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Probing The Moderating Role of Financial Literacy in The Relationship Between Herding Behaviour and Investment Decision Making: An Empirical study

Savita Pandey
Research Scholar, Department of Management
Mewar University , Chittorgarh , Rajasthan

Prof. Pradeep Kumar Varshney
Department of Management
Mewar University , , Chittorgarh , Rajasthan

Prof.(Retd.) Dhani Shankar Chaubey
Uttaranchal University Dehradun , Uttarakhand

Abstract
The present study aims at analyzing herding behaviour and its impact on investment behaviour, as well as to determine if investor financial literacy moderate the relationship between herding behaviour and investment decision-making. Finding indicates that financial literacy has a statistically significant and favorable effect on investor's investing decisions. It was also found that financial literacy moderates the relationship between herding behaviour and investor investment decisions. As a result, herding investment is the vital factor affecting investment decisions to all investors. Some of the Implications, limitations and future scope of the study are discussed at the end of this study.

Keywords: Financial Literacy, Herding Behaviour, Financial Behaviour, Investment Decision Making, Behavioural Bias.

Introduction

Behavioural finance has been effective in explaining financial market anomalies that conventional finance could not. Behavioural finance challenges the assumption that rational investors prevail in financial system because it believes that conventional financial theories fail to incorporate the critical component of investors being human beings who are regularly exposed to the human element of making mistakes, emotions, the struggle for survival, the need for security, and the ingrained mechanism to avoid anything risky in their propositions. Traditional finance does not take these factors into consideration, and they were formerly thought to be insignificant. This is where behavioural finance theory comes in, since it incorporates the influence of cognition, which is a vital component of being human. The concept of behavioural or cognitive biases explains why most stock investors' investment decisions are not rational, as classical finance theory suggests. According to behavioural finance, investors engage in psychological and emotional behaviour that deviates from rational behaviour. Behavioral biases, according to Pompian (2012), are the propensity to make bad investment decisions. Education is viewed as a critical component in eliminating stereotypes, which may be addressed through successful approaches. Financial literacy is now largely acknowledged as a crucial component of global economic and financial stability. Underprivileged financial knowledge muddles the decision-making process. Financial literacy aids in the proper management of financial resources. A knowledgeable investor may ignore their prejudices and make solid financial decisions. This study contributes to a better understanding of the importance of financial literacy among women and how it affects the link between behavioural biases and investment decisions. Previous research has not looked at financial literacy as a moderator between genders. The findings might be significant in better understanding gender investing trends in an increasingly global and competitive market. With the aforementioned purpose in mind, the study was conducted on individual investors in the Lucknow region. The new study offers a comparable way for

demonstrating behavioural finance theories and hypotheses, as well as persuasive reasoning. The paper is divided into six parts. The first part is the introduction section, the second part is the review of the literature. The methods and dataset are explained in detail in third part. The fourth part of paper outlines the analysis and outcomes fifth part outlines the discussion and conclusion and last part are the implication, limitation and future scope of the study.

Review of Related Literature and Hypothesis Development

Herding Behaviour and Investment Decision Making

Herding behaviour is the most visible and influential behavioural bias in terms of having a large influence on financial markets. Herding behaviour entails a transition period that develops before a rapid change in financial market trends (Kang, 2013). Herding conduct among investors has been blamed for widespread mistakes and the formation of market "bubbles" (Devenow & Welch, 1996). The purpose of herding behaviour among investors is to protect their reputation. This is because individuals prefer the experience of failing in a normal manner to the feeling of succeeding uncommonly. It gives the investor the option of not taking any risk with an investment in a certain stock by going against the tide. It may also relate to confidence in the talents, historical profits obtained, trends, and experience of other stock investors using that particular investment channel. (Dave & Welch, 1996).

Herding- examine if investors who lack confidence, value the advice of others (Durand et al., 2013). Clarke et al., (2014) study the key evidence of herd behaviour in institutional settings of Amman Stock research. Ramadan (2015) investigated herding behaviour on the Turkish Stock Exchange, whereas Balagyozyan (2016), Garg and Gulati (2013), and Elahi and Malik (2014) stated that herding bias has a significant influence on investing decisions. Abidin and Kamil (2017) described the stock market equities investor group behaviour and decision-making. According to Hon-Snir et al. (2012), females are more prone to herding bias. Male and female investor's investing decisions have been considerably impacted by financial literacy. Adil, Singh, and Ansari (2022) investigated whether financial literacy mitigated these correlations. According to the study, investors require training programmes, conferences, and seminars to overcome their behavioural biases while making investing decisions. In this way, financial literacy may play a significant role in investment forecasting. The current study may be the first to investigate the moderating impact of financial literacy across male and female investors. These arguments lead to the following hypothesis

H1. Herding behaviour has a significant impact on investor's investing decisions.

Financial literacy and investment decision

Financial literacy is defined as successfully understanding and using various financial talents such as investing, budgeting, and personal financial management. Financial literacy, which is a lifelong learning process, serves as the foundation of your relationship with money. Financial literacy is defined by PACFL (2008) as "the capacity to apply knowledge and skills to successfully manage financial resources for a lifetime of financial well-being." Financial literacy is a critical aspect in making informed investing decisions. (Hilgert et al., 2003). According to Lusardi and Mitchell (2007), household income, age, number of children, educational attainment, marital status, retirement status, and gender all have an impact on financial literacy. According to a research, socioeconomic variables such as risk preferences and investment characteristics, work type and rank, personal and household income i.e. amount of investment possibilities, investment option framing, and males are more financially savvy than females (Gallery et al., 2011). Anood Bin Kalli and Al-Tamimi 2009). Chen and Volpe (2002) explored the level of financial literacy among the general people living in the United States of America (USA), among university students (Chen and Volpe, 1998), and among the older population literacy is low (Lusardiet al., 2014), and low levels of financial literacy affect investment decisions negatively (Al-Tamimi and Anood Bin Kalli) and make irrational investment decisions (Bucher-Koenen and Ziegelmeyer, 2011), further investors having a high level of financial literacy make a better investment decision (Hilgert et al., 2003). This argument leads to the following hypothesis:

H2: Financial literacy significantly affects the investment decision of investors.

Herding, financial literacy and investment decision

Several author has explored the linkage between Financial literacy and investment decision-making

and found close association between these two variables.(Duong et al. (2015), Ates¸a et al. (2016), Sezer and Demir (2015), Bucher-Koenen and Ziegelmeyer, 2011, Sevim et al. 2012 and Takeda et al. (2013). Duong et al. (2015) indicated that demographic factors such as gender, age, and income have strong influence on investor decision making. They also discovered that around the age of retirement, investors' knowledge and judgements about investments and savings can be enhanced. Ates et al. (2016) discovered a robust link between behavioural biases and financial literacy. Financial information has been shown to have a detrimental impact on framing, overconfidence, and loss aversion. In their 2015 study, Sezer and Demir identified no link between investors' behavioural biases and their level of financial expertise. Individuals with low cognitive capacity and little financial skills, according to study, make biased investing judgments. 2011 (Bucher-Koenen and Ziegelmeyer). According to research of Sevim et al(2012) , increased financial knowledge among investors encourages customers to utilize credit cards responsibly and discourages excessive borrowing. Overconfidence is more common among investors with low investment literacy, whereas it is less common among investors with strong investment literacy..

Inadequate financial literacy can lead to information overload and swarming behaviour (Setyowati et al., 2018). Previous research, including by Gerardi et al. (2013), Klapper et al. (2013), Lusardi et al. (2014), and Cueva and Rustichini (2015), revealed that a lack of financial literacy was the root cause of the 2007-2008 global financial crisis. Even if the herding is legitimate, it causes market instability. Religious literacy may also help investors avoid swarming, resulting in fewer market failures (Razak and Abdullah, 2015). As a result, a rational person must think critically and studies the situations with his ideas in order to not only follow the behaviours of others but also to discriminate between truth and lie.

Behavioral finance experts are increasingly interested in researching how financial literacy affects individual investors behavior while making investments. As was previously said, in order to understand investor behaviour, it is vital to look at financial literacy and behavioural biases. Studies have shown that behavioural biases and financial literacy significantly influence investment behaviour. Financial literacy has not been identified as a moderating factor between investor behaviour biases and investment decisions, despite the fact that the relationship between these two concepts, which have a considerable impact on investment decisions, has gotten little attention in studies. A moderator variable can influence or even change the nature of the relationship between the dependent variable and its predictor variable. As a result, we recognise that past research initiatives should either dismiss the possible importance of moderating variables or fail to thoroughly analyse them based on our review of the literature. In research initiatives, financial literacy has been investigated from the viewpoints of investment performance and decision-making. Al-Tamimi and Anood Bin Kalli (2009); Hilgert et al. (2003); Bucher-Koenen and Ziegelmeyer (2011); This disparity variable is examined as a modulator of the relationship between behavioural biases and the investment choices made by certain investors. Overconfident investors overestimate their expertise, according to behavioural bias research. (Odean, 1998). People that follow the crowd behave in a herdlike manner (Clarke et al., 2014). Investors that pursue high-risk endeavours in an effort to maximise earnings exhibit a high tolerance for risk (Hanna and Lindamood, 2004). A winning investment is more likely to be sold by investors with disposition effects than a losing one (Shefrin and Statman, 1985). Therefore, we propose that:

H3. Financial literacy moderates the relationship between herding behaviour and investment decision making.

H4: Demographic variables like income and educational qualification positively affect the investment decision.

Objectives

- To analyze the relationship between herding behaviour, financial literacy, and investment decision.
- To study the effect of demographic variables on the investment decision of the investors.
- To assess the moderating effect of financial literacy on the relationship between herding behaviour, and investment decisions.

Research Methodology This section of the study gives an explanation of the data used in the study, its type, source, data collection methods, instruments used in the study, sample unit,

sampling, and demographic details of the respondents to achieve the set objectives and test the hypotheses of this study.

Data and its Collection: This study is based on primary data. Data collection has done by constructing a questionnaire consisting of two parts (Part A and Part B). Section A contains the questions on the demographic details of the respondents and Section B consists of the scale/instruments constructed to measure the latent variables of the study.

Sample Unit and Sample Size: Sample unit of this study is the investors investing in the Indian financial market. The total sample size has been set as 400. A total of 426 samples have been collected out of which 16 questionnaires were found incomplete and hence rejected. Finally, this study has been carried out with a 410 sample size.

Instruments Used: This study constructed three scales/instruments to run a model and test its validity. Scales constructed include the statements in five points Likert scale ranging from 5 for "strongly agree" to 1 for "strongly disagree". All These three instruments are; herding behaviour, financial literacy, and investment decision. An instrument on the herding behaviour of the investors consists of 7 items, an instrument constructed to measure financial literacy consists of 5 items and an instrument constructed to measure the investment decision of the investors consists of 4 items.

Variables of the Study and Statistical Tools Used: This study includes age, gender, marital status, educational qualification and occupation as demographic variables and herding behaviour, financial literacy, and investment decision as latent variables. To establish a relationship between herding behaviour, financial literacy, and investment decision, Partial Least Square Structural Equation Model has been run in the Smart PLS. To test the effect of demographic variables on latent variables, one-way ANOVA has been used.

Data Analysis and Interpretation: Data analysis has been done in the Smart PLS Software. The Partial Least Square Structural Equation Model has been run to establish a relationship between herding behaviour, financial literacy, and investment decision.

Results and Discussion: Outcomes of the Partial Least Square Structural Equation Model with three latent variables; herding behaviour, financial literacy, and investment decision where financial literacy has been taken as moderating variable has been presented in table 3. to table 8.

Construct reliability and validity: Values of construct reliability and validity are revealed in the table 8. Cronbach's alpha value, Composite reliability (rho_a) and Composite reliability (rho_c) of the model for all the variables in the model is higher than 0.70 which confirms the internal consistency of the model. Since the AVE of all the latent variables is more than 0.5, there exists a convergent validity in the model (Kala & Chaubey, 2022).

Results

Information presented in table 1 indicates the demographic characteristics of respondents. It is observed that 108(26.3%) respondents fall in the age Below 30 Years, 128(31.2%) respondents are in the age group of 30 -40 years, 46(11.2%) are in the age group of 40-50 years, 94(22.9%) investors are in the age group of 50-60 years and remaining 34(8.5%) investor are in the age above 60 years. Information about the gender categories of respondents indicates that 220(53.7%) investors are male and the remaining 190(46.3%) respondents are female. It is observed that 243(59.3%) investors are married categories, 159(38.8%) are unmarried and 8(2.0%) are from Divorce/separated categories respondents. According to data on respondents' education levels, 44 respondents (10.7%) are enrolled in technical courses (BE/diploma,/certification), 12 respondents (2.9%) are matriculated, 9 respondents (2.2%) are graduates, 167 respondents (40.7%), are postgraduates, and 178 respondents (43.4%) have indicated they have a professional degree. According to information on the respondents' occupational classifications, 178 (43.4%) respondents belong to the service class, followed by 55 (13.4%) businessmen, 127 (31.0%) retirees, 32 (7.5%) professionals, and the remaining 18 (4.4%) housewives

.**Table1:Demographic characteristics of Respondents**

Sl NO	Description	No of Respondents	Percentage
Age Categories	Below 30 Years	108	26.3
	From 30 to -40 years	128	31.2
	From 40-50 years	46	11.2

	From 50-60 years Above 60 years	94 34	22.9 8.5
Gender categories	Male Female	220 190	53.7 46.3
Marital status	Married Unmarried Divorce/ Separated	243 159 8	59.3 38.8 2.0
Education Level	matric Graduate Postgraduate Doctorate Professional Qualification	12 9 167 44 178	2.9 2.2 40.7 10.7 43.4
Occupational Categories	Service Class Businessman Retired Professionals Housewives	178 55 127 32 18	43.4 13.4 31.0 7.8 4.4

The chi-square test was used to investigate the possibility of a relationship between available investment options and financial literacy. The information presented in the table indicates that The Chi-square test value (X^2 = 7.5709 at 18 degrees of freedom and 0.05% level of significance is lesser than the tabulated value (X^2 = 28.87) at 18 DF and 5% significance level. Thus, test statistics supports the research hypothesis and we may conclude that There is no association between investment avenues and the level of financial literacy of investors

Table2: Investment Pattern and its Association with financial literacy

Sl No	Investment Avenues	Perceived Financial Literacy			
		Low	Medium	High	Total
A	Equity Share	29	114	42	185
B	Fixed income securities e.g. government bond s, fixed deposit account	71	189	33	293
C	Foreign Exchange Market	0	10	0	10
D	Derivatives Securities Market	7	40	10	57
E	Mutual fund investment	33	109	26	168
F	Gold bonds	20	55	20	95
G	ULIPs	7	37	8	52
H	Real-estate	28	84	14	126
I	Money market	1	11	0	12
J	Other	0	2	0	2
	Total	196	651	153	1000
Chi-Square Test(X^2)= X^2= 7.570953 at a 5% level of significance and 18 degrees of freedom					

Descriptive statistics for important constructs and associated measurement variables are presented in Table 3 for the investigation. Herding behaviour was reported to have a mean score of 3.5213, SD

of.76633, and variance of.587. " When it comes to investing in equities, I rely on the advice of friends, coworkers, and close family", according to the measurement, this variable inside the herding behaviour construct has the greatest mean (3.6488), SD (1.0871), and vaiance (1.172) scores. The concept of financial literacy had a mean score of 2.3400, SD of.77074, and variation of.594 on the scale. The measuring variable with the greatest mean of 2.6366, SD of.97255, and variation of.946 is "take an active role in investment planning to make prudent financial decisions and achieve individual financial well-being."

Table3: Herding Behavior, Financial Literacy and Investment Decision: A Descriptive Statistics(N=410)

	Mean	Std. Deviation	Variance
Herding Behaviour	3.5213	.76633	.587
In comparison to my investing judgments, I trust financial analysts, friends, and family members more.	3.3732	1.28172	1.643
When it comes to investing, I rely on the judgments of others.	3.5951	1.22802	1.508
When it comes to investing in equities, I rely on the advice of friends, coworkers, and close family.	3.6488	1.08718	1.182
I react promptly to changes in the decisions of other investors.	3.5512	1.39981	1.959
If a large number of shares have been ordered since the start of trading, I prefer to acquire them.	3.5537	1.37505	1.891
If the total trading activity on the stock market was higher than typical in the previous month, I would raise the size of my stock market holdings.	3.3171	1.32013	1.743
Foreign investors, in my opinion, outperform local investors in terms of investment performance.	3.6098	1.16338	1.353
Financial Literacy	**2.3400**	**.77074**	**.594**
I am aware of different provisions related to financial decision	2.2683	1.11939	1.253
I have the necessary knowledge required to make a financial investment decision	2.2171	1.08972	1.187
I try to gain the necessary skill in investment decision making	2.2366	1.29325	1.672
I am enthusiastic about organising household money, including budgeting, purchasing, insurance, and loans.	2.3415	1.14071	1.301
I take an active role in investment planning to make sensible financial decisions and attain individual financial well-being.	2.6366	.97255	.946
Investment Decision	**3.0573**	**.65207**	**.425**
Herd behaviour can lead to good investing decisions.	3.1024	.86736	.752
Herd behaviour sometimes helps in making a good investment decision but not always.	3.1878	.79506	.632
Herd behaviour sometimes causes unfavourable investment decision but copying an expert's behaviour produce good benefits.	3.0585	.81938	.671
Poor decisions result from herd behaviour.	2.8805	.74523	.555
Valid N (listwise)			

Effect of Demographic characteristics of respondents on their Investment Decision: demographic characteristics of respondents especially income level and education were considered to examine whether there is an effect of income and education on the investment decision of the investors.. Tables 4 and Table 5 have made a comparison among the investors of various income groups using ANOVA. The variance in the mean score of different income groups has been analyzed and the alpha level has been set at 5 percent. It has been hypothesized that *"There is no significant difference of income and education level on investment decision of the investors."* The outcomes of the test are presented in table no.4 to Table 5 shows the income groups-wise distribution of the investors and the descriptive statistics.

Table.4.: Descriptive Statistics of ANOVA for Investment Tendency among the Investors of different Income Categories

Income	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Below Rs 30,000	142	2.9947	.69667	.05846	2.8791	3.1103	1.25	4.25
Rs 30,000 – 50,000	132	2.9602	.70157	.06106	2.8394	3.0810	1.50	5.00
Rs 50,000 – 70,000	44	3.0511	.64830	.09773	2.8540	3.2482	2.00	4.75
Rs 70,000-1,00,000	56	3.0938	.58302	.07791	2.9376	3.2499	2.00	4.25
Above Rs. 1,00,000	36	2.9028	.74947	.12491	2.6492	3.1564	1.50	4.75
Total	410	2.9951	.68246	.03370	2.9289	3.0614	1.25	5.00

The ANOVA results in Table5 reveal that there is no significant difference in investment decisions among investors of different income categories (f = 0.615, p = 0.652). At a 5% level of significance, the computed value of F at (v1=4 v2=405) is 0.6150, which is smaller than the table value (2.46). As a result, the null hypothesis is accepted indicating no significant differences in respondents' investment tendency across the level of income of respondents

. Table 5.: Outcome of ANOVA for Investment Tendency among the Investors of different Income Categories

investment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.151	4	.288	.615	.652
Within Groups	189.340	405	.468		
Total	190.490	409			

The data in Tables 6 and 7 show the Descriptive Statistics of ANOVA for Investment Tendency among Investors of varying educational levels. The estimated value of F at (v1=4 v2=405) at a 5% level of significance is 6.780, which is more than the table value(2.46), showing that the bull hypothesis is rejected, demonstrating significant differences in respondents' investment tendency across education levels.

Table 6Descriptive Statistics of ANOVA for Investment Tendency among the Investors of different Income Categories

Educational Qualification	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Matric	12	3.6875	.30386	.08772	3.4944	3.8806	3.25	4.25
Graduate	9	2.5556	.44683	.14894	2.2121	2.8990	2.00	3.50
Postgraduate	167	2.9386	.67967	.05259	2.8348	3.0425	1.50	4.75
Doctorate	44	3.4148	.54704	.08247	3.2485	3.5811	2.00	5.00
Professional Qualification	178	2.9199	.67876	.05088	2.8195	3.0203	1.25	4.75
Total	410	2.9951	.68246	.03370	2.9289	3.0614	1.25	5.00

Table7: One Way ANOVA of mean of investment tendency across education level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.779	4	4.195	9.780	.000
Within Groups	173.711	405	.429		

Total	190.490	409			

Effect of Herding Behaviour and Financial Literacy on Investment Decisions of the Investors: A Measurement model

The implicit or explicit models that correlate the latent variable to its indicators are referred to as measurement models. The model's measurement model examines the relationship between latent variables and their measures. The structural model illustrates the relationship between the latent variables. Typically, you saturate the structural model by enabling all latent variables to correlate in order to test the measurement model. The measurement model is then updated to reflect the discrepancy. In PLS-SEM path modelling, the measurement model, sometimes referred to as the outer model, has to do with the measurement of latent variables. Excellent latent variables have an outer loading of at least 0.7.Less than 0.5 should be eliminated. The antecedent elements determining herding behaviour, financial literacy and investment decision-making are represented in Figure 1. Cronbach's alpha, composite reliability, convergent validity, and AVE tests were employed to evaluate model fit. (Hair et al. (2017)). Cronbach's reliability of herding behaviour ratings were 0.721, investment decision-making 0.821 and herding behaviour was 0.714 which is significantly higher than the acceptable minimum of 0.7. The CR for all constructs is more than 0.70, and the Square root of AVE must be more than the correlation value of other latent variables in the model. Since the Square root of AVE of all the latent variables in our model is more than the correlation value of the other two latent variables hence our model is said to be the best fit. the AVE values vary from 0.511 to 0.653. (table8)

Table 8: Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Collinearity
Financial Literacy	**0.714**	**0.721**	**0.815**	**0.523**	**1.019**
Herding	**0.721**	**0.825**	**0.808**	**0.511**	**1.074**
Investment Decision	**0.821**	**0.830**	**0.882**	**0.653**	
Moderating Effect _ Financial literacy	**1.000**	**1.000**	**1.000**	**1.000**	**1.056**

Overall, this measurement model's discriminant validity is good. Fornel and Larcker (1971) determined that the components possessed discriminant validity by comparing the square root of each AVE on the diagonal to the correlation coefficients (off-diagonal) for each construct in the relevant rows and columns. (Table9)

Table 9: Discriminant Validity Fornell-Larcker criterion

	Financial Literacy	Herding	Investment Decision	Moderating Effect _ Financial literacy
Financial Literacy	0.686			
Herding	0.130	0.641		
Investment Decision	0.587	0.772	0.808	
Moderating Effect _ Financial Literacy	0.014	-0.226	-0.095	1.000

The heterotrait-monotrait correlation ratio (HTMT) measures latent variable similarity. Discriminant validity is considered to be proved if the HTMT is smaller than one. A cutoff of 0.85 reliably distinguishes between valid and invalid pairings of latent variables..(Table10)

Table 10. :Heterotrait-Monotrait Ratio (HTMT)

	Financial Literacy	Herding	Investment Decision	Moderating Effect _ Financial literacy
Financial Literacy				
Herding	**0.221**			
Investment Decision	**0.788**	**0.929**		
Moderating Effect _	**0.030**	**0.286**	**0.099**	

Financial literacy				

Effect of Herding Behaviour and Financial Literacy on Investment Decision of the Investors:

The effect of herding behaviour and financial literacy using Smart PLS Partial Least Square Structural Equation Model has been depicted in table. Statistics of the model shows that both the latent variables i.e. herding behaviour and financial literacy have a significant direct effect on investment decision of the investors ($p < 0.01$). Hence the null hypothesis H01 of the study is rejected.(Table11)

Table11: Path Coefficient: Mean, STDEV, T values, p values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Financial Literacy -> Investment Decision	0.493	0.491	0.027	17.989	**0.000**
Herding -> Investment Decision	0.723	0.722	0.022	33.377	**0.000**
Moderating Effect 1 -> Investment Decision	0.066	0.065	0.020	3.344	**0.001**

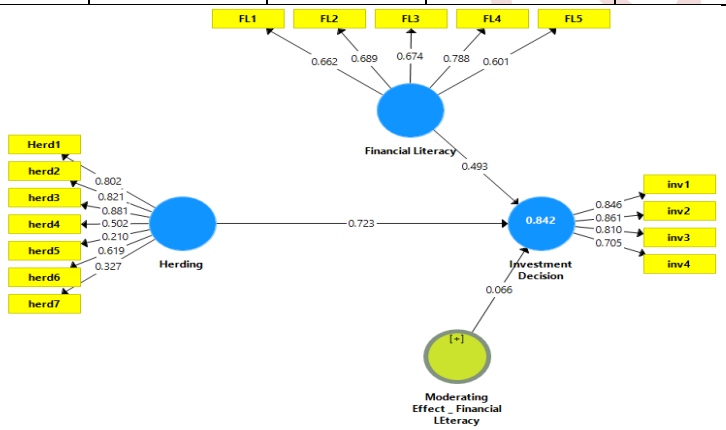

Figure1: measurement model and outcomes

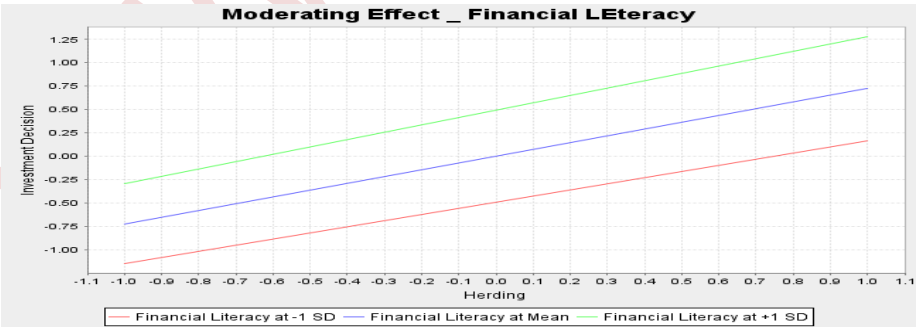

Figure2: Moderating effect Financial literacy

Moderating Effect of Financial Literacy: Statistics of the model revealed in table.. show that the latent variable financial literacy moderates the relationship between herding behaviour and investment decision of the investors ($t = 3.334$, $p = 0.001$). Results confirmed that financial literacy moderates the relationship between herding behaviour and the investment decisions of the investors. Hence, it supports the research hypothesis No 3.

Discussion and conclusion

The current study intends to examine herding behaviour and its influence on investment behaviour, as well as to determine if investor financial literacy moderates the link between herding behaviour and investment decision-

making. According to the research, financial literacy has a statistically significant and favourable effect on investors' investing decisions. It is feasible to argue that financial literacy is the single most important element impacting investment decisions for all investors. The study finds that investors with different levels of financial awareness and biases may have different investment proportions. Further research into the relationship between investment choices and individual investors' herding biases that are influenced by financial literacy led to the conclusion that investors' investment proportions may vary depending on their financial literacy and herding biases, as well as a conclusion that some herding biases are connected to investment choices. The results are equivalent to those of Hilgert et al. (2009), Al-Tamimi and Anood Bin Kalli (2016), Pandey S., Chaubeyds, and Tripathi DM (2016), and (2003).

According to the study's findings, financial literacy moderates the relationship between herding and investor investment decisions. As a result, the most significant factor in lowering overconfidence bias is financial knowledge. The findings of the research are similar to those of Takeda et al (2013). When it comes to the relationship between financial literacy and investing choices, it has been shown that highly literate investors have difference in their approach as compared and contrasted to investors with poor financial literacy in choosing their investment avenues (Khalid et al., 2018). As a result, it is possible to assert that lack of financial literacy might result in significant discrepancies between behavioural biases and investing choices.

Financial literacy is a need for making an investment choice, according to current behavioural finance research, and it also serves as a significant predictor of the association between behavioural biases and investment decisions, particularly for female investors. Our study may be the first to predict how financial knowledge would affect male and female investors in terms of moderation or interaction.

Implications and future scope of the study

Increased financial literacy may have a significant influence on people's investing decisions. Individual investors are eager to make new investments in order to boost their financial returns, but they must go with prudence. Financial advisors should look at the link between investment risks and investment outcomes. Examine the risk-taking tendency of the investors as well. A universal investment strategy cannot suit everyone's financial goals. Each investor's demands should be met by tailoring the portfolio to their gender, age, income, education, risk tolerance, and so on. According to the report, financial market courses should be designed to educate investors in undertaking technical market research prior to investing. The report suggests training programmes, workshops, and seminars to help investors enhance their financial literacy and expertise.

Limitations of the study

This research, like many others, has limitations. To begin, the model examination approach assumes that the latent variables have linear connections. Second, due to general obstacles, the investigation was organised using a survey questionnaire that was constantly validated. Because a structured questionnaire was used to collect data, respondents may be hesitant to reply, resulting in erroneous findings. Third, the study was restricted to individual investors in a single city, Lucknow. Fourth, a larger sample size would enable us to derive more conclusive findings. In terms of population representability and variability, combining the judgmental and snowball sampling procedures may have only small disadvantages. Therefore, care should be used when extending the results to other areas. We advise further investigation to ascertain the extent to which other cognitive biases, such as representativeness, anchoring, home bias, and so on, influence investing decisions in a different region of the nation with distinct demographics, such as professional investors..

Reference

1. Adil, M., Singh, Y. and Ansari, M.S. (2022), "How financial literacy moderate the association between behaviour biases and investment decision?", *Asian Journal of Accounting Research*, Vol. 7 No. 1, pp. 17-30. https://doi.org/10.1108/AJAR-09-2020-0086
2. Al–Tamimi, H.A.H. and Anood Bin Kalli, A. (2009), "Financial literacy and investment decisions of UAE investors", The Journal of Risk Finance, Vol. 10 No. 5, pp. 500-516, DOI: 10.1108/15265940911001402.

3. Ates¸a, S., Cos¸kunb, A., Abdullah S¸ahinc, M. and Demircan, M.L. (2016), "Impact of financial literacy on the behavioural biases of individual stock investors: evidence from Borsa Istanbul", Business and Economics Research Journal, Vol. 7 No. 3, pp. 1-19, ISSN: 1309-2448, DOI: 10.20409/berj. 2016321805.
4. Bucher-Koenen, T. and Ziegelmeyer, M. (2011), "Who lost the most? Financial literacy, cognitive abilities, and the financial crisis", ECB Working Paper.
5. Bucher-Koenen, T. and Ziegelmeyer, M. (2011), "Who lost the most? Financial literacy, cognitive abilities, and the financial crisis", ECB Working Paper.
6. Cakan, E. and Balagyozyan, A. (2016), "Sectoral herding: evidence from an emerging market", Journal of Accounting and Finance, Vol. 16 No. 4, pp. 1-12.
7. Chen, H. and Volpe, R.P. (1998), "An analysis of personal financial literacy among college students", Financial Services Review, Elsevier, Vol. 7 No. 2, pp. 107-128.
8. Clarke, J., Ornthanalai, C. and Tang, Y. (2014), "Institutional herding and asset price: the role of information", Rotman School of Management Working Paper, (1707868).
9. Cueva, C., and Rustichini, A. (2015). Is financial instability male-driven? Gender and cognitive skills in experimental asset markets ?. J. Econ. Behav. Organ. 119, 330–344. doi: 10.1016/j.jebo.2015.08.014
10. Devenow, A., & Welch, I. (1996). Rational herding in financial economics. European Economic Review, 40(3), 603-615.
11. Gallery, N., Newton, C. and Palm, C. (2011), "Framework for assessing financial literacy and superannuation investment choice decisions", Australasian Accounting, Business and Finance Journal, Vol. 5 No. 2, pp. 3-22.
12. Garg, A. and Gulati, R. (2013), "Do investors herd in Indian market", Decision, Vol. 40 No. 3, pp. 181-196.
13. Gerardi, K., Goette, L., and Meier, S. (2013). Numerical ability predicts mortgage default. Proc. Nal. Acad. Sci. U.S.A. 110, 11267–11271. doi: 10.1073/pnas. 1220568110
14. Gerardi, K., Goette, L., and Meier, S. (2013). Numerical ability predicts mortgage default. Proc. Nal. Acad. Sci. U.S.A. 110, 11267–11271. doi: 10.1073/pnas. 1220568110
15. Hanim, Karmila & Abidin, Siti. (2017). Does Herd Behavior Exist Among Investors of Shariah-Compliant Equities in Malaysia?. Advanced Science Letters. 23. 4968-4972. 10.1166/asl.2017.8978.
16. Hilgert, M.A., Hogarth, J.M. and Beverly, S.G. (2003), "Household financial management: the connection between knowledge and behaviour", Federal Reserve Bulletin HeinOnline, Vol. 89, p. 309.
17. Hilgert, M.A., Hogarth, J.M. and Beverly, S.G. (2003), "Household financial management: the connection between knowledge and behaviour", Federal Reserve Bulletin HeinOnline, Vol. 89, p. 309.
18. Huu Duong, H., Gerrans, P., Lajbcygier, P., Moulang, P., Strydom, M., Vaz, J. and Wickramanayake, J. (2015), A Review of Retirement Savings Investment Behaviours: Theory and Evidence, Citeseer.
19. Huu Duong, H., Gerrans, P., Lajbcygier, P., Moulang, P., Strydom, M., Vaz, J. and Wickramanayake, J. (2015), A Review of Retirement Savings Investment Behaviours: Theory and Evidence, Citeseer
20. Kala, D. & Chaubey, D.S. (2022). Examination of relationships among technology acceptance, student engagement, and perceived learning on tourism-related MOOCs. *Journal of Teaching in Travel & Tourism,* 1-18. https://doi.org/10.1080/15313220.2022. 2038342
21. Kang, W. (2013). Herd behaviour in financial markets. International Business Research, 6(6), 31.
22. Khalid, Rizwan & Javed, Muhammad & Shahzad, Khurram. (2018). Impact of Behavioral Biases on Investment Decision Making with Moderating Role of Financial Literacy. Jinnah Business Review. 6. 34-41. 10.53369/RKXA7855.

23. Klapper, L., Lusardi, A., and Panos, G. A. (2013). Financial literacy and its consequences?: evidence from Russia during the financial crisis. J. Bank. Finance 37, 3904–3923. doi: 10.1016/j.jbankfin.2013.07.014
24. Klapper, L., Lusardi, A., and Panos, G. A. (2013). Financial literacy and its consequences?: evidence from Russia during the financial crisis. J. Bank. Finance 37, 3904–3923. doi: 10.1016/j.jbankfin.2013.07.014
25. Lusardi, A. and Mitchell, O.S. (2007), "Financial literacy and retirement preparedness: evidence and implications for financial education", Business Economics, Vol. 42 No. 1, pp. 35-44.
26. Malik, S.U. and Elahi, M.A. (2014), Analysis of Herd Behavior Using Quantile Regression: Evidence from Karachi Stock Exchange (KSE).
27. Pandey S., Chaubey, D.S., and Tripathi DM (2016). Financial Accounting Information and Its Impact on Investment Decision in Equities, *Management Convergence*, 7(/2), 11-20
28. Ramadan, I.Z. (2015). Cross-sectional absolute deviation approach for testing the herd behavior theory: the case of the ASE index. *International Journal of Economics and Finance*, 7(3), 188-193.
29. Setyowati, A., Harmadi, H., and Sunarjanto, S. (2018). Islamic financial literacy and personal financial planning?: a socio-demographic study. Int. J. Econ.Manag. 5, 149–168.
30. Sevim, N., Temizel, F. and Sayılır, O. (2012). The effects of financial literacy on the borrowing behaviour of T urkish financial consumers. International Journal of Consumer Studies, 36(5), 573-579.
31. Takeda, K., Takemura, T. and Kozu, T. (2013), "Investment literacy and individual investor biases: survey evidence in the Japanese stock market", The Review of Socionetwork Strategies, 7(1), 31-42.
32. Tamimi and Anood Bin Kalli (2009). Table 2 represents the items of the questionnaire. Click here to see Table 2: https://docs.google.com/document/d/1JAWJUkrAjSmm25DuZJNSyHxrKgmTT4k-6e6D4Z8by9A/edit