

Factors Affecting Expected Return and Re-investment Intention of Stock Market Investors: A Comprehensive Study on Human Psychology during Investment Decisions

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Abstract:

The purpose of this study is to highlight the elements which are substantial in individual investment behaviour. The effect of all factors and their relationship on decision-making by investors explained in this study. For this purpose, the primary data collected through questionnaires from 276 respondents and convenience sampling used to collect data. Statistical tools such as Linear Regression Model and General Linear Regression Model were employed to analyze the data. The study reveals that return expectations decrease with the increase of investment experience of an individual investor. Furthermore, investment message has a significant relationship with risk perception, which shows that investors' risk perception increases using pessimistic information about the economy, and their return expectations decrease. Whilst, by using positive news about the economy, the risk perception decreases and returns expectation increases. This research study was conducted only in Islamabad and Rawalpindi regions of Pakistan. Therefore, only the Islamabad Stock Exchange considered completing the survey.

Keywords: Risk Propensity, Risk Perception, Reinvestment Intention, Behavior Finance, Decision Making

I. Introduction

Investment behaviour is considered as the most important field of behavioural finance because it postulates the psychological aspect of investors and also recognizes the intentions and attitudes of the investors. The relationship between the intentions, attitudes, and behaviours of a person as described in the "theory of reasoned action" (M.

Fishbein, & Ajzen, I., 1975). Moreover, the theory of planned behaviour highlights the linkage between attitudes and behaviours of an investor (Ajzen, 1985).

In traditional financial theory, an efficient market hypothesis confirms the rationality of investors and they update their commitment on receipt of new information (Fama, 1970). Furthermore, according to efficient market theory (EMT), investors always behave in a risk-averse manner, but psychologically, they change their risk preferences with respect to the situation (Kahneman & Tversky, 1979). People have different thinking, desires, needs, and mental ability. Therefore, during decision making, mostly people use heuristics (representativeness, availability, anchoring, and adjustment), biases (anchoring, confirmation, loss aversion) and/or framing effects to make complicated decisions easier and simpler.

The mentality of humans is very much difficult to predict. Therefore, it is difficult to understand the decision-making process of the investor due to its mental complexity. Furthermore, this unpredictability sometimes leads the individual investor to sell low and buy high, by dipping into rising markets and flees when the market falls (Bikhchandani, Hirshleifer, & Welch, 1992; Galbraith, 1993). In addition, financial products are intangible, and the result of the decisions always uncertain, which may lead to poor decision making. Therefore, to understand the decision-making process of a specific investor, it is important to understand the variables or elements, which can influence the decisions of the investor.

The intention of reinvestment is depends on investors nature which affirms future investment experience in stock market positively (Lehu, 2004). The investor feeling of risk can reduce his reinvestment intention for risk aversion and may increase his reinvestment intention. Declining to reinvestment intention helps to reduce the risk perception associated with adverse outcome. Hence, this type of controled and planned behavior is helpful favorable decision making and provide ease in reduction of negative consequences of a a particular decision. In this context, it can be stated that the reinvestment intention is likely to be changed with change in behavior of investor. Moreover, it is proven by social psychologists that finest forcaster of individual behavior is the intention to make any decision. That is the main reason it permits individuals to incorporate experience of previous deciosion to the future decision and can change the behavir (M. Fishbein & Ajzen, 1975). The reinvestment intention of a person in stock market can depends on the level of risk perception.

II. Literature Review and Theoretical Framework

It is difficult to understand the Decision-making process of the investor due to its complexity. The mentality of humans is very difficult to predict. Therefore it sometimes leads individual investor to sell low and buy high, by dipping into rising markets and flee when the market falls (Bikhchandani *et al.*, 1992; Galbraith, 1993). Moreover, financial products are intangible and the result of the decisions always uncertain which may lead to poor decision making. Therefore, for understanding of the decision making process of the investor it is necessary to understand the important variables or elements, which may influence the decisions of the investor. Hence, we can better understand them by building g a model. Moreover, the investor makes decision making by putting all their focus on risk.

Financial risk propensity is the extent of uncertainty or investment return unpredictability that an investor is ready to accept when taking an investment decision (Grable & Lytton, 1999; Davey, 2000). Furthermore, in a financial perspective, risk tolerance is the quantity of risk an investor willing to take while making a financial decision. The willingness of the investors to take risk (Risk Propensity) depends upon the investor's status and previous successful risk taking outcome. Chou, Huang, and Hsu (2010), found that naïve investors feel more risk hence is reluctant to take risks. Malkiel, (2003) found that a person's risk propensity may differ due to his Lifecycle stage, subjective factors and household situation and many more. Furthermore, the risk tolerance can be changed due to socioeconomic, biological, and demographic characteristics with investors' psychological makeup (Evangelou, 2020).

The risk tolerance varies with the change of education level of an individual investor. That is, it is subjected to increasing an individual's power to consider risks inherent to the investment method. Therefore, this endows the investor with a higher financial risk propensity (Haliassos & Bertaut, 1995). Furthermore, the risk tolerance of an investor always been encouraged by the higher education. Hence, of risk propensity increases with the increase of education level (Haliassos & Bertaut, 1995, Zhong & Xiao 1995). Many investors have lack of knowledge about fundamental economics concepts for an appropriate investment decision (East, 1993; Lusardi & Mitchell, 2006). It is also found that decision making correlates with the education of financial management significantly.

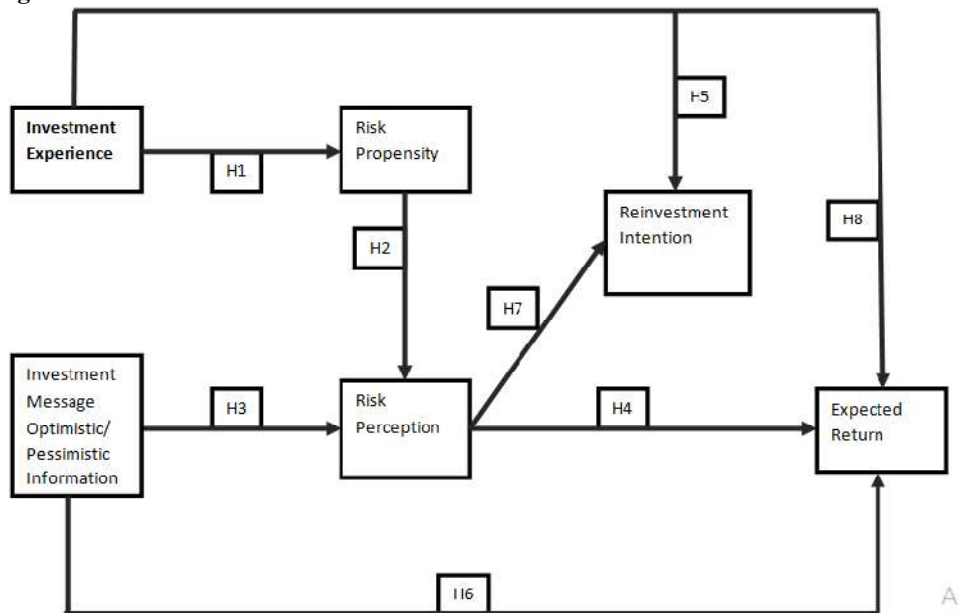
Prior research has suggested that the improvement of education in financial management significantly correlates with decision-making on critical investment issues (Chen & Volpe, 1998). Chen and Volpe (1998) conclude that the level of financial knowledge of an individual influences their opinions and impinge on their decisions (İlhan, 2020). Perceived risk is more considerable than actual risk in investment decision by an individual investor. Hence, it is found that perception of risk is not a function of technical risk calculations such as beta, the standard deviation, or variance rather it is an intuitive concept of risk is the probability of loss (Alderfer & Harold Bierman, 1970). It is proven that an individual is willing to accept different levels of risks in different contexts, for example financial risks versus physical risks.

In the investment decision-making process, experience, market efficiency and information are very important. Investor evaluates and purchase financial products by focusing on their experience. Investor's experience provides them the awareness of risk so that they can assess risk effectively (Harrison, 2003). Hence, an investor showed positive feedback in trading when their previous information is in time series. However, contextual information excludes from it (Muradoglu, 2002). Therefore, investors that possessed higher experience regarding their investment decisions contain high-level of risk tolerance that leads to contain a high risky portfolio. On the other hand, investors that possessed lower investment experience regarding their investment decisions contain a low level of risk tolerance that leads to contain less risky portfolio (Corter & Yuh-Jia, 2006; Reed and Storrud-Barnes, 2010).

The aim of this study is to determine the factors those may involve in the decision making process of an individual investor. Whenever a rational investor sought to invest in any investment, he or she must compare the expected return with associated risk

of particular investment(s)(Fama, 1970). Furthermore, this associated risk may vary from person to person due varied risk propensity and hence risk perception (Davey, 2000). The expected return may also change due to investment experience and information available in the market (Dominitz & Manski 2011; Kaufmann, Weber & Haisley, 2012). The risk perception which may also change due to information available in the market can influence on the reinvestment intention of an investor during the risky investment decisions(Doran & Wright, 2010). Similarly except of risk perception, investment experience can also play a significant role to determine the reinvestment intention of an individual investor(Reed & Storrud-Barnes, 2010). Therefore the literature gap is found in the shape of reinvestment intention, which is newly added to the Sitikin & Weingart 1995, model.

Figure 1



Previous literature helped to developed the following hypotheses;

- H₁: Past Investment Experience has significant impact Risk Propensity.
- H₂: Risk Propensity and Risk Perception have a significant relationship.
- H₃: Risk Perception influenced by the way information is framed.
- H₄: Risk Perception and Expect return are significantly correlated
- H₅: Past Investment Experience is significantly related to Reinvestment Behavior.
- H₆: Information Type influences the Expected Return.
- H₇: Risk Perception has significant impact on reinvestment behavior.
- H₈: Investment Experience has significant impact on return expectation.

III. Research Methods

The questionnaire was distributed personally among 300 active investors of Islamabad Stock Exchange (ISE). Because the sample of this study was limited to investors located in Islamabad, therefore the approach is called convenient sampling

approach. The target investors recognised by the personal meetings with the investors, by their personal profile of experience and thorough references. The sample size of the study was 276 investors. Five-point Likert scales was used and adapted from the previous studies. To save time and to get better feedback from investors, each question was explained personally to the investors before the distribution of questionnaires which helped the investors to easily understand and fill the questionnaire accordingly.

IV. Data Analysis

A. Reliability Analysis

Cronbach's Alpha measured to ensure the reliability of the questionnaire and it is found that its value is 0.653. This value confirms the reliability of questionnaire.

B. Regression Analysis

In this study, independent variables are regressed on dependent variable individually with the help of SPSS rather to test whole model at once. The results are given below:

Table 1: Table of Regression Analysis

Dependant Variable	Independent Variable	Significance Value (P)	Beta (β)	Determinant of Coefficient (R^2)
Risk Propensity	Investment Experience	0.655	-.027	0.001
Risk Perception	Risk Propensity	0.000	.261	0.068
Risk Perception	Information Message	0.000	-0.167	0.028
Return Expectation	Risk Perception	0.824	-0.13	0.000
Reinvestment Intention	Investment Experience	0.238	0.071	0.005
Return Expectation	Information Message	0.008	0.159	0.025
Reinvestment Intention	Risk Perception	0.966	-0.003	0.000
Return Expectation	Investment Experience	0.222	-.138	0.019

H₁: Investment Experience shows significant impact on risk propensity

The results of this hypothesis after employing regression analysis shows that the significance level is 0.655, the value of β is -0.027 and the value of R^2 is 0.001. Hence, this hypothesis is rejected because significant level is greater than 0.05 but it must be lesser than 0.05 ($p < 0.05$), see appendix.

$$\begin{aligned} \text{Risk Perception} &= \alpha + \beta(\text{IE}) + \epsilon \\ \text{Risk perception} &= 3.803 - 0.017(\text{IE}) + \epsilon \end{aligned}$$

Where IE is Investment Experience.

H₂: Risk Propensity Risk has significant impact on Risk Perception

Risk propensity is significant on risk perception with coefficients of regression (R^2) 0.068. This shows that 6.8 % variation in the risk perception can be explained by variation in risk propensity. The significant level remained .000. The results showed beta (0.183) between risk propensity and risk perception indicating a positive relationship between them. This means that 0.183 units of risk perception increases with a unit increase in risk propensity. The value of R^2 0.068 shows the 6.8 percent variation in impact on risk perception which is explained by the variation in the risk propensity (see appendix).

$$RP = \alpha + \beta(\text{Risk Propensity}) + \epsilon$$

$$RP = 3.209 + 0.183(RPy) + \epsilon$$

Where, RP= Risk Perception & RPy= Risk Propensity

H₃: Investment Message/ Information type had a significant effect on risk perception

Based the results of analyses, p (0.006), R² (0.028), and β (-0.167) our hypothesis was accepted because the investment message showed the significant relationship with risk perception. The risk perception showed the possibility of change by 2.8% with the change in investment message. Moreover, with the increase of one unit of information message, 0.257 units of risk perception will decrease. Moreover, a 2.8 percent variation in risk perception is explained by the variation in the investment message (see appendix).

$$\text{Risk perception} = \alpha + \beta(OPI) + \epsilon$$

$$RP = 4.708 - 0.257(OPI) + \epsilon$$

Where, RP = Risk Perception & OPI = Optimistic Passemistic Information

H₄: Risk Perception has significant impact on Expected Return

Observed R² (0.000), value of β is -0.13 and significant level (.824) leads us to reject our hypothesis-4 (H4) because significant level is greater than 0.05 but it must be lesser than 0.05 (p<0.05), see appendix.

$$\text{Expected return} = \alpha + \beta(RP) + \epsilon$$

$$ER = 3.254 - 0.016(RP) + \epsilon$$

Where, RP= Risk Perception & ER= Expected Return

H₅: Investment experience has a significant impact on reinvestment intention

Through regression analysis we found values of R² (0.005), β's value is 0.071 and sig value is (.238) of hypothesis 5. These results show significant level is greater than 0.05 but it must be lesser than 0.05 (p<0.05). Analyses reject the relationship investment experience and reinvestment intention because the significance level is greater than 0.05 (see table 2c).

$$RI = \alpha + \beta(IE) + \epsilon$$

$$RI = 2.437 + 0.023(IE) + \epsilon$$

Where, RI= Reinvestment Intention & IE= Investment Experience

H₆: Investment message or information type has significant impact on return expectation

The regression analysis between information type and return expectations gives values of R² (0.025), p (0.008) and β (0.283). The p-value is 0.008 which is less than 0.05 which depicts the significant relationship between information message and expected return. Moreover, the positive value of beta 0.283 shows 0.283 units of return expectation will increase with the increase of one unit of information message.

$$ER = \alpha + \beta(OPI) + \epsilon$$

$$ER = 2.294 + 0.0283(OPI) + \epsilon$$

Where, ER= Expected Return & OPI = Optimistic Passemistic Information

H₇: Risk perception has significant impact on reinvestment intention

The value of β is -0.003, and significance value of the relationship is 0.966. These values shows that risk perception has negative but insignificant impact on reinvestment intention(see appendix).

$$RI = \alpha + \beta(RP) + \epsilon$$

$$RI = 2.538 - 0.002(RP) + \epsilon$$

Where, RI= Reinvestment Intention & RP= Risk Perception

H₈: Investment Experience has significant impact on Returns expectations

The significance value is 0.022 for the causal relationship between investment experience and returns expectations. This value confirms the significant impact of investment experience on returns expectations. Moreover, the value of β is -0.138, which shows negative relationship observed predictor and outcome. This value shows that 0.138 units decreases with a single unit increase of investment experience (see appendix).

$$ER = \alpha + \beta(IE) + \epsilon$$

$$ER = 3.470 - 0.070(IE) + \epsilon$$

Where, ER= Expected Return & IE= Investment Experience

Some hypothesis were rejected through regression analysis because their p-values were higher than .05 ($p > .05$). The insignificant hypotheses were, H1, H4, H5 and H7. Other hypotheses (H2, H3, H6 and H8) were significant with p-value which is less than .05 ($p < .05$).

V. Discussion

Investment decisions involve huge amounts and intentions of the investors. Therefore, it is important that investor's attitude should be understood by the financial institutions so that they can offer better products to their customers and get profit. This theoretical framework provides the understanding of investors' behavior. The investors' behavior depends on many variables. Some of important aspects discussed in this study. The behavior finance study provides the different understanding of investors that is reacting in different manners according to their cognitive thinks and biases. Investors do not always react according to the traditional finance theory rather use their experience for future investment decisions. The investor also relies on different types of information in their decisions. Moreover, different investment attributes such as risk perception, return expectation, risk propensity, investment experience, and information message and, investors' decision-making behavior influences the scenario. Hence, many researchers presented their studies regarding investor's behavior. However, these studies are less in numbers.

VI. Conclusions and Future Recommendations

Investor's decision-making regarding financial products is a complex process, and very difficult to explain. However, we can understand it through different variables that affect the investment decision-making process.

This study explains the individual investors' investment behavior during the investment in financial products in Pakistani stock markets through descriptive analyses. The results show that individual investors' behavior may vary from one scenario to another scenario. The results clearly show that practice and theory are different for investors because some theory based hypotheses are rejected.

Pakistani investors were disagreeing on the relationship between, investment experience and reinvestment intention (H5), investment experience and risk propensity (H1) risk perception and reinvestment intention (H7) and, risk perception and return expectation (H4), hence these hypotheses were rejected. However other results show the valid relationships between theory and practice for instance, risk propensity and risk perception (H2), Information message and risk perception (H3), information message and return expectation (H6) and investment experience and return expectations (H8).

- From analyses we conclude that, risk propensity and the risk perception are positively correlated; investors with a high risk propensity perceive high risk as compared to investors with a low risk propensity.
- Investment experience shows a negative relationship with return expectations. Therefore, investors with high experience expect less return as compared to novice investors.

Optimistic and pessimistic information influence the risk perception. Investors possess optimistic information perceive low risk perception and investors possess pessimistic information perceive high risk. On the other hand, investors with optimistic information expect for high return due to his overconfidence upon its own assessment and investors with pessimistic information expect low return. Hence, from the above stated variables, companies that are providing the financial products can make customised products and offer their customers according to their needs.

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