitra, 2003). By concluding all these results of previous studies, the researcher develops the hypothesis H1 Financial literacy will have a significant impact on risk tolerance.

The result of these research studies shows that there is a significant negative impact of financial literacy on risk tolerance, and the beta coefficient is negative. These results are showing that H1: Financial literacy have a significant impact on risk tolerance is accepted as the result showing a significant relationship between said variables.

Financial literacy has a significant impact on risk tolerance; result is showing a significant relationship between the said variables. It means that if the people are getting financial knowledge, it must bring some change in the risk tolerance, and results show that the more the people literate more they will be well known to the risk tolerance Luhrmann et al., (2015) and (Nguyen, 2017).

The finding of this study on financial literacy and risk tolerances is consistent with the finding of the empirical studies of Luhrmann et al., (2015) and (Nguyen, 2017).

Interest is defined as it is the amount of ownership that the stockholder has in the firm. Moreover, the interest can be affected by the different factors like the rate of inflation, liquidity, and risk of default. Therefore, the relationship between financial risk tolerance and financial interest has attracted many policymakers and researchers. Financial interest can also be explained as the interest of the owners in the security or any loan security that is referred by the firm to achieve interest, including rights and responsibilities. Many researchers contribute by taking an interest in many traits of academic tasks, which results in some attractive situations (Krapp, 1999; Tobais, 1994). To facilitate and develop an individual interest, situational interest is mainly providing help (Krapp et al., 1992). The sentiments are of two types one is positive, and another one is negative sentiments, and these sentiments are linked with the situational interest and its results in involvement in the interest also (Hidi & Harackiewicz, 2000). The psychological state of the stake or interest is able to be measured and observed by the observer, and the observer can quickly check it. Situation interest can be observed, and interest can be arising, and in further, it can be easily sustained (Hidi & Baird, 1986).

Intrinsic behavior is explained as the behavior which is driven by the internal rewards. In psychology, intrinsic motivation describes the difference between the rewards and that rewards may be internal or external. Investors of the stocks and the mutual funds are usually having a high rate of financial interest. An excellent association had by the financial interest as a bridge to greater amount of risk tolerance. Financial interest appears in the offering of additional explanations towards risk tolerance heterogeneity. The hypothesis developed by studying previous literature that financial interest will have a significant impact on risk tolerance, and the results shows that the hypothesis is accepted as there is a significant positive relationship between the variable financial interest and risk tolerance.

Financial interest has a positive impact on risk tolerance; result is showing a significant positive relationship between the said variables. It means that people who have more financial interest show the more risk tolerance, and results also show that those individuals that are well known to the financial interest can have more risk tolerance same those individuals who have less financial interest have the less financial risk tolerance. However, the changes in the risk tolerance due to the financial interest is the minor, but they have much impact (Awais et al., 2016)

CONCLUSION AND RECOMMENDATION

This chapter comprises the conclusion of my study work. This study analyzes and investigates the effect of financial literacy and financial interest on individual risk tolerance. The data is collected through online questionnaires, and 250 questionnaires were sent to respondents, out of which 230 questionnaires received back 210 are usable. Using the convenience sampling technique and data were collected in two months for this study. The data is analyzed through SPSS software. The analysis shows that both financial literacy and financial interest are related to risk tolerance, and from the results I concluded that financial interest have a significant and higher Impact on risk tolerance as compared to financial literacy. The results show that financial interest have a significant positive relationship with risk tolerance, which means that if the increase in a financial interest, it will also increase risk tolerance.H2 Financial interest have a significant positive impact on risk tolerance is accepted as according to the study of (Awais et al., 2016).

Whereas financial literacy have a significant negative relationship with risk tolerance, it means that if the financial literacy decreases, it will also decrease risk tolerance.H1 financial literacy have a significant impact on risk tolerance is accepted as per the study of Luhrmann et al., (2015) and (Nguyen, 2017).

Implications of Study

This study can help the banking sector, finance advisers, finance professionals, and psychologists in improving their knowledge in order to be aware of risk awareness and opportunities. This study can contribute to literature addition on behavioral finance with respect to study in the Pakistan region; the researcher can conclude the financial professionals' and financial advisor's behavior regarding the risk tolerance and opportunity availing.

Limitations of Study

In the current study, I tried to overcome the existing flaws in all aspects, but still, there are still limitations that must be considered and can be applied in the future. The first limitation of the research is that it is conducted with a small number of sample size. It's possible to get different results by increasing the sample size. The second limitation of this research study is that data is collected from only two cities, i-e, Rawalpindi and Islamabad. The results may be differed if more cities included.

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Future recommendations

Several future research directions can be drawn from the current study on the impact of financial literacy and financial interest on risk tolerance. This study investigates the impact of only a few variables such as financial literacy and financial interest; many other variables like the unemployment rate, personality traits, etc., would also affect the risk tolerance at any level.

Secondly, this study is limited to the geographical region of Rawalpindi and Islamabad. The more regions can be explored for the better results.

APPENDIX

Questionnaire

Scale: Responses to each item are measured on a five-point scale with the anchors labeled: (1) strongly disagree, (2) disagree, (3) neither disagree nor agree, (4) agree, (5) strongly agree.

Section A

Financial literacy

Financial literacy is measured through a quiz including six questions. I developed the questions in accordance with the Swedish context and therefore they differ to some extent from questions used by, for example (Anderson et al. 2017) and (Lusardi, 2008) and (Lusardi,2012).

1. How high is the central bank's inflation target?
 a) 5 to 6% b)7 to 9% c)11 to 12% d) don't know
2. If there is a risk that the inflation will exceed the inflation target, what should the central bank do?
 a) Raise the repo rate b) decrease the repo rate c) no change in repo rate d) don't know
3. If the nominal interest rate is 5%, and the expected inflation is 2%, how high will the real interest rate be (approx.)?
 a) 2.5% b) 3% c)5.5% d) don't know
4. A savings product where you will receive a guaranteed amount at maturity, and the return follows the equity market, is called:
 a) fixed income security b) Equity-linked security c) Debt security d) don't know
5. Mutual funds have different risk levels; which of these mutual fund types is generally viewed as having the highest risk?
 a) Equity fund b) money market fund c) fixed income fund d) don't know
6. The definition of the P/E-ratio is:
 a) Operating income divided by net sales b) Price per share divided by earnings per share
 c) Dividend per share divided by share price d) don't know

Section B

Financial interest

Financial interest was measured using 3 items scale (cf. Hidi, 1990; Schiefele, 1991.Participants were asked to rate how much they agreed with statements relating to themselves on a scale of 1 (strongly disagree) to 5 (strongly agree).

Statements	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
I am interested in economic matters and financial markets	1	2	3	4	5
I follow the media about developments on the financial markets.	1	2	3	4	5
I follow the media about the developments of new saving products.	1	2	3	4	5

Section C

RISK TOLERANCE

The measure of risk tolerance (RT) is assessed through survey questions about the trade-off between risk and return. Risk tolerance preferences are often measured using survey questions (see e.g., Dohmen et al., 2011; Grable and Lytton, 1999). The RT variable comprises three questions raised in the survey: Participants were asked to rate how much they agreed with statements relating to themselves on a scale of 1 (strongly disagree) to 5 (strongly agree).

Statements	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I can accept losing part of my saving if the chance of getting a good return is great	1	2	3	4	5
I think one has to take risks to gain something	1	2	3	4	5
I would like to increase risk because the return is too low	1	2	3	4	5

DEMOGRAPHIC QUESTIONS

Please Circle the Appropriate Answer.

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1. Gender: A. Male B. Female

2. Marital Status: A. Single B. Married

3. Age: A. 18-25

B. 26-40 C. 41-60 D. Over 60

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