

RESEARCH ARTICLE

Antecedents of Investment Decision-Making in Mutual Fund: An Indian Perspective

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The growth rate of investments in mutual funds is certainly the most significant phenomenon of present financial markets. Over the years, mutual funds have been a branch whose assets have now become the largest among other financial intermediaries. In this industry, which has focused its attention on marketing, its products have been cut to a wider population. The aim of the present research is to explore the relationship between risk perception and investment decisions in mutual funds. This study is also an attempt to explore the role of expected return in the investment decision of investors in the mutual fund industry. The current research is able to further deepen the relationship of investor expertise with investment decisions, risk perception, and retail investors' expected return.

Keywords: Investment Decisions, perceived risk, Investor expertise, Expected return, Mutual Funds

JEL Classification: G2

The main rationale of the investors engaged in investment is to maximize their income and minimize the expenses and risks involved. In financial literature, investors are assumed to be rational. People save a certain amount of money after fulfilling their basic needs, termed savings. In the financial system, people route their hard-

earned savings into investments, expecting a handsome return. The probability of profit and loss or risk in the investment process makes it difficult for individuals to make investment decisions. A rational man has varieties of investment vehicles, whereas the flow of funds and market volatility are both influenced by macroeconomic conditions

(Qureshi et al., 2017). Indian economy is a high-inflation economy, developing at a good pace, so it has become necessary for retail investors to invest in the stock market (Sivarama & Srivastava, 2019).

Stock investing is a stressful experience (Barro, 1990), especially in a loss situation. Emotional stress from a significant loss may well be detrimental to effective decision-making regarding future investments (Salovey, 2001).

In comparison to stock investment, a mutual fund is stated as a better option for investors who wish for higher returns but have risk aversion. A mutual fund is one of the best-known investment vehicles today and is popular among the Indian middle class. The top mutual funds are greater investment tools for individuals to satisfy all financial goals (Tyson, 2018). Institutional ownership with a conflict of concern in mutual funds displays an adverse impact on the performance of the fund (Fikri, 2019). There is a huge variety of mutual fund schemes that are offered to investors according to their desired benefits and risk tolerance (Wang et al., 2014). The most important criterion for selecting a good investment fund is to increase one's wealth.

Although mutual fund companies understand well the need for effective marketing (Geer, 1997), they have a limited understanding of "how consumers make choices in this market." As a result, this is an industry that costs more than US\$1 billion, with little knowledge of consumer selection processes. This is an important aspect of making their marketing and public policy decisions. Financial instrument investment has now become as easy as buying a consumer good (Wilcox, 2003). Because consumer reports rate the quality of a variety of items we buy, there is no lack of publicly available information that purports to offer insights into the "quality" of various mutual funds. Consumers can easily collect information on the past history of different funds, the costs associated with buying and holding shares in each, as well as the stated investment objectives of the funds. With all the choices and sources of information available to them, investors' involvement has increased as there are varied investment choices (Levitt, 1998).

Further, several authors have also argued the previous/expected fund returns have a significant

and positive effect on investors' decisions (Sirri & Tufano, 1998; Ivković & Weisbenner, 2009; de Mingo-López & Matallín-Sáez, 2017). From the above literature, it can be ascertained that the literature is not lacking on factors affecting investment decisions in mutual funds (Nagy & Owenberger, 1994; Levitt, 1998; Gil & Ruiz, 2009; Gillet et al., 2011), yet, the majority of them have focused primarily on the qualitative aspect of problem-solving. It results in a grave need to justify this with empirical evidence to understand the influence of skills and perceptual aspects of investors on their investment decision, especially towards mutual-fund investment. The current research paper is an attempt to explore investors' psychology. It is an attempt to identify the influence of investors' expertise on the investment decision as well as consider the role of perceptual aspects like risk perception and expected return on it.

The current study will enlighten us on the following queries:

1. Investors' expertise in the investment decisions towards mutual fund
2. How is the perceptual aspect, like risk perception, significant with respect to investment decisions toward mutual funds?
3. How does expected return influence the relationship between investors' expertise on the investment decision towards mutual funds?

A research model is proposed with the help of a statistical technique of structural equation modeling (SEM) for resolving the above-mentioned queries. We utilize the data collected from mutual fund investors to model the relationships among investors' expertise, risk perception, expected return, and investment decision.

The current research work provides information on investors' expertise for the investment decision towards mutual funds and their usefulness for the industry. This study also enriches us with information on the role of risk perception and expected return for facilitating investment decisions.

Literature Analysis and Foundation for Hypothesis

Theoretical Foundation

The theoretical construct of the present study was derived from the theory of planned behavior

(TPB; Ajzen, 1985). The theory states that behavior, subjective norms, and intentions for perceived behavioral control shape one's intentions and behavior. In our study, the investment decision acts as a behavior that is observable in a particular situation vis-à-vis a given goal, behavioral intent is risk perception, and it is expected to moderate the effect of intent on behavior. Investment expertise that controls a person's behavior and risk perception is considered a normative belief, which is a perception of normative social pressure.

The Psychology of Investment Decision

Investment, in the financial sense, is the commitment of a person's finances in order to earn future income in the form of interest, dividends, premiums, pension benefits, or capital appreciation (Hirshleifer, 1958; Virlics, 2013; Camacho et al., 1992; Putri et al., 2013). An investment decision is important for a person to pursue his or her life peacefully and willingly. Spending and saving are two sides of the same coin. Saving arises from safe or controlled consumption (Haugen & Haugen, 2001). However, the conversion of saving to investments requires strong intentions. Savers are expected to earn future returns. Investment is a conversion of currency into assets, assets that can generate future returns. An investment process provides a methodology for achieving two goals, with the first important goal being to convert investment from savings; the second is to choose a balanced approach in securities selection (Lee et al., 2011). An investment decision requires intensive planning. People regularly lose their hard-earned money due to a lack of planning. The investment decision is influenced by many factors. These factors may be internal or external. External factors are universal to everyone, whereas internal factors are unique to different people. The massive amount of information on financial data makes investing activity more complex as it needs lots of effort to process such data (Li et al., 2017).

The primary purpose of investing in equity by investors is to earn a high return as per their risk appetite. Many investors argued that despite creating wealth, it is important to use a variety of investment selection criteria in investment (Nagy & Obenberger, 1994). When the investment option is targeted, investors soon fall in love with that instrument. Early involvement in judgment has a strong ability to manage suboptimal options, and people with economic skills (expertise) do not become immune to such

situations (Posavac et al., 2019). The overall negative impact of investment uncertainty decreases with the degree of reflection (Drakos & Goulas, 2008). The (perceived) expertise of the investor is one of the main characteristics that influence investment decisions. Gil & Ruiz (2009) pointed out that the equity-investor relationship is influenced by the expertise of the equity investments as part of their entire portfolio. Byron (2005) stated that better experience and knowledge in investing enable individual investors to choose or plan an optimum investment portfolio.

The mutual fund investor who has good investment experience and a better understanding of risk information is able to comprehend the association between risk and return in investing mutual funds. Mutual fund investments (Gil & Ruiz, 2009) are more likely to be due to a better understanding of the risks and required returns on mutual fund investments. Barber et al. (2008) found that individual investors have interest-based buying behavior, and it is important for mutual fund investors to understand financial market data. Anand and Cowton (1993) reported that individuals make purchase decisions for their stock funds according to economic criteria. Furthermore, they stated that speculative factors such as "recent stock price movements" and "favorable stock prices" have a significant impact on investors' investment behavior. The rebalancing of the fund is considered the best strategy for improvement of return on investment for mutual fund investors (Damayanti et al., 2018).

Investment Expertise and Investment Decision

Chen et al. (1993) found in their study that there is trade within market timing and the ability to choose a mutual fund. When managers have the expertise to choose securities or time-suppressed mutual fund assets, they produce good results. They further stated that changes are positively related to choice and negatively related to market timing. Investors who sometimes have professional experience or financial expertise help make better decisions; however, financial experts who realize their expertise in specific areas can often suffer more behavioral bias than individual investors (Otuteye & Siddiquee, 2020). Many behavioral scientists have recognized that the sensitivity toward cognitive bias is higher in professional or expert investors compared to those employed in the capital market or even in neonates (Tyszka & Zielonka, 2002). Professional investors (experts) are at particular risk

of deviating from a logical step if the works are not transparent and there is no unilateral indication of a suitable solution (Verma et al., 2008). They further stated that professional investors or experts are more convinced by their financial and economic situations, so they never change their initial decision because of minor changes in the economy. Investors' expertise is an important factor for investors in analyzing stock-related information (Tu & He, 2020). The investee firms always benefit from the expertise possessed by the lead investor (Xiao, 2019).

Gill et al. (2011) described the expertise of the investor as one of the key features that influence the investment decision or intention to invest. It is stated by Gill and Biger (2009) that the investment expertise of individual investors positively influences the proportionate equity investment in the total portfolio. Hence for the present study on the Indian mutual market, the following hypotheses are made.

H01: There is a significant positive relationship between investors' expertise and the investment decision of mutual fund investors.

H02: Mutual fund investments have a significant negative relationship with perceived risk and investment decisions.

Risk Perception as Mediator

Broihanne et al. (2014) found in their study that risk-taking decreases with respect to both measures of risk perception and with respect to risk aversion and investor experience. They observed the strong role that risk perception plays in relation to risk-taking behavior. In relation to overconfidence measures, overconfidence has a strong positive and significant effect on risk-taking behavior. The risk-taking decision of any investor can be easily explained through their risk assessment capability (Broihanne, et al., 2014). The demographical characteristic of an investor, such as his age, gender, investment habits, and financial literacy, may influence the perception of the investor, which may lead to skewed risk perception and a prejudiced investment decision; these characteristics are observed commonly among

highly educated people (Linciano et al., 2018). The perception of the market risk and the fear of adverse pricing in relation to their expectations is the result of the asymmetrical density obtained in the market (Aloulou & Boujelbene, 2019). Risk perception mediates the effect of risk tendency on risk behavior. It is observed that both risk tendencies and risk perceptions influence the risk-taking behavior of the investor (Hamid, 2020). The above theoretical inputs help us to establish the following hypothesis. Hence, as literature exhibited the relationship between investor's expertise and risk perception, it has been found that risk perception influences the investment decision of investors; therefore, risk perception can be a potential mediator (Baron & Kenny, 1986) between investors' expertise and investment decision of mutual fund investor.

H03: Risk perception of mutual fund investors negatively mediates the positive relationship between investors' expertise and investment decision.

Expected Return as Moderator

Individual decision-making can be viewed as a result of dealing with preferences and expectations, which is relied on the constraints imposed by the financial capability and the market situation. The information available to the investors and their beliefs determine the possible outcome and their subjective probability, and their desires determine the values or services of the possible outcomes (Antonides & Van, 1990). The historical representations of historical asset returns follow the same pattern. They have a significant impact on the expected return on assets. The ruling had a small and unusual effect on asset risk, which in turn was a better predictor of asset allocation rather than expected return. Other things like displaying asset names, in contrast, investors greatly influenced (reduced) risk perceptions and returns (Weber & Zuchel, 2005).

Investment decision is influenced by financial, behavioral, and investor-specific factors such as risk perception, expected return, and asset preference (Antonides & Van, 1990). There is a clear difference between the elements of "expectation" and "choice"

in the methodological decision-making process. The perception of each of the main effects is related to the assumptions and not the actual events, as well as the consequences of the speculations. Therefore, for the current study, we have formulated the following hypothesis.

H04: Expected return of mutual fund investment positively moderates the positive relationship between the investor's expertise and investment decision.

Theoretical Model

An evaluation model was developed to measure the relationship between the selected variables based on the proposed literature. The following estimation model was evaluated using a five-point scale (Likert) with a strong disagreement (1) score from a strong agreement (5).

Research Methodology

Data Collection and Questionnaire

The data was collected with the help of a self-administered questionnaire. Investor expertise was assessed using four items adopted from the study of Jordan and Kaas (2002). Risk perception and expected return were adopted using four items and one item adopted from the study of Deb and Singh (2018). The investment decision was assessed by two items adopted from the study of Gill et al. (2011). It is also demonstrated by Tayal et al., (2018) and Ansari & Upadhyay, (2021) that there is a high association between self-administered questionnaires and objective

metrics. The simple random sampling method was adopted to select responders. A Google form was floated to 750 mutual fund investors out of 1,300 mutual fund investors identified from two public and 14 private mutual fund institutions. The questionnaire was sent to the responders through email and social networking sites like Facebook, WhatsApp, and LinkedIn. It is being ensured to the respondents that their responses will be kept confidential and only used for academic purposes. To ensure a good response rate, a reminder mail was sent to them after the second week the primary mail was sent. The responses were collected from the selected respondents between March 2021 to May 2021. The total response obtained was 488, of which 410 were usable (54.30%). Such a rate can be considered to be a good response as similar response rates were also received by many other studies like Sarwar & Afaf (2016) and Anum & Ameer (2017).

Table 1. Respondents' Profile

	Particular	Frequency
Gender	Male	301
	Female	109
Age	Upto 25 years	158
	26 to 40 years	182
	41 to 55 years	49
	56 and Above	21
	Under Graduate	81
Education	Post Graduate	149
	Professional	168
	Doctorate	12

Hypothesized Model

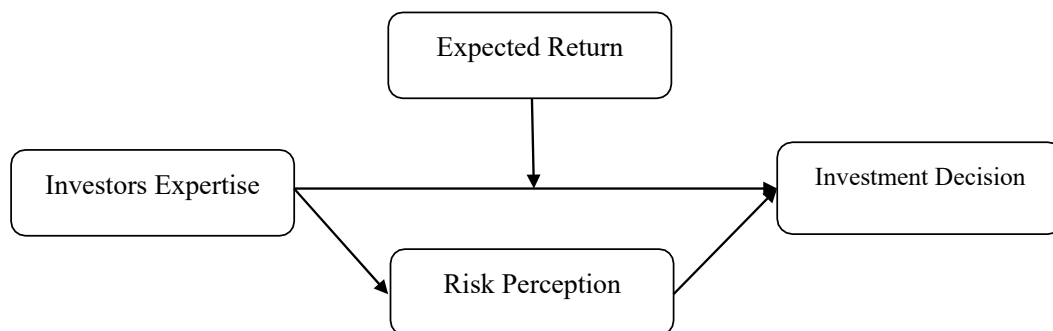


Figure 1. Hypothesized Model

Analytical Approach

Confirmatory factor analysis was applied to the measurement model (using AMOS 21) to ensure the significant loading of all items of the model built in their respective constructs. Chi-square statistics such as comparative fit index (CFI), standardized root mean squared residual (SRMR), root mean square error of approximation (RMSEA), and PClose were used to measure the model fit (Ho & Bentler, 1992). We consider threshold values to establish an excellent model as suggested by Ho and Bentler (1999): (a) the value of CMIN/DF must be greater than 1; (b) the value of CFI is 0.95 or higher; (c) value of SRMR must be 0.08 and below; (d) the RMSEA value is 0.06 and below; and (e) the PClose value is above 0.05. The analytical tool we adopted was the process macro of SPSS 21 to test the proposed hypothesis (Hayes, 2013).

Descriptive Statistics

The primary requirement to conduct factor analysis is the normally distributed data. Table 2 displays the value of the mean, standard deviation, skewness, kurtosis, and each scale's inter-correlation. Although there are negative values of skewness and kurtosis of all the constructs shown in the table, it can still be assumed that the data is normally distributed as all values lie within +/-1 (Bryc, 2012). There is a minimum chance of multi collinearity in regression analysis (Tabachnick & Fidell, 2007) as the inter-correlation coefficient scale values are 0.477, 0.278 and 0.092, respectively, significant at the ($p < 0.01$) and correlation coefficient of all variables also lesser than 0.7 (threshold). In addition, if the value of VIF (variance inflation factor)

is less than 5 for all the independent variables, it confirms that there is no issue of multi collinearity in the current study, and data is appropriate for advanced analysis (Hair, Ringle, & Sarstedt, 2011). We have not tested the causal relationships of the variable because the data is cross-sectional. Therefore, the result of the current research depicts any direction of the relationships among the observed variable. Durbin Watson statistics for the construct is 1.911; hence there is no issue of auto-correlation (Chen, 2013) in the data. All the values of Cronbach's alpha are above 0.9 (.913, .915), which indicates that there is an excellent internal consistency of the scales.

Measurement Model

The confirmatory factor analysis method (using IBM.SPSS, Amos.v21) was applied to measure the construct item and their respective loading in the model. To establish the moderating and mediating effect among the investors' expertise, risk perception, and investment decision (Jones et al., 2015; Hayes, 2013), we adopted the direct effect moderation model (Model 5) of the PROCESS function (Hayes, 2017). The model fit was measured through certain standardized statistical measures, which are χ^2 statistics (chi-square) Goodness of fit as suggested by Hair et al. (2010): CMIN/DF > 1, CFI (Comparative fit index) ≥ 0.95 , SRMR (Standardized root mean square residual) ≤ 0.08 , RMSEA (root mean square error of approximation) ≤ 0.06 and PClose > 0.05 (Hu & Bentler, 1999; Hair et al., 2010). Subsequent testing of the proposed hypothesis was performed through Path Analysis with the help of SPSS Process Macro (Hayes & Preacher, 2015).

Table 2. Descriptive Analysis

Descriptive Statistics			Skewness		Kurtosis		Pearson Correlation				VIF
	Mean	Std. Deviation	Statistic	Std. Error	Statistic	Std. Error	ER1	INV_D EC	PERC_R ISK	INV_EXP	
ER	3.198	1.467	-.285	.121	-1.311	.240	NA				1.128
INV_DEC	2.478	.841	-.155	.121	-.790	.240	.477**	.709			
PERC_RISK	3.014	1.160	-.325	.121	-.839	.240	-.278**	-.129**	.913		1.241
INV_EXP	3.231	1.110	-.262	.121	-.748	.240	.092	.591**	.315**	.915	1.155

**Correlation is significant at the 0.01 level (2-tailed). Bold diagonal values are Cronbach's alpha coefficient of respective scales.
Legends: ER- Expected return; INV_DEC- Investment Decisions; PERC_RISK- Perceived risk; INV_EXP- Investors expertise.

Confirmatory Factor Analysis

There was an excellent model fit resulting from the confirmatory factor analysis, which is in the analysis of the measurement model: CMIN = 39.863, DF = 32, CMIN/DF = 1.246 (threshold value between 1 to 3), CFI = 0.997 (threshold value greater than 0.95), SRMR = 0.022 (threshold value less than 0.08), RMSEA = 0.025 (threshold value less than 0.06), PClose = 0.976 (threshold value less than 0.05). The observed variables of the measurement model have composite reliabilities scores of 0.915, 0.888, and 0.710, respectively, for the investor's expertise, perceived risk, and investment decision.

The convergent and discriminant analysis (Table 3) shows the high reliability of the model as it satisfied convergent validity conditions (Hair et al., 2010). The table also shows that there is no discriminant validity concern in the construct (Fornell & Larcker, 1981).

We examined common method bias issues through the common latent factor technique. CLF (latent factor) was included with every factor for the estimation model examined. The standard regression weight differentiation between the estimation model is under 0.200, with and without the latent factor. It established that the current study is free from common method bias (Gaskin & Lim, 2016) problem.

Table 3. Convergent and Discriminant Analysis

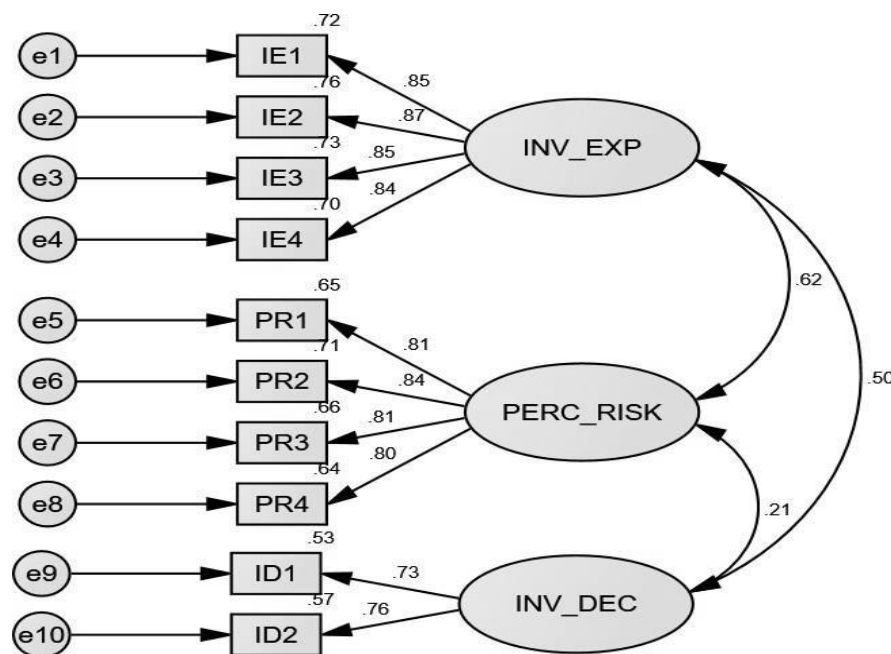
Variables Measures	Investment Expertise	Perceived Risk	Investment Decision
CR	0.915	0.888	0.710
AVE	0.728	0.666	0.550
MSV	0.381	0.381	0.253
Convergent Validity	Satisfied ^s	Satisfied ^s	Satisfied ^s
^s As it is satisfied the validity condition ($CR > 0.7$, $AVE > 0.5$, $CR > AVE$)			
Discriminant Validity	Satisfied [#]	Satisfied [#]	Satisfied [#]
[#] As it is satisfied the validity condition ($AVE > 0.5$, $AVE > MSV$)			

Source: Hair et al., 2010 & Fornell & Larcker, 1981

Hypothesis Testing

Structural Model Fit

To consider a value required for satisfying the fit function, we cut out the standard indicators that are suitable for the current research study. The model provides a 131.476 chi-square value and suggests strong evidence of NUL hypothesis rejection against



Legends: ER- Expected return; INV_DEC- Investment Decisions; PERC_RISK- Perceived risk; INV_EXP- Investors expertise.

Figure 2. Measurement Model

the high CMIN value; $df = 48$ and $P_{close} = 0.030$ indicate that the model clearly matches the population. The value of chi-square varies with the size of the sample, so it is recommended to examine the matrix of other characteristic measurements. Other models fit measures; the indicators similarly reflect the fit model in the data set. $\chi^2/df = 2.739$ provides acceptable compatibility between the model considered and model data (Hu & Bentler, 1999). CFI = 0.978 looks to be a good fit as it comes close to value 1. RMSEA = 0.065 and SRMR = 0.089 also indicate a close fit of the model in terms of the degree of independence (Arbuckle, 2005). Therefore, one can conclude that the path model meets the criteria of model fit analysis.

Hypothesis Analysis

A hypothesis can be tested with the help of empirical values received from the path analysis of the model (see Tables 4 and 5).

Table 4. Table of Regression Analysis

Hypothesis	β	t-value	Conclusion
Investors Expert \rightarrow Investment Decision	0.591	14.800*	Hypothesis 1 accepted

Sign * $p < 0.001$

Table 4 shows the results of the path analysis for the proposed hypothesis test. Hypothesis 1 suggests that investors' expertise (IE) and investment decision (ID) in mutual funds have a significant positive relationship.

A standard coefficient value of 0.591 ($t = 14.800$) and values $P < 0.001$ specifies the strength of the IE and ID. This supports Hypothesis 1, and a similar observation was found by Kaur (2018). The standard coefficient value of -0.129 ($t = -2.618$) and P value < 0.01 specifies the strength of the perceived risk on investment decisions. This supports Hypothesis 2.

Table 5. Analysis of Mediation

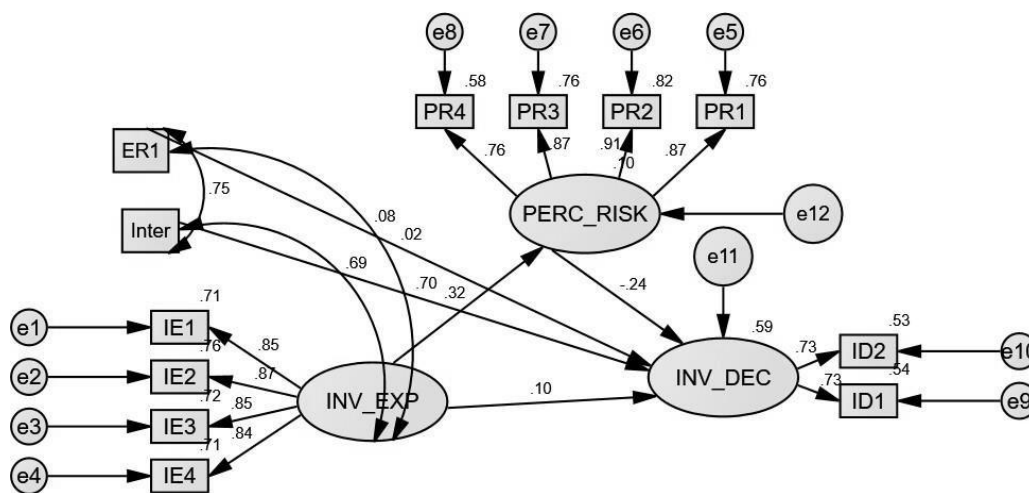
Hypothesis	(Direct) β	(Indirect) β	(Total) β	Conclusion
Investors Expert \rightarrow Perceived Risk \rightarrow Investment Decision	.363***	-0.055***	0.308***	(Partial mediation) Hypothesis 2 accepted

Sign *** $p < 0.001$,

I tested Hypothesis 3 through SPSS Process Macro performed for Hayes analysis (Hayes, 2013), and the result of the test is shown in Table 5.

The mediator variable satisfies the subsequent conditions:

- Change in the supposed mediator can be explained by changes in the independent variable (i.e., path a),
- Changes in the dependent variable can be explained by changes in the mediator (i.e., path b), and



Legends: ER- Expected return; INV_DEC- Investment Decisions; PERC_RISK- Perceived risk; INV_EXP- Investors expertise.

Figure 3. Structural Model

- The significant association between the dependent and independent variables does not remain the same after paths *a* and *b* are controlled, and the mediation effect takes place when path *c* (independent and dependent variable) is zero.

A range can be predicted with the help of condition *c*. When path *c* is diminished to zero, only one principle mediator can exist. In another way, if path *c* is non-zero, this exhibits a partial mediating factor (Baron & Kenny, 1986).

There is a significant relationship between IE and ID (Path C), and a relationship between IE with PR (path *a*) was found to be significant. It controls the modified IE, which indirectly affects the ID through the effect of PR. The indirect effect of PR on ID was found significant ($B = -0.055$, $p < 0.01$). Moreover, the direct effect of IE on ID (Path C) also showed a significant relationship ($B = 0.363$, $p < 0.001$). Therefore, it is found that the relationship between IE and ID is partially mediated by PR. Hence, Hypothesis 3 is accepted (Ademola et al., 2019).

H4 assumed that a strong, positive alliance of IR and ID improved with a higher ER score than a lower ER score. The test results show a significant influence ($B = 0.032$, $t = 2.075$, $p < 0.05$) of interaction (cross product of ER and IE), which supports H4 (Ademola et al., 2019).

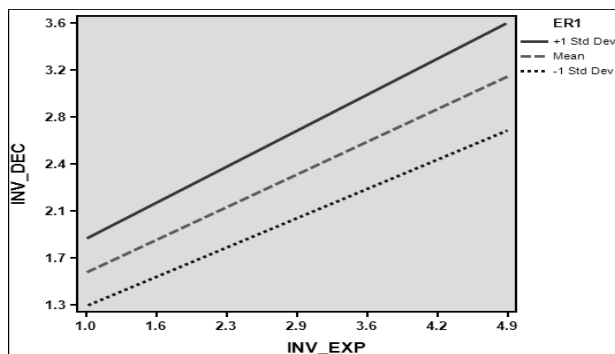


Figure 3. Moderating Effect

Note: ER made stronger the positive relationship between IE and ID of mutual fund investors.

This interaction was also studied further to establish their type and nature through an equation generated (Aiken et al., 1991) using +1 and -1 Std Div of the mean value of moderating variable. Figure 2 is the

pictorial representation of this interaction. We found a sharp rise of association between IE and ID with high value and low value of ER. Therefore, ER reinforces the affirmative relationship between IE and ID, thus verifying H3.

Discussion

Risk is one of the most important features of all investment options. Many investors who have lost some money claim that they were not informed of this risk when making their investment decisions. Here comes the role of IE in terms of ID with a prior calculation of perceived risk to achieve expected returns on investment.

The result of our study determined that IE and ID have a significant positive relationship in mutual fund investment decisions, as stated by Gill et al. (2011). The result also stems from our research that perceived risk (PR) and ID have a significant and negative relationship with mutual fund investing, that is, an increase in perceived risk as a result of negative mutual fund investment motivation. PR also mediates the relationship between ID and IE. The present study found that there is a strong and positive relationship between IE and ID improvement with a higher expected return (ER) score compared to a lower ER score.

Finally, investment advisors must comprehend the joint effect of investor expertise of investors, the perceived risk of the investor, as well as his return expectation. The current research will help financial planners and investment consultants succeed in the area of investment advisory field.

The purpose of this research is to examine the behavioral characteristics of Indian mutual fund investors. The findings of this study have significant theoretical and practical implications for stakeholders from various sectors of society.

In terms of contribution to the body of knowledge, this study demonstrates how well the constructs of investment expertise (which controls a person's behavior) and risk perception can account for Indian investors' intention to invest in mutual fund schemes, in addition to successfully applying the TPB model. This serves as a foundation for future research in developing countries on the socio-psychological dimensions of individual investors.

The primary contribution of this research is to expand the previous literature by including investors'

knowledge and risk perceptions about investments as antecedents of investor choices. The significant impact of perceived risk demonstrates the critical role it plays in shaping a positive investor experience and in explaining the mechanism by which knowledge expertise affects an investor's decision-making. This is another fresh addition to the debate over whether risk perception is more feasible as a mediator (Ajzen, 1988). The discovery that risk perception is influenced by investor expertise, which is in turn influenced by expected return (a moderator between investor expertise and risk perception), which then influences the investor's decision, may help the researchers gain new insight into the field of behavioral decision-making.

Overall, the TPB model, along with two newly added constructs, significantly contribute to our understanding of financial studies in terms of individual investor decision-making.

For practical purposes, politicians and policymakers should recognize that Indian investors mostly invest in mutual funds owing to their skill or understanding of mutual funds, which may explain why they are exposed to risk while investing in mutual funds. On the downside, this may be a basis for mutual fund non-participation. The significant effect of financial literacy on investors' perceived risk should serve as a reminder to policymakers that educating investors is critical to foster a positive environment among society's stakeholders.

Finally, individual investors may benefit themselves and society by limiting their financial losses and unwillingness to engage in mutual funds. This is only possible through an awareness of these decision-making biases. They can avoid tangible consequences by consciously avoiding such biases during the financial decision-making process.

Limitations and Future Scope

The main limitation of this study is that it examines only one product category (mutual funds), which limits inclusion in other investment avenues. Further, we did not categorize the types of assets (e.g., equity, debt, money market, and mixed assets) of mutual funds. To do this, it is worth doing further research and identifying other differences. In addition, we considered perceived risk, investment efficiency, and expected return in this study. Other factors of purchase intention can be incorporated into the comprehensive model, thereby improving the explanatory power of the same. After

all, the majority of respondents in this study are aged 21–40 years or younger and do/may not have much money to invest or have investing intention. Hence, the ability to bias exists due to different acquisition behaviors of different ages. Thus, future studies may examine different age groups and education.

The results also show that investors' expertise is important in choosing an investment strategy. In addition, the mutual funds marketing manager should note that mutual fund information and publications can benefit more and increase consumer awareness. Future studies should highlight the analysis of psychological factors, such as self-worth, motivation, and level of investment contribution. Future studies may deal with other financial items such as insurance, stocks, and G-Sec, that may provide a variety of results.

Conclusion

The primary purpose of the present research was to examine whether mutual fund investments are favorably influenced by their perceived expertise, perceived risk, and expected return. The fundamental contribution of this study is to add to the existing body of knowledge by including investors' knowledge and risk perceptions regarding investing as antecedents of investor decisions. The study's finding can be used by politicians, fund managers, and policymakers in promoting and encouraging investors toward mutual funds.

References

- Ademola, S. A., Musa, A. S., & Innocent, I. O. (2019). Moderating effect of risk perception on financial knowledge, literacy and investment decision. *American International Journal of Economics and Finance Research*, 1(1), 34-44.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), *Action-control: From cognition to behavior* (pp. 11–39). Heidelberg, Germany: Springer.
- Ajzen, I. (1988). *Attitudes, personality, and behavior*. Milton-Keynes, London: *Open University Press*.
- Aloulou, A., & Boujelbene, Y. (2019). Dynamic analysis of implied risk neutral density. *International Journal of Monetary Economics and Finance*, 12(1), 39–58.

- Anand, P., & Cowton, C. J. (1993). The ethical investor: Exploring dimensions of investment behaviour. *Journal of Economic Psychology*, 14(2), 377–385.
- Ansari, K. R., & Upadhyay, R. K. (2021). Organizational citizenship behavior and team effectiveness in service industry: a moderated mediation model. *Journal of Indian Business Research*, 13(2), 308–323.
- Antonides, G., & Van Der Sar, N. L. (1990). Individual expectations, risk perception and preferences in relation to investment decision making. *Journal of Economic Psychology*, 11(2), 227–245.
- Anum, B. A., & Ameer, B. (2017). Behavioral factors and their impact on individual investors decision making and investment performance: empirical investigation from Pakistani stock market. *Global Journal of Management and Business Research*, 17(C1), 61–70.
- Arbuckle, J. L. (2005). *Amos 6.0* [statistical program]. Chicago, IL: SPSS.
- Barber, B. M., Odean, T., & Zhu, N. (2008). Do retail trades move markets? *The Review of Financial Studies*, 22(1), 151–186.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Barro, R. J. (1990). The stock market and investment. *The Review of Financial Studies*, 3(1), 115–131.
- Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective*. Pearson.
- Broihanne, M. H., Merli, M., & Roger, P. (2014). Overconfidence, risk perception and the risk-taking behavior of finance professionals. *Finance Research Letters*, 11(2), 64–73.
- Bryc, W. (2012). *The normal distribution: characterizations with applications* (Vol. 100). Springer Science & Business Media.
- Byron, K. (2005). A meta-analytic review of work–family conflict and its antecedents. *Journal of Vocational Behavior*, 67(2), 169–198.
- Cai, C. W. (2018). Disruption of financial intermediation by FinTech: a review on crowdfunding and block chain. *Accounting & Finance*, 58(4), 965–992.
- Camacho, D. D., Dy, J. T., Jimenez, M., Margarita, C., & Lim, E. C. (1992). A study on the treasury bill interest rates and selected variables vis-a-vis the stock market composite indexes as a tool in financial investment decisions. Retrieved from https://animorepository.dlsu.edu.ph/etd_honors/42
- Chen, N. F., Kan, R., & Miller, M. H. (1993). Are the discounts on closed-end funds a sentiment index? A rejoinder. *Journal of Finance*, 48(2), 809–810.
- Chen, Y. (2013). New approaches for calculating Moran's index of spatial autocorrelation. *PloS one*, 8(7), e68336.
- Damayanti, S. M., Murtaqi, I., Bekt, R., & Nugroho, A. B. (2018). Asset allocation strategy to create superior portfolio from equity mutual funds. *International Journal of Monetary Economics and Finance*, 11(3), 243–250.
- De Mingo-López, D. V., & Matallín-Sáez, J. C. (2017). Investing in mutual funds: The determinants of implied and actual net cash flows. *Applied Economics*, 49(60), 5962–5970.
- Deb, S., & Singh, R. (2018). Dynamics of risk perception towards mutual fund investment decisions. *Iranian Journal of Management Studies*, 11(2), 407–424.
- Drakos, K., & Goulas, E. (2008). Irreversible investment under uncertainty: The message in leasing expenditures. *International Journal of Monetary Economics and Finance*, 1(4), 412–426.
- Fikri, S. M. (2019). Ownership concentration and fund performance in conventional and Shariah Malaysian mutual funds. *International Journal of Monetary Economics and Finance*, 12(6), 467–497.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39–50.
- Gaskin, J., & Lim, J. (2016). Model fit measures. *Gaskination's StatWiki*, 37(3), 814–822.
- Geer, J. F. (1997). Brand war on Wall Street—Financial services firms are spending millions on their brand names to coral your invested assets. *Fortune World*, 20(May), 54–63.
- Gil-Bazo, J., & Ruiz-Verdú, P. A. B. L. O. (2009). The relation between price and performance in the mutual fund industry. *The Journal of Finance*, 64(5), 2153–2183.
- Gill, A., & Biger, N. (2009). Gender differences and factors that affect stock investment decision of Western Canadian investors. *International Journal of Behavioral Accounting and Finance*, 1(2), 135–151.
- Gill, A., Biger, N., Mand, H. S., & Gill, S. S. (2011). Factors that affect mutual fund investment decision of Indian investors. *International Journal of Behavioural Accounting and Finance*, 2(3–4), 328–345.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139–152.
- Hamid, F. S. (2020). The relationship between risk propensity, risk perception and risk-taking behaviour in an emerging market. *International Journal of Banking and Finance*, 10(1), 134–146.
- Haugen, R. A., & Haugen, R. A. (2001). *Modern investment theory* (Vol. 5). Prentice Hall.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

- Hayes, A. F. (2013). Mediation, moderation, and conditional process analysis. Introduction to mediation, moderation, and conditional process analysis: A regression-based approach, 1, 20.
- Hayes, A. F. (2017). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford publications.
- Hayes, A. F., & Preacher, K. J. (2015). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, 68(1), 143-164.
- Hirshleifer, J. (1958). On the theory of optimal investment decision. *Journal of Political Economy*, 66(4), 329-352.
- Ho, R. T., & Bentler, P. M. (1992). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 1(4), 1-55.
- Ho, R. T., & Bentler, P. M. (1999). Evaluating model fit. In *Structural equation modeling: Concepts, issues, and applications* (pp. 76-99). Sage Publications, Inc.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Ivković, Z., & Weisbenner, S. (2009). Individual investor mutual fund flows. *Journal of Financial Economics*, 92, 223-237.
- Jones, S. R., Torres, V., & Arminio, J. (2022). Negotiating the complexities of qualitative research in higher education: Essential elements and issues. Routledge.
- Jordan, J., & Kaas, K. P. (2002). Advertising in the mutual fund business: The role of judgmental heuristics in private investors' evaluation of risk and return. *Journal of Financial Services Marketing*, 7(2), 129-140.
- Kaur, I. (2018). Mutual fund investor's behaviour towards information search and selection criteria: Do knowledge and perception about mutual funds matter? *Qualitative Research in Financial Markets*, 10(1), 395-414.
- Lee, W. S., Huang, A. Y., Chang, Y. Y., & Cheng, C. M. (2011). Analysis of decision making factors for equity investment by DEMATEL and analytic network process. *Expert Systems with Applications*, 38(7), 8375-8383.
- Levitt, A. (1998, May 15). *Remarks before the Investment Company Institute*. US Securities and Exchange Commission.
- Li, C. W., Tiwari, A., & Tong, L. (2017). Investment decisions under ambiguity: Evidence from mutual fund investor behavior. *Management Science*, 63(8), 2509-2528.
- Linciano, N., Lucarelli, C., Gentile, M., & Soccorso, P. (2018). How financial information disclosure affects risk perception. Evidence from Italian investors' behaviour. *The European Journal of Finance*, 24(15), 1311-1332.
- Nagy, R. A., & Obenberger, R. W. (1994). Factors influencing individual investor behavior. *Financial Analysts Journal*, 50(4), 63-68.
- Otuteye, E., & Siddiquee, M. (2020). Underperformance of actively managed portfolios: some behavioral insights. *Journal of Behavioral Finance*, 21(3), 284-300.
- Posavac, S. S., Ratchford, M., Bollen, N. P., & Sanbonmatsu, D. M. (2019). Premature infatuation and commitment in individual investing decisions. *Journal of Economic Psychology*, 72, 245-259.
- Putri, K., Negina, K., Baridwan, Z., & Nahartyo, E. (2013). Risk information impact on investment decisions: Experimental test of PMM theory, a case of Indonesia. *DLSU Business*, 23(1), 66-83.
- Qureshi, F., Ismail, I., & Chan, S. G. (2017). Mutual funds and market performance: New evidence from ASEAN markets. *Investment Analysts Journal*, 46(1), 61-79.
- Salovey, P. (2001). Applied emotional intelligence. Regulating emotions to become healthy, wealthy, and wise. In J. Ciarrochi, J. P. Forgas, & J. D. Mayer (Eds.), *Emotional intelligence in everyday life: A scientific inquiry* (pp. 168-184). New York: Psychology Press
- Sarwar, A., & Afaf, G. (2016). A comparison between psychological and economic factors affecting individual investor's decision-making behavior. *Cogent Business & Management*, 3(1), 1232907.
- Sirri, E. R., & Tufano, P. (1998). Costly search and mutual fund flows. *Journal of Finance*, 53, 1589-1622.
- Sivaramakrishnan, S., & Srivastava, M. (2019). Financial well-being, risk avoidance and stock market participation. *International Journal of Financial Services Management*, 9(4), 326-344.
- Tabachnick, B. G., & Fidell, L. S. (2007). Experimental designs using ANOVA (p. 724). Thomson/Brooks/Cole.
- Tayal, R., Kumar Upadhya, R., Yadav, M., Rangnekar, S., & Singh, R. (2018). The impact of transformational leadership on employees' acceptance to change: Mediating effects of innovative behaviour and moderating effect of the use of information technology. *VINE Journal of Information and Knowledge Management Systems*, 48(4), 559-578.
- Tu, B., & He, C. (2020) Investor's portfolio decision: Perspective of parameter uncertainty. *Systems Science & Control Engineering*, 8(1), 48-56. <https://doi.org/10.1080/21642583.2019.1708828>
- Tyson, E. (2018). *Personal Finance in Your 50s All-in-One for Dummies*. John Wiley & Sons.
- Tyson, E. (2018). *Personal Finance in Your 50s All-in-One For Dummies*. John Wiley & Sons.
- Tyszka, T., & Zielonka, P. (2002). Expert judgments: Financial analysts versus weather forecasters. *The Journal of Psychology and Financial Markets*, 3(3), 152-160.

- Verma, R., Baklaci, H., & Soydemir, G. (2008). The impact of rational and irrational sentiments of individual and institutional investors on DJIA and S&P500 index returns. *Applied Financial Economics*, 18(16), 1303–1317.
- Virlics, A. (2013). Investment decision making and risk. *Procedia Economics and Finance*, 6, 169–177.
- Wang, Z., Feng, C., & Zhang, B. (2014). An empirical analysis of China's energy efficiency from both static and dynamic perspectives. *Energy*, 74, 322–330.
- Weber, M., & Zuchel, H. (2005). How do prior outcomes affect risk attitude? Comparing escalation of commitment and the house-money effect. *Decision Analysis*, 2(1), 30–43.
- Wilcox, R. T. (2003). Bargain hunting or star gazing? Investors' preferences for stock mutual funds. *The Journal of Business*, 76(4), 645–663.
- Xiao, L. (2019). How lead investors build trust in the specific context of a campaign: A case study of equity crowdfunding in China. *International Journal of Entrepreneurial Behavior & Research*, 26(2), 203–223. <https://doi.org/10.1108/IJEBR-05-2019-0265>