

Investigating The Impact Of Behavioural Biases And Financial Literacy In Financial Decision Making Among Working Women In Mumbai

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ABSTRACT

This study examines the nexus between financial literacy, behavioural biases, and investment decision making among 197 working women in Mumbai. Specifically, it explores how financial behaviour & attitude and regret aversion mediate the relationship between financial literacy and investment choices. Results indicate significant impacts of financial behaviour & attitude and investment decision making on the financial choices of participants. Additionally, a positive association is found between financial literacy and both financial behaviour & attitude and investment decision making. However, a noteworthy finding is the negative relationship between financial literacy and regret aversion. Furthermore, the study highlights the detrimental influence of regret aversion on both financial literacy and investment decision making among the participants. These findings underscore the intricate dynamics involved in the decision-making processes of working women regarding investments, emphasizing the crucial mediating role played by behavioural biases. Overall, the research suggests the necessity of addressing behavioural biases alongside enhancing financial literacy to facilitate prudent investment decision making among working women in Mumbai. Such insights hold implications for policymakers, financial educators, and practitioners aiming to foster financial empowerment and well-being among women in the workforce.

Keywords: Financial Literacy, Investment decision, financial behaviour & attitude and Risk Aversion

1. Introduction

Financial Literacy (FL) and behavioural finance (BF) in connection with investment decision (ID) making is a research phenomenon in the field of business and finance that has gained popularity in the research domain in the last decades. The increasing need for individuals and investors to make daily decisions (s) on their investments has increased the popularity of the research domain, most specifically since the integration of financial literacy into the concept of behavioural finance. However, since the emergence of this research area, there are limited studies to examine the evolution of research of FL and BF in the context of investment decisions. Over the years, the behaviour of investors or people when it comes to making investment decisions has become very foxy (Salim & Khan, 2020). Thus, increasing the relevance and importance of financial literacy among people was vital, it also has gained popularity among women. This is because of the unstable global financial market and its financial objectives, which continually change. There is an increase in entrepreneurs' responsibilities in financial management for the financial future. This may be why (Kumar & Anees, 2013) suggested the need for developing a good understanding of the financial world. This would aid appropriate decision-making on financial objectives in this kind of complex business environment, where the range of complex products that shape the financial markets keeps emerging. The importance of financial literacy and behavioural characteristics in investment decision-making has been underpinned in the literature.

2. Literature Review

2.1 Financial Literacy

Financial literacy is the ability to make an appreciative and sound financial decision that can drive a financial goal and take care of associated risk factors for every financial decision (LUSARDI, MITCHELL, & CURTO, 2010). Lack of this financial knowledge has been the reason why people shy away from making financial decisions (van Rooij, Lusardi, & Alessie, 2011).

2.2 Behavioural Finance

As explained by (Fromlet, 2001), behavioural finance is the interaction of individual behaviour and market behaviour, combining knowledge of these two theoretical fields in investment decision-making. As this concept becomes more rapidly developing, it coincides with financial literacy. Nevertheless, then, the financial decision has to be taken with several consequences on a daily basis. Decisions on whether to save or invest assets are made on a daily basis by investors (CAMPBELL, 2006). Due to the need to make this decision, people tend to exert a series of financial behaviours such as financial Behaviour & Attitude, Regret aversion, Mental Accounting ext.

Investment Decision Making

Decision-making processes are highly influenced by behavioural finance which sheds light on and enhances investors' reasoning, most especially the emotional biases (Singh, 2016). (Ricciardi & Simon, 2000) also mentioned what, why, and how investors make decisions predicted by their financial behaviour. This concept originates in sociology, psychology, finance, portfolio selection, and efficient market hypothesis, with psychology and sociology as the main propeller of the concept (Dreman & Berry, 1995). (Singh, 2016) emphasizes that the significance of behavioural finance is in understanding proper market hypothesis and portfolio selection which are predictors of decisions taken by investors when viewed from the angle of traditional finance.

3. Conceptual Framework

In presence of Financial Literacy, the biases while taking decision are expected to be reduced and rational decisions are taken. Therefore, impact of financial literacy and mediating effect of biases are checked on investment decision making.



Based on the above-discussed literature, the following hypothesis is formulated:

Ho: Financial Literacy has association with financial behaviour and attitude

Ho Financial literacy has an association with Regret Aversion

Ho Financial Literacy has association with self-control prospect.

Ho Financial literacy has an impact on investment decision making of working women in Mumbai.

4. Target Population, Sampling Process, and Data Collection

Working women in Mumbai were considered for this research study. A total of 193 women were surveyed across sectors like banking, telecom, IT, Finance and Education. The data was gathered through random sampling method. Convenient and purposeful sampling methods were used.

5. Results Data Analysis and Method

To test the proposed model, we adopted partial least squares structural equation modelling (PLS-SEM) using Smart PLS software. The analysis process included a measurement model and a structural mode.

5.1 Measurement Model Analysis

Outer loadings

	FBA	FL	IDM	RA
FBA1	0.78			
FBA2	0.91			
FBA3	0.824			
FL1		0.9		
FL2		0.94		
FL3		0.71		
IDM1			0.921	
IDM3			0.88	
IDM4			0.787	
RA1				0.984
RA2				0.785
RA3				0.791

Outer loading indicates the strength of the relationship between each observed variable (indicator) and its corresponding latent construct (factor). Higher loading values signify a stronger relationship and suggest that the indicator is a good representation of the underlying construct.

Financial Behaviour & Attitude (FBA):

FBA1: Outer loading = 0.78

FBA2: Outer loading = 0.91

FBA3: Outer loading = 0.824

Interpretation: All indicators of FBA exhibit strong outer loadings, indicating a robust relationship with the latent construct. They are reliable measures of financial behaviour and attitude.

Financial Literacy (FL):

FL1: Outer loading = 0.9

FL2: Outer loading = 0.94

FL3: Outer loading = 0.708

Interpretation: FL1 and FL2 demonstrate high outer loadings, indicating their strong association with the financial literacy construct. FL3, although lower, still shows a moderate loading, suggesting its relevance as a measure of financial literacy.

Investment Decision Making (IDM):

IDM1: Outer loading = 0.921

IDM3: Outer loading = 0.88

IDM4: Outer loading = 0.787

Interpretation: All indicators of IDM display high outer loadings, indicating their strong relationship with the latent construct of investment decision making. They are reliable indicators of participants' decision-making processes regarding investments.

Regret Aversion (RA):

RA1: Outer loading = 0.984

RA2: Outer loading = 0.785

RA3: Outer loading = 0.791

Interpretation: RA1 demonstrates an exceptionally high outer loading, indicating a strong association with the regret aversion construct. RA2 and RA3 also exhibit good outer loadings, further affirming their relevance in measuring regret aversion.

5.2 Construct Reliability and Validity

Cronbach's Alpha:

- Cronbach's alpha measures internal consistency reliability. It assesses the extent to which items within a construct are correlated with one another.
- For all constructs (FBA, FL, IDM, RA), the Cronbach's alpha values range from 0.768 to 0.792, indicating acceptable to good internal consistency.

Composite Reliability (ρ_a and ρ_c):

- Composite reliability measures the reliability of a construct by considering the standardized loadings of its indicators.
- Both ρ_a and ρ_c provides estimates of composite reliability.
- For FBA, FL, and IDM, both ρ_a and ρ_c ranges from 0.802 to 0.87, suggesting good reliability.

- However, for RA, rho_a is unusually high at 3.06, which might indicate an error or anomaly in the data. The value for rho_c (0.808) seems more plausible and indicates acceptable reliability.

Average Variance Extracted (AVE):

- AVE represents the amount of variance captured by the construct in relation to the variance due to measurement error.
- It assesses convergent validity, indicating the extent to which items within a construct converge.
- AVE values should ideally be above 0.5 for good convergent validity.
- For FBA, FL, IDM, and RA, AVE values range from 0.596 to 0.705, indicating acceptable to good convergent validity. However, the AVE for RA (0.596) is slightly lower, suggesting that the indicators might not converge as strongly as those of the other constructs.

5.3 Discriminant Validity Heterotrait-monotrait ratio (HTMT) – Matrix

	FBA	FL	IDM	RA
FBA				
FL	0.266			
IDM	0.785	0.31		
RA	0.474	0.199	0.317	

1. Heterotrait-Monotrait Ratio (HTMT) Analysis:

- The HTMT ratio compares the correlations between different constructs (heterotrait correlations) to the correlations within the same construct (monotrait correlations).
- A common threshold for discriminant validity is an HTMT ratio less than 0.85.

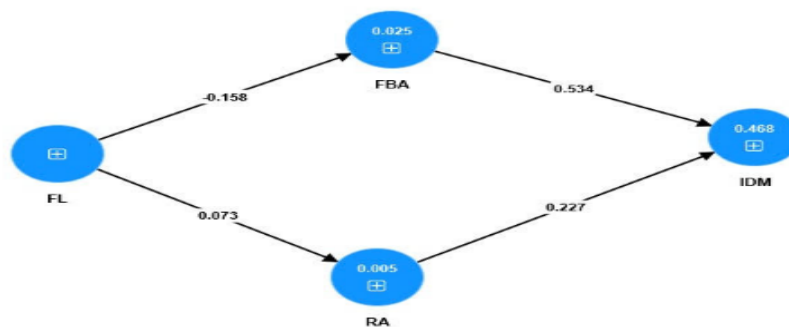
2. Interpretation:

The HTMT values below represent the correlations between different constructs:

- FBA vs. FL: HTMT = 0.266
- FBA vs. IDM: HTMT = 0.785
- FBA vs. RA: HTMT = 0.474
- FL vs. IDM: HTMT = 0.31
- FL vs. RA: HTMT = 0.199
- IDM vs. RA: HTMT = 0.317

All the HTMT values are below the threshold of 0.85, indicating good discriminant validity between the constructs. This suggests that the constructs (FBA, FL, IDM, and RA) are sufficiently distinct from each other, and the measures capture unique aspects of the underlying latent variables. Overall, the analysis confirms the discriminant validity of the constructs, indicating that they measure distinct aspects of the phenomena under investigation. This strengthens the validity of the measurement model and ensures that the constructs are adequately differentiated from each other.

5.4 Structural Model Analysis



Path Analysis

Path Analysis Results: a. FBA -> IDM:

- Path coefficient (β): 0.534
- T statistics (|O/STDEV|): 4.772
- p-value: 0 (significant at p < 0.05)

Interpretation: The path from Financial Behaviour & Attitude (FBA) to Investment Decision Making (IDM) is significant (p < 0.05), indicating a strong positive relationship. For every one-unit increase in FBA, IDM is expected to increase by 0.534 units.

b. FL -> FBA:

Path coefficient (β): 0.231

T statistics ($|O/STDEV|$): 2.31

p-value: 0.02 (significant at $p < 0.05$)

Interpretation: The path from Financial Literacy (FL) to Financial Behavior & Attitude (FBA) is significant ($p < 0.05$), indicating a positive relationship. For every one-unit increase in FL, FBA is expected to increase by 0.231 units.

FL -> RA:

Path coefficient (β): 0.073

T statistics ($|O/STDEV|$): 0.286

p-value: 0.775 (not significant)

Interpretation: The path from Financial Literacy (FL) to Regret Aversion (RA) is not significant ($p > 0.05$), indicating that there is no significant direct relationship between FL and RA.

RA -> IDM:

Path coefficient (β): 0.227

T statistics ($|O/STDEV|$): 1.306

p-value: 0.192 (not significant)

Interpretation: The path from Regret Aversion (RA) to Investment Decision Making (IDM) is not significant ($p > 0.05$), suggesting that there is no significant direct relationship between RA and IDM. The results indicate significant direct paths from FBA to IDM and from FL to FBA. This suggests that both financial behaviour & attitude and financial literacy have a direct positive influence on investment decision making and financial behaviour & attitude, respectively. However, the direct paths from FL to RA and from RA to IDM are not significant, suggesting that there may not be significant direct relationships between financial literacy and regret aversion, and between regret aversion and investment decision making.

5.5 R² value

	R-square	R-square adjusted
FBA	0.025	0.008
IDM	0.468	0.45
RA	0.005	-0.012

- **FBA (Financial Behaviour & Attitude):**

R-square: 0.025

R-square adjusted: 0.008

Interpretation: The R-square value of 0.025 indicates that approximately 2.5% of the variance in Financial Behaviour & Attitude (FBA) is explained by the independent variables in the model. The adjusted R-square, which considers the number of predictors and sample size, is 0.008. This suggests that the model explains a small proportion of the variability in FBA.

- **IDM (Investment Decision Making):**

R-square: 0.468

R-square adjusted: 0.45

Interpretation: The R-square value of 0.468 indicates that approximately 46.8% of the variance in Investment Decision Making (IDM) is explained by the independent variables in the model. The adjusted R-square, accounting for the model's complexity, is 0.45. This suggests that the model explains a substantial proportion of the variability in IDM, indicating a good fit.

- **RA (Regret Aversion):**

R-square: 0.005

R-square adjusted: -0.012

Interpretation: The R-square value of 0.005 indicates that only 0.5% of the variance in Regret Aversion (RA) is explained by the independent variables in the model. The adjusted R-square, which can be negative when the model doesn't improve prediction but may worsen with additional predictors, is -0.012. This suggests that the model does not effectively explain the variability in RA. Overall, while the model demonstrates a good fit in explaining the variance in IDM, it performs poorly in explaining the variance in FBA and RA. This indicates that there might be other factors or variables not included in the model that contribute to FBA and RA, highlighting the need for further exploration and refinement of the model.

6. Limitations and Future Research Directions

This study has a few limitations that can be addressed in future. The sample size was small and was limited to working women in Mumbai. Mixed Method research can be carried out in future, involving both qualitative and quantitative data.

7. Conclusion

The study was undertaken to explore how financial behaviour & attitude and regret aversion mediate the relationship between financial literacy and investment choices a positive association is found between financial literacy and both financial behaviour & attitude and investment decision making. However, a noteworthy finding is the negative relationship between financial literacy and regret aversion. Furthermore, the study highlights the detrimental influence of regret aversion on both financial literacy and investment decision making among the participant.

References:

- Chandra, P. (2016), *Behavioural Finance*, 1st ed., McGraw-Hill, Noida.
- De Bondt, W. F., and Thaler, R. H. (1994). Financial decision making in markets and firms: A behavioral perspective (No.w4777). National Bureau of Economic Research.
- Kahneman, D., and Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the Econometric Society*, 263-291.
- Kumar, S. and Anees, M. (2013). Financial Literacy and Education: Present Scenario in India. *International Journal of Engineering and Management Research*, 3(6), 83-87.
- Lusardi, A., Mitchell, O. S., and Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2), 358-380.
- Ricciardi, V., and Simon, H. K. (2000). What is behavioral finance? *Business, Education & Technology Journal*, 2(2), 1-9.
- Salim, A., and Khan, S. (2020). The effects of factors on making investment decisions among Omani working women. *Accounting*, 6(5), 657-664.
- Salim, A., and Khan, S. (2020). The effects of factors on making investment decisions among Omani working women. *Accounting*, 6(5), 657-664.
- Shefrin, H., and Statman, M. (1985). The disposition to sell winners too early and ride losers too long: Theory and evidence. *The Journal of Finance*, 40(3), 777-790.
- Singh, K. (2004). Globalization and Employment Status of Women in India. Paper submitted at National Seminar on Opportunity and Challenges before Women, New Delhi.
- Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral decision making*, 12(3), 183-206.
- Tversky, A., and Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive psychology*, 5(2), 207-232.
- Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 101(2), 449-472.
- Van Rooij, M., Lusardi, A., and Alessie, R. (2007). Financial literacy and stock market participation. National Bureau of Economic Research Working Paper,13565. Cambridge: NEBR.