

Investors Personality and Perceptual Biases: Effect on Financial Decisions

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Abstract - The conventional wisdom in finance holds that rational investors weigh the risks and rewards of an investment before making a choice in order to maximize their profits in the long run. The introduction of psychological components into financial decision-making is a challenge to traditional finance. The quantitative research in this study is grounded in financial behavior theory and prospect theory. Investors' judgments on purchasing and selling shares are heavily influenced by their perceptions of the market. The study's goal is to find out what kinds of errors investors commonly make in their perceptions of the world and how those errors relate to their personalities. To gather the necessary information, random samples of 200 Bangladeshi stock market investors were chose. The hypothesis correctness had tested by using Parametric Analysis and ML-SEM in this study. The data showed if investor's personalities had a significant influence on their perceptions of the market. The results of the study showed that if there is any direct or indirect association between representative errors and investment decisions, the overconfidence fallacy's impact on investment judgments, the effect of a person's mood state on the amount of time it takes to process information, the amount of time spent analyzing information has an impact on investment choices, and the extent of information on the overconfidence error.

Keywords - Behavioral Finance, Investing Decisions, Prospects, Heuristics, Perceptual Errors, and Biases.

I. INTRODUCTION

Behavioral finance is a new field based on psychological and cognitive notions. Irrational biases affect investing choices in behavioral finance. Investments are difficult. Investment outcomes mix sociology, psychology, and cognitive theory. Financial theories presume rational investors (Kim et al., 2004). Prudent investors analyze all options and chose the best. Financial market inefficiencies may impair rationality and decision-making. Knowing investors' personalities and characteristics may help us compensate for our ignorance. These programs may assist investors achieve financial goals and decrease long-term decision variance. For better stock market decisions, this research explores investor psychology and perceptual defects. Since prospect theory influences financial behavior, behavioral finance is part of economic psychology. Financial behavior prospect theory yielded this outcome. Prospect theory demonstrated these challenges. We concluded this after considering prospect theory (Pompian & Wood, 2006; Kiyilar & Acar, 2013). Financial science relies on financial psychology research. Despite significant studies, people don't comprehend financial behavior's hidden nature. Financial activity is critically veiled (Montier, 2007); Roll, 1986; Barberies & Thaler, 2003; Line et al., 2008) examined how perceptual errors affect financial market investors' decisions. Misguided opinions hurt investors, these researchers discovered (Kim and Nolsinger, 2008). The financial behavior paradigm informs investors how their activities impact financial markets and how to behave rationally (Kim and Nogsinger, 2008). It also illustrates how investors affect financial markets (Bhatla, 2009). Investors' beliefs drive financial behavior. Financial models combine market and investor behavior. Extreme and normal financial actions occur. These fields explore money and financial behavior. "Do individual investors act logically, or are they influenced by perceptual errors and emotion?" questions minor financial behavior studies. However, major financial activity is researching whether the efficient hypothesis adequately represents financial markets and if market inefficiencies are warranted (Eslami Bidgoli, 2009). This study explores investor behavior, psychological vulnerabilities, and how these impact judgments to reduce mistakes. Investor behavior separates man's psychologically active phenomena in financial markets in normal financial science. Traditional financial sciences employ ideal financial conduct, whereas the financial behavior hypothesis uses observable behavior.

II. LITERATURE REVIEW

Behavioral finance challenges mainstream financial theory's assumption of investor rationality. Recent study suggests that personality characteristics and social settings impact investment behavior. In light of behavioral finance, we must remember how personality type affects behavioral biases while investing. We evaluated financial decision-making biases caused by the five personality traits, including overconfidence, propensity, and herding. A questionnaire on arrogance, overconfidence, and herding was given to 251 Indian investors. Our study suggests that personality variables affect investors' financial decision-making susceptibility. Extrovert investors are more level-headed, less overconfident, and less inclined to follow the herd. Open, friendly investors appear to boost confidence and herding. This research may help financial planners create personality-based financial tools. When beginning off, investors consider psychological considerations as well as investment vehicle options. These psychological aspects affect investing choices and expected outcomes (Xiao, 2008). We'll examine the confidence bias, availability bias, hindsight bias, escalation of commitment bias, and randomness bias to better comprehend perceptual errors, which are the psychological impacts of normal and atypical situations (McGoun, 1992). Most investors are concerned about their investment money due to these mistakes. The stock market holds most investors' money, thus their investment strategy, finances, and assets may be to blame. This guide should help you avoid common financial investment mistakes (Down, 2003). By recognizing and eliminating such cognitive flaws, one may reduce their impact. Investing cognitive mistakes include these. This may improve investment results (Shefrin; 2000). In 2003, Chan, Van, and Vertinsky studied how businessmen's attitude and mental state affected their behavior in international currency exchange markets. This research evaluated how happy, neutral, and negative mood states affect businessmen. Two 66 and 72 sample experiments were conducted. The research found that happy businessmen underperform (actually they incurred a loss). However, both negative and intermediate businessmen took constructive action (actually they profited). Businesses in a good mood like to make quick decisions since they spend less time studying data. G. Rajendran and TC. Thomas observed that personality impacts investment structures and kinds (2012). Type 1 stock market participants are Adventurers and Straight Arrows. Type 1 investors are more likely to buy equity-related goods, mutual funds, and other financial instruments. Type 2 investors like equity-related items and mutual funds. Derivatives, direct stock, and real estate are Type 3 investments. Celebrity status and investment distinctiveness drive are Type 3 investors. Type 4 Straight Arrow investors like equities, fixed income, and pension plans. Thus, efficiency-focused investors are more optimistic. Due to their ignorance, people purchase stocks at greater prices, which lower stock market prices. They become less efficient and effective. Most investors buy expensive stocks then sell them at cheap prices to seem confident when they are not (Zhu; 2003). Increased transactions generate financial market bubbles (Johnsson et al., 2002). Hoang Thanh Huynh Ton and Trung Kien Dao believe psychological factors influence Vietnam Stock Exchange investors' judgments (2014). Empirical research shows that only extreme pessimism, optimism, and risk aversion affect investors' decisions. They also observed that risk and optimism affect investors' choices. Broihanne, Merli, and Rodger studied overconfidence and financial risk perceptions in 2014. Sixty-four experts addressed the economy. The results showed they overestimated their financial and stock market forecasting abilities. They showed that overconfidence and optimism increase risk-taking, whereas danger decreases it (Broihanne et al., 2014, pp.1). According to Mohammad Shafi's research, herding, irrational thinking, confidence, and the drive to earn rich are the biggest indicators of investors' behavior. Shafi's research also found that investors are motivated by money (2014). Kaustia and Rantapuska studied the psychological effects of weather, seasons, and daily changes on Finnish investors' financial transactions in 2015. They found that light and temperature had little effect on transaction patterns, but rain has a statistically significant influence, and seasonal emotional loads have little effect on buying vs selling. However, they seemed to increase transaction volume. The statistics show that investors sell assets before the holidays and make fewer transactions. Even when the daily changes match the climatic variations, the feelings remain the same as Monday (the first working day of the week). Traders' economic investment decisions are usually unaffected by daily shifts and calendar influences. However, the psychological effects of these market fluctuations may influence a portion of individual investors' trading choices (Kaustia & Rantapuska 2015, Pg.1). Wulfmeyer studied how disposal affects US investment fund managers in 2016. They used a range of stock sizes and market uncertainties to show that disposition influences investment fund managers. Disposal will also enhance systemic risk. They found that stock ambiguity and significant stock transactions exacerbate the disposition impact. However, managers' investment decisions will affect the intensity of this influence (Wulfmeyer, 2016). Behavioral finance biases may affect investing and spending choices. Herding, anchoring, mental accounting, loss aversion, and overconfidence

are the most common mistakes. Knowing our mental shortcuts while making financial decisions may help us make better ones. Thus, certain features of a person's personality may affect their risk tolerance, which affects their stock and bond investments. Behavioral biases like "Overconfidence" affect an investor's stock, security, and bond investing choices (Athur, 2014). These studies suggest that personality affects risk-taking. This affects investing decisions.

III. CONCEPTUAL MODEL

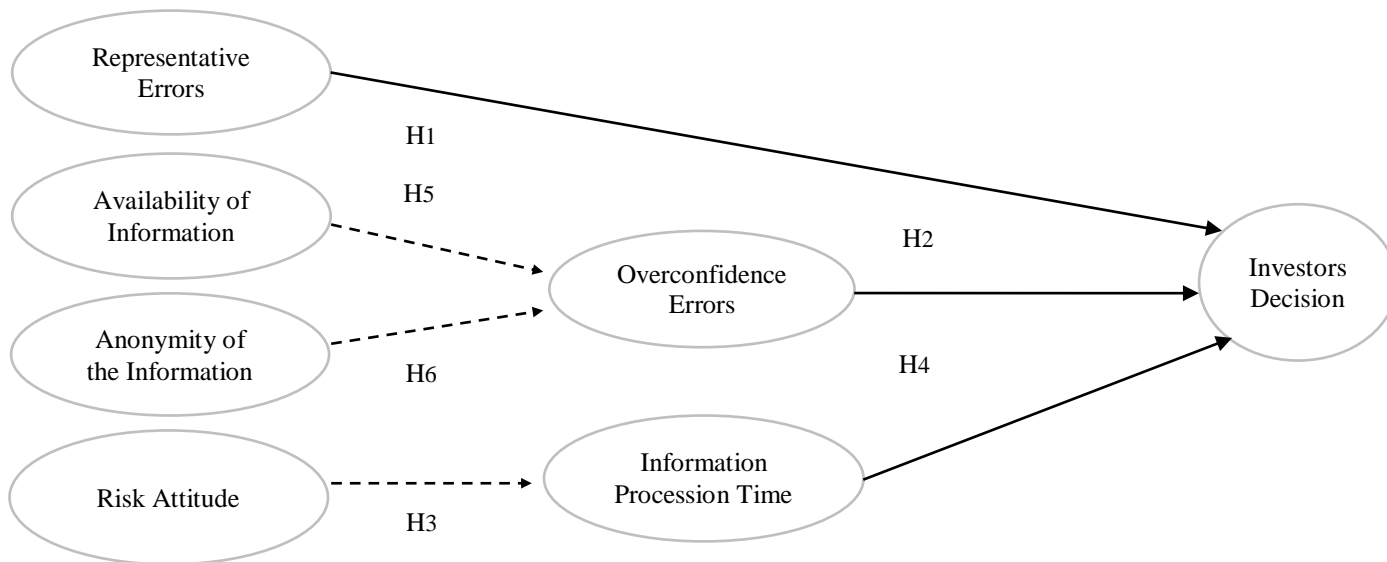


Fig.1 Research Model

IV. MATERIALS AND METHODS

1. Research Approach

In the realm of behavioral finance, the study has been carried out with a quantitative methodology, in conjunction with a combination of techniques from the qualitative side of things. The gathering of information will be the major focus of attention. The inquiry is conducted via the use of primary research. This primary research contributes to a more in-depth investigation of the research topics that have been offered. The objective of this research is to gather information in order to provide an explanation for the influence that the personality of an investor as well as the investor's perceptual biases have on the investor's choices about financial matters.

2. Resource Constraints (Independent Variable)

In the process of carrying out an experiment, an independent variable is one that may be manipulated or adjusted in order to study the effects of the experiment. This is done in order to find out what the results of the experiment are. Because of this, "independent" is the term that is used to describe it within the context of the study. In addition to their more common names, independent variables are also referred to as subordinate variables and substantiating factors (they explain an event or outcome). In this particular research project, the following are some instances of elements that are outside the control of the researcher:

Identifiers	Items
Representative Errors	Similar items or events confuse people about probability.
	Similar items or events don't confuse people about likelihood
	Adequate source available

Degree of Information	Not adequate source available
Anonymity of the Information	Higher anonymity
	Lower anonymity
Risk-Attitude	Risk neutral
	Risk averse

3. Individual Voids (Intervening Variable)

As this research is looking for a theoretical explanation for a relationship between two variables, an intervening variable, also known as a mediator variable, is what we are looking for. It's more like a list of ideas rather than a list of facts. The intervening variables are the followings:

Identifiers	Items
Overconfidence	Information regarding decision
	Accuracy of forecast
	Level of risk association
Information Procession Time	Level of effort in analyzing information
	Level of anonymity in analyzing information

Tab.1 Variables Introduction

4. Investment Decision (Independent Variable)

Investment decision in this research is a stand-alone variable that is unhindered by the other variables that we are attempting to assess. The dependent variables shape towards it.

5. Source of Data

All Bangladeshi financial investors have been served as the sample for this study's population. In order to collect primary data, a survey is administered to the investors located in Bangladesh's viable urban regions.

6. Sampling Size and Sampling Technique

Singh and Masuku suggest using a population of 75,000, a confidence level of 90 percent, and $P=0.05$ to achieve a level of accuracy with 10 percent permissible error. This would result in a sample size of 200. (Singh and Masuku, 2014).

The information has been gathered via the use of a method called snowball sampling, which is based on a nonprobabilistic sampling approach. Snowball sampling involves selecting samples from individuals along with recruit more investors among their acquaintances and is located in close proximity to the researcher (Dornyei, 2007).

7. Analytical Approach

Using descriptive statistics as part of an analytical strategy, we analyzed and discussed the demographics of our sample. With the aid of Smart PLS, the quantitative data has been examined (version 4). Inferential statistics were used to find evidence supporting the study's hypotheses. The SmartPLS Graphical User Interface is a PLS-based SEM (structural equation modeling) application (Wong K., 2013). Partial least squares structural equation modeling (PLS-SEM), which has been refined for use in the study of strategic management, marketing, and other business-related fields, is used to evaluate the study's assumptions (Joe F. Hair, 2013). Partial least squares structural equation modeling (PLS-SEM) is a common method for approximating complicated route models that make use of latent variables and their relationships. PLS-SEM path modeling is a useful method for estimating causal models when the theoretical model and empirical evidence are appropriate. Rather than trying to use the model to explain the co-variation between all variables, PLS-SEM provides testable parameters that maximize the clarified variance (R² values) of the dependent constructs, which means the method is conducive to prediction-oriented goals (forecasting the target constructs in the structural model) (Joe F. Hair, 2013). The PLS technique is generally acceptable for SEM applications that aim at approximation or theory building, such as in studies that focus on classifying critical triumph factors (e.g., (Höck, 2010), (Sattler, 2010), and PLS SEM can also be used for confirmatory theory testing due to its flexibility (i.e., almost no off-putting expectations regarding the model specifications and data) (Joe F. Hair, 2013). Particularly when the number of participants is fewer than the sample size or when the data distribution is skewed, PLS becomes an invaluable tool for structural equation modeling in applied research projects. Those findings may be found in (Wong K. K., 2011). Partial least squares structural equation modeling involves iterations of two stages. The formative measurement model is used in the first stage, while the reflective measurement model is used in the second. The formative measurement model's dimension validation is distinct from the reflecting measurement models. Before making any inferences about the links between constructs, this order ensures that the constructs are being measured correctly and consistently (Barclay, 1995). The method of reflective measuring was adopted in our investigation.

8. Data Analysis Method

The research approach for this study is descriptive-correlation in terms of its nature, and it is utilized in terms of the study's purpose, which is to examine the relationship between two variables. The data has been analyzed using two steps. Measurement accuracy and precision are first examined using a confirmatory factor analysis. In addition, the equipment's dependability and validity will be examined as part of this investigation (CFA). The SEM, also known as a structural equation model, may be used to examine how a person's personality characteristics, risk-taking behavior, and the interactions between the variables affect their ability to make right judgments.

As a hypothesis backed by empirical evidence, it may be stated as follows:

$$[BB_i = \beta_0 + \beta_1 R_i + \beta_2 D_i + \beta_3 A_i + \beta_5 R A_i + \beta_6 A g_i + \beta_7 G_i]$$

In the following equation, the initials "BB" stand for three biases: hindsight bias, overconfidence bias, neuroticism and randomness bias. Representative Mistakes are denoted by the letter 'R' in this scale, 'D' represents Degree of Information, 'A' stands as Anonymity of the Information, 'RA' as Risk-Attitude Errors, "Ag" is for Age, and 'G' which is Gender are all represented by the letter. The aggregated value will be multiplied with the corresponding Beta.

The statistical population for this study includes Common Investing Fund, Bangladesh Stock Exchange, and Investment Market participants. The random sample approach begins with choosing 200 people to participate in the study, then collecting their replies in a questionnaire for further research. Chronbach's Alpha was utilized to assess the questionnaire's reliability throughout this study.

9. Data Type and Collection Method

Even though Bangla plays a part in the translation of the questions in order to connect correctly with regional potential audience, the data collecting has been done in English in order to make the language appear more professional. The questionnaire is going to be broken up into two sections. The primary section is for informational purposes, while the other section has been used for assessment purposes. For the "close ended questions," the research has been used a "Likert Scales" that has a total of five points. The major mode of data gathering are interviews, which is carried out in-person, over the phone, or through online platforms such as chat rooms, google doc responses and emails.

V. DATA ANALYSIS

1. Demographic Profile Analysis

The tables show that there are 82.5% male respondents and 17.5% are female respondents. In the developing country context, the women are also interested in investing.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	165	82.5	82.5	82.5
	Female	35	17.5	17.5	100.0
	Total	200	100.0	100.0	

Tab.2 Frequency Distribution of Gender of the Investors

The age table shows that most of the investors have the age range of 26-35. The second range of the age range is 17-25. The least age of the investors who are above 50.

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Below 17	1	.5	.5	.5
	17-25	85	40.0	40.0	48.5
	26-35	96	48.0	48.0	88.5
	36-50	21	10.5	10.5	99.0
	Above 50	2	1.0	1.0	100.0
	Total	200	100.0	100.0	

Tab3. Frequency Distribution of Age of the Investors

Education					
		Frequency	Percent	Valid Percent	Cumulative Percent
	Completed elementary school	1	.5	.5	.5
	High school graduate	10	5.0	5.0	5.5
	Bachelor's degree	101	50.5	50.5	56.0
	Master's degree	88	44.0	44.0	100.0
	Total	200	100.0	100.0	

Tab.4 Frequency Distribution of Education of the Investors

The table 4 has depicted the educational attainment of the investors. Most of the investors have completed the bachelor's degree which is about 50%. The second educated group is 44% who are the master's degree holder. Some of the investors have completed only high school and primary education.

Investing Experience				
	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 6 months	3	1.5	1.5	1.5
6months-1 year	25	12.5	12.5	14.0
1-3 years	88	44.0	44.0	58.0
More than 3 years	84	42.0	42.0	100.0
Total	200	100.0	100.0	

Tab.5 Frequency Distribution of Investing Experience

The above table depicted the investment experience of the investors. Most of the investors have the experience of one to three years and more than three years.

	Mean	Std. Error of Mean	Std. Deviation	Variance	Maximum
RPE1	3.8850	.09220	1.30395	1.700	5.00
RPE2	3.4350	.08193	1.15866	1.342	5.00
RPE3	3.2350	.08994	1.27195	1.618	5.00
RPE4	2.9600	.08677	1.22716	1.506	5.00
RPE5	3.3600	.08827	1.24828	1.558	5.00
AI1	3.6600	.09469	1.33917	1.793	5.00
AI2	3.9800	.09483	1.34112	1.799	5.00
AI3	4.0750	.09049	1.27967	1.638	5.00
AI4	4.0250	.09255	1.30879	1.713	5.00
ANI1	3.9600	.08934	1.26348	1.596	5.00
ANI2	3.9200	.08605	1.21697	1.481	5.00
ANI3	3.9650	.08751	1.23751	1.531	5.00
ANI4	3.9600	.08706	1.23125	1.516	5.00
RA1	3.9400	.08872	1.25470	1.574	5.00
RA2	4.0600	.09890	1.39864	1.956	5.00
RA3	3.9900	.09589	1.35613	1.839	5.00
RA4	3.9600	.09293	1.31417	1.727	5.00
OVE1	4.1000	.09215	1.30326	1.698	5.00
OVE2	3.8000	.09668	1.36724	1.869	5.00
OVE3	3.2350	.08994	1.27195	1.618	5.00
OVE4	2.9600	.08677	1.22716	1.506	5.00
IPT1	3.3600	.08827	1.24828	1.558	5.00
IPT2	3.6600	.09469	1.33917	1.793	5.00
IPT3	3.9800	.09483	1.34112	1.799	5.00
IPT4	4.0750	.09049	1.27967	1.638	5.00
id1	3.2350	.08994	1.27195	1.618	5.00
id2	2.9600	.08677	1.22716	1.506	5.00
id3	3.3600	.08827	1.24828	1.558	5.00
id4	3.6600	.09469	1.33917	1.793	5.00
id5	3.9800	.09483	1.34112	1.799	5.00
id6	4.0750	.09049	1.27967	1.638	5.00

The table 6 depicted the variables individual construct. Each of the factors has items. With the descriptive analysis the mean, standard deviation, standard error of mean and variance of the items are demonstrated.

2. Reliability and Validity of Reflective Measurement Model

According to the assessments, the reliability alpha values were higher than 8.0. Using partial least square (PLS) route modeling inside Smart PLS software, we looked at the reliability and validity of the calculation. Convergent validity was evaluated by calculating composite reliability (CR), factor loading, and average extracted variance (AVE). Success is shown by factor loadings over 0.70, composite dependability over 0.70, and average variance extracted above 0.50. (Gefen, Straub, & Boudreau, 2000). The study inspected the average variance extracted (AVE) test for calculating convergent validity, which should be greater than the minimum

value of 0.5 suggested by (Fornell, 1981), endorsing the convergent validity of all constructs. Factor loading above 0.50 is appropriate, even if a value greater than 0.70 gives a clear convergent validity indication (Bagozzi & Yi, 1998)

	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average variance extracted (AVE)
Ano_info	0.937	0.938	0.955	0.841
Avl_info	0.929	0.931	0.950	0.825
Info_process_time	0.903	0.905	0.932	0.775
Over_error	0.841	0.843	0.893	0.677
Rep_error	0.875	0.876	0.909	0.668
Risk_att	0.931	0.934	0.951	0.830
Inv_dec	0.904	0.914	0.926	0.677

Tab.7 Validity and Reliability of the Model

3. Discriminant Validity

The discriminant validity in this table should be no .05 values in the AVE. All items loaded considerably (>0.70) on their respective factors, indicating high indicator reliability, as shown by the factor loadings from the final PLS measurement model (Hulland, 1999). All scales employed in this investigation showed reliability with composite reliability (pc) values over the cutoff of 0.70 (Werts, Linn, & Jöreskog, 1974). (Nunnally and Bernstein, 1994). All scales were found to have convergent validity, as shown by the PLS findings, which showed that the extracted variance for all variables was more than the 0.50 threshold value (Fornell and Larcker, 1981). When comparing the extracted variances for each component to the inter-scale correlations, Fornell and Larcker's (1981) test for discriminant validity found that all seven constructs had adequate discriminant validity. The ANI is .932, the AVI is .938, the IPT is .978, the OE is .955, and the RE is .938. The RA is .878 and the ID is.884. This study has enormous implications because of its discriminant validity.

	<i>AI</i>	<i>AVI</i>	<i>IPT</i>	<i>OVE</i>	<i>RPE</i>	<i>RA</i>	<i>ID</i>
Ano_info	0.932						
Avl_info	0.932	0.938					
Info_process_time	0.904	1.057	0.978				
Over_error	0.966	0.938	0.945	0.955			
Rep_error	0.878	0.955	1.007	1.079	0.938		
Risk_att	1.019	0.943	0.926	0.978	0.913	0.878	
Inv_dec	0.884	1.015	1.066	1.046	1.085	0.913	0.884

Tabl.8 Discriminant Validity

	<i>AI</i>	<i>AVI</i>	<i>IPT</i>	<i>OVE</i>	<i>RPE</i>	<i>RA</i>	<i>ID</i>
Ano_info	0.917						
Avl_info	0.871	0.908					
Info_process_time	0.836	0.972	0.880				
Over_error	0.858	0.831	0.827	0.823			
Rep_error	0.798	0.865	0.898	0.927	0.817		
Risk_att	0.952	0.877	0.853	0.866	0.829	0.911	
Inv_dec	0.826	0.944	0.972	0.910	0.960	0.848	0.823

Tab.9 Discriminant Validity (franker-lanker)

4. Structural Model Validity

Statistical significance is reached when the significance level is less than the cutoff value, at which point the null hypothesis is rejected. There are many ways to handle different statistically significant effects. An alternative to the null hypothesis (the alternative hypothesis) is accepted if the null hypothesis is shown to be false. This is a one-tailed test, therefore if the null hypothesis is rejected; the alternative hypothesis ($p < 0.05$) is accepted. Presented in the table are the sample mean and standard deviation as well as the model p value and t value. It's recommended that the t-value falls between -2 and +2 for accepting null hypothesis. The significance level (p value) must be below than .05. Seven hypotheses are accepted in this study.

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Ano_info -> Inv_dec	-0.102	-0.103	0.025	4.041	0.000
Avl_info -> Inv_dec	0.062	0.062	0.033	1.903	0.057
Info_process_time -> Inv_dec	0.618	0.619	0.035	17.857	0.000
Over_error -> Inv_dec	0.293	0.294	0.024	12.322	0.000
Rep_error -> Inv_dec	0.224	0.223	0.025	9.127	0.000
Risk_att -> Inv_dec	-0.076	-0.075	0.023	3.256	0.001

Tab.9 Structural Model Measurement

5. Mediation Analysis of the Model

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Ano_info -> Over_error	0.592	0.585	0.080	7.419	0.000
Avl_info -> Over_error	0.322	0.329	0.081	3.971	0.000
Over_error -> Inv_dec	0.915	0.915	0.017	52.622	0.000

Variables	Original sample (O)	Sample mean (M)	Bias	2.5%	97.5%
Ano_info -> Over_error	0.592	0.585	-0.007	0.421	0.733
Avl_info -> Over_error	0.322	0.329	0.007	0.180	0.497
Over_error -> Inv_dec	0.915	0.915	0.000	0.874	0.943

Tab.11 Total Effect of the Mediator

The table shows total indirect effect of the mediator over confidence error has positive effect on investors' decision making. Bias level is significant; over the 97% biasness explain the values more than .50

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Ano_info -> Inv_dec	0.542	0.535	0.071	7.649	0.000
Avl_info -> Inv_dec	0.295	0.301	0.077	3.830	0.000

Tab.12 Indirect Effect of the Mediator

Variables	Original	Sample mean	Standard	T statistics	P
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	sample (O)	(M)	deviation (STDEV)	(O/STDEV)	values
Avl_info -> Over_error -> Inv_dec	0.295	0.301	0.077	3.830	0.000
Ano_info -> Over_error -> Inv_dec	0.542	0.535	0.071	7.649	0.000

Tab.12 Specific Effect of the Mediator

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Info_process_time -> Inv_dec	0.978	0.978	0.200	4.890	0.000
Risk_att -> Info_process_time	0.856	0.854	0.035	24.457	0.000

Tab.14 Total Effect of the Mediator

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P value
Risk_att -> Inv_dec	0.837	0.836	0.035	23.914	0.000

Tab.15 Indirect Effect of the Mediator

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Risk_att -> Info_process_time -> Inv_dec	0.837	0.836	0.035	23.840	0.000

Tab.16 Specific Effect of the Mediator

All the above tables (Total, Specific and Indirect Effect) of the mediators explains greater T value which is above the recommended +/- 2 value and P value < 0.05 which depicts that the evidence against null hypothesis is immense and significant along with the effect is comprehensive.

6. Hypothesis Testing

The table showed all the six hypothesis result. All of the hypothesis are less than p < .05

	Statements	Decision
H1	There is impact of the representative error on the choices regarding investments.	accepted
H2	The overconfidence fallacy's impact on the judgments about investments	accepted
H3	There is an effect of the person's psychology on the span of time it takes to process information	accepted
H4	Risk mentalities have impact on the amount of time it takes to process information	accepted
H5	The amount of time spent analyzing information has an impact on investment choices	accepted
H6	There is an extent of the effect of the amount of information on the overconfidence error	accepted
H7	There is an influence of information anonymity on the error of overconfidence	accepted

Tab.17 Hypothesis Testing Result

VI. DISCUSSION & FINDINGS

This research analyzes how cognitive and emotional processing influences investment. Structural equations did this. There were five independent variables, one dependent variable, and two mediators. Financial literacy influences behavioral biases, according to study. Second, in the sample, some personality features might enhance or lessen daily prejudices which were second major finding. Personal bias and the perceptual mediator favorably influence investor money distribution. Overconfidence influences investment decisions, according to statistics, hypothesis testing, and data interpretation. Arrogant investors may make mistakes. Representativeness bias may promote reckless investing. Investors should determine their risk tolerance before investing.

Due to information overload and unpredictability, individuals assess investment returns emotionally and intuitively. Financial markets fluctuate (Benartzi & Thaler, 2001; Shefrin & Thaler, 1992; Solt & Statman, 1989). Studies show that individuals adopt intuitive approximations or second-guess their way to the proper choice in uncertain situations. Decision-making is famously hard (Epstein, 1994; Finucane et al., 2000; Slovic et al., 2004) Anchoring, representativeness, and availability influence attitudes. Investors may consider several risk factors. Since prejudices are more of a character flaw than a mental illness, understanding others is vital. They impact investors' financial well-being and resource allocation. Kalra Sahi and Pratap Arora discovered that investors' biases influence their judgments (2012). Intuitive investors prefer Kudryavtsev, A., et al. explanations (2013). In today's market, "overconfidence" may mean overestimating one's common sense, intellect, and smarts. This study found that overconfidence may influence investing choices. Confidence in investment decisions substantially influences risk tolerance. Overconfidence may affect investing decisions. Business owners and investors dominated research. Investors' learner mindset may lead to overconfidence bias. Overconfident investors believe they can predict the future and choose lucrative businesses. This study confirms earlier results. Studies show overconfidence affects investment decisions. The findings disprove such study.

Madaan and Singh (2019) discovered that behavioral biases affect investment decisions: Herding, overconfidence, anchoring, and disposition effect cause anchoring. Investors are often influenced by overconfidence, herding, availability bias, and representativeness faults. According to Rasheed, M. H. et al., Akhtar, M. W. (2018), Yurttadur, M., and Ozcelik, H., impact investors change (2019). Investors purchase stocks that meet their forecasts rather than considering all relevant data, which may impair market performance. Mushinada and Veluri suggest rational investors are prone to self-attribution bias and overconfidence bias (2019). Raheja, S. and Dhiman, B. say overconfidence, risk tolerance, and regret bias impact investment choices (2019). Nadeem and colleagues discovered that investors' money attitudes impact stock market involvement (2020). Investors' heuristic conduct boosts investment performance, according to Parveen et al. (2020) and Kunwar (2021).

Investors' representativeness bias relies on objective traits and historical knowledge. This research demonstrated representativeness bias influences investment decisions. This bias makes individuals view events superficially and base their judgments on "great business Equals good investment." Investors may extrapolate past performance into the future. Historical stock performance may motivate investors. Investors use history to solve challenges. Our challenges may seem familiar to investors. They'll use the same way to address the problem without asking. Investors won't purchase shares if morale is bad. Indonesian investors hurry investment choices due to this habit. Buying shares quickly simplifies investment research. Investors acquire shares based on stock price without analyzing the company. Investor attitudes change quickly. Investors think big. They'll always love their investment. Many studies show that representativeness bias damages investment. Risk tolerance may affect investors' selections. Risk tolerance evaluates investor financial risk. This research demonstrated financial uncertainty comfort influences investing choices. Assessing risk tolerance for instruments, investment goals, profits, and funds may help investors make smarter selections. Risk aversion influences investment emotions. Loss anxiety influences investors' risk tolerance. Investors may readily establish risk tolerance based on instruments, investing goals, profit expectations, and investment money. To profit, you must understand losing. Investors may then adjust their portfolio risk. To ensure that risks and returns meet expectations, traders must examine their risk tolerance while investing.

Thus, investor attention impacts management transparency and market price choices (Hirshleifer and Teoh (2003) Bloomfield). [Other citations must exist] Investors overlook information, causing this dilemma (2002). This research found that investor interest in preference consistency affects private information creation. Research proved this. It's logical. Research permits this. Study logic supports this conclusion. In favorable markets, investors may believe public claims more. Positive information may increase accounting fixation effects like Hirst and Hopkins (1998) and Krische (1998). (2005). Soon. Consider. Investigate this. This may

require deemphasizing fundamental research. Such study would provide new avenues for direct information processing studies. Research would expand.

This study reveals financial experts may interpret information biasedly. Financial experts exaggerate good news and understate unfavorable news (Easterwood and Nutt, 1999). Traditional theories of analyst behavior presume that selfish analysts operate rationally amid a conflict of interest. This study also suggests psychological variables may cause independence concerns, improving our understanding. Isolating preferences is vital since individuals are less conscious and their behavior may not meet incentives.

VII. CONCLUSION

The findings show that overconfidence has a considerable and advantageous influence on investors' decision-making. Furthermore, it is shown that herding has no exponential impact on investors' choices. The findings show that although overconfidence, risk attitudes, representative mistakes, and availability bias have a significant impact on investors' decisions, herding behavior has no detectable impact. It has also been shown that psychological factors differ depending on a person's gender. The bulk of the study's conclusions are consistent with the evidence from previous research that served as support. With increasing awareness of the impact of their own psychological factors on their stock market decision-making, investors should be better able to make reasonable judgments that will increase market efficiency. We recommend that a larger sample size of investors be added and expanded to incorporate additional places and states in future research in order to accurately portray the whole phenomenon of Bangladeshi investors' decision-making and to support the findings of this study. Given the scope and development of behavioral finance, there are a multitude of new opportunities and challenges to be encountered. There are still many psychological aspects that need to be researched. Researchers may further look at additional psychological factors like the regret bias and the anchoring effect to completely grasp their impact on investors' decision-making. These factors could prove to be useful in predicting how eager investors are to incur risks. The study's findings will help regulators and policymakers of the stock market better comprehend the impact that psychological factors have on investors' choice-making. The conclusion demonstrates that availability bias behavior has a positive and significant impact on investors' decision-making. It follows logically that the sample and study design selected will be enough to achieve the stated research aims. Like all prior investigations, this one is susceptible to a variety of underlying problems. One of them is that there are only 200 participants in this research, even if the sample size of investors satisfies the requirements of statistical approaches. If the right regulations are put in place to address the psychological factors and biases, more research may be conducted to determine if these implementations are helpful in increasing the stock market's efficiency.

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