

Artificial Intelligence and the LIPOR Approach: A Connection for Retail Equity Investors' Knowledge

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Abstract

Purpose: This study deals regarding appropriate capital investment and, retail equity investors estimating the potential returns on their investment, the LIPOR technique given by Gupta and Loya could represent a better option for it.

Finding: This study has identified some gaps in the literature to address the difficulties retail investors face due to changes in governmental financial policies and changes in bank and repo rates, among several other factors triggered by the central bank of a specific country. This study outlines the relationship between the LIPOR approach and AI tools to raise awareness among retail equity investors.

Methodology: A mixed method approach is used in this study for data analysis. Some statistical test correlation, regression, and ANOVA are used to predict the relationship between two constructs. Ethical consideration is used to collect the data from respondents in this study.

Originality: The LIPOR approach is used for justifies the stock market investment awareness among Retail Equity Investors in this research paper.

Keywords: AI tools, Appropriate Return, Decision Making, LIPOR Approach, Stock Market Investment.

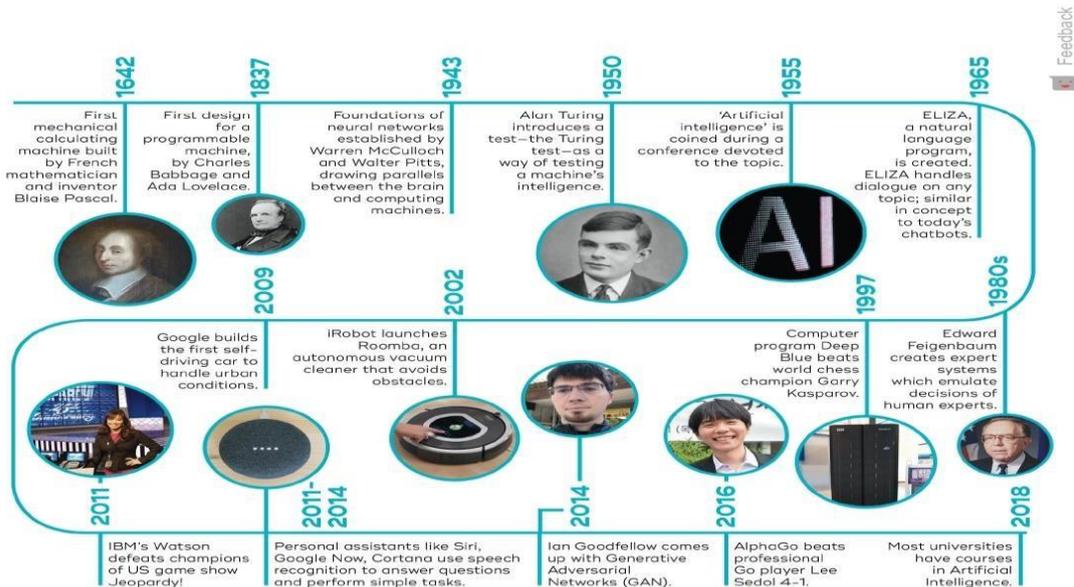
Introduction

The Artificial Intelligence

Artificial intelligence traces its origins in the period between 1940 and 1960. Warren McCulloch and Walter Pitts achieved great progress in 1943 when they combined computer science and mathematics to create a biological neuron model. Because of the US government's involvement in promoting this research, this age gave rise to the important question, -Can Machines Think?|| Turing, a British mathematician, investigated the mathematical applications of artificial intelligence. Turing presented a conceptual framework in 1950 that implied that machines could solve problems similar to how humans do.

Owing to the need to support a logical concept, a number of prominent intellectuals began to investigate the value of artificial intelligence research. Five years later, professors Allen Newell, Cliff Shaw, and Herbert Simon taught a curriculum named -Logical Theorist|| The Logical Theorist was a human-like programme for solving problems.

History of Artificial Intelligence

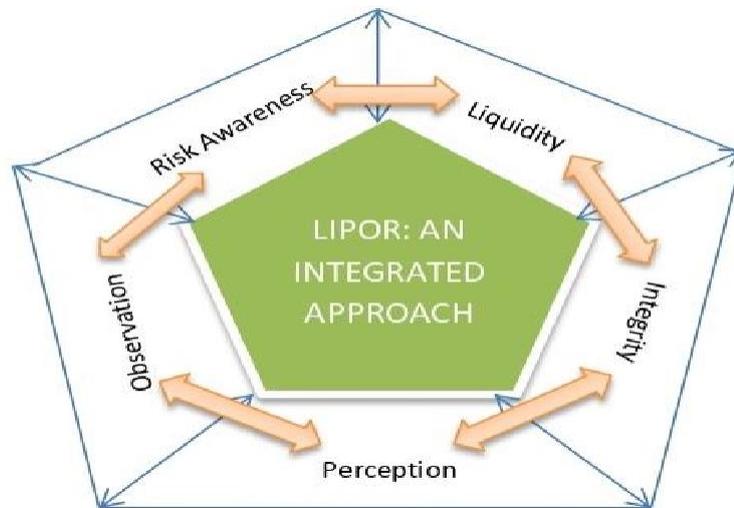


Source: <https://www.bing.com/images/search>

The perceived accuracy and empirical validation of AI-supported models makes them a source of financial information for most people. Thus, to support this behavioral goal, a conceptual framework grounded in human interaction with artificial-intelligence is required (Chua et al., 2023). It is critical that people understand how artificial intelligence affects stock market investing to improve their knowledge of the technology. Due to their apparent accuracy and empirical confirmation, people frequently depend on AI-supported models for investment information. Thus, to support this behavioral goal, a conceptual framework grounded in human interaction with AI is required (Chua et al., 2023). It is critical that people understand how artificial intelligence affects stock market investing to improve their knowledge of the technology. Different artificial-intelligence technologies are currently being developed.

Santos and Qin (2019) provided ways to improve the understanding of innovation and investment trends. They pinpoint important traits associated with innovation and venture capital investment patterns, which aid in explaining how risk capital changes as new technologies develop. Fraise and Laporte (2022) created algorithmic pseudo-internal models of credit risk specifically designed for banks to achieve suitable investment returns. They describe how adjustments to a bank's capital requirements affect how retail equity investors make investments to obtain the right kind of return. With the development of AI, Bi et al. (2024) advise using quantitative methods, which work well for deciphering the intricacies of investment analysis.

The LIPOR Approach: An Integrated Approach for decision making in the stock market investment



Source: *The LIPOR Approach: An Integrated Approach for Stock Market Investment*. ROC No. L-143261/2024; Dated: 09/02/2024

Liquidity, Integrity, Perception, Observation, and Risk Awareness are all included in the "Integrated Decision Making Approach," or LIPOR method. These five components result in five crucial elements when they operate in tandem. These elements are crucial for evaluating how the stock market reacts to new fiscal, monetary, and economic policies, as well as other major shifts in the market. Relevant techniques are described by Cartea et al. (2022) to solve current liquidity difficulties. They propose that AI algorithms can greatly improve knowledge about the liquidity element by helping understand how rivals behave to increase liquidity in the stock market. Analyzing future values requires a close examination of the stock market momentum. Stock market integrity is crucial for evaluating market efficiency because stock market indices are affected by monetary and other policy changes made by the government in power in a given nation. An integrity-efficient MQ paradigm, as proposed by Aitken et al. (2014), emphasizes the advantages associated with ask and bid prices in the stock market. Precise perception is necessary to evaluate the stock market properly. In order to solve this, Bacanin et al. (2022) propose the "multilayer perceptron hybridized" algorithm, a highly successful stock market prediction system. Furthermore, Cao (2022) explored a range of opportunities, strategies, and issues related to AI in finance. Cao asserted that these obstacles may be overcome and opportunities can be grabbed with great effectiveness when AI and data science tools are applied. He stressed that observing the stock market is essential for stock market analysis. Additionally, Giudici et al. (2024) addressed risk management by describing how four principles—explainability, sustainability, accuracy, and fairness—effectively handle different kinds of inconsistencies. As a result, earlier research suggests that AI and the financial management environment are ideal.



Investment was the first step in the LIPOR method. After the COVID-19 pandemic, stock market investments have quickly gained popularity. During the COVID-19 pandemic, Harron and Rizvi (2021) found an inverse relationship between the coronavirus and liquidity in financial markets, specifically in stock market trading across 23 emerging markets. There is currently a noticeable dynamism in "Stock Market Investment," reflecting industrial progress, even though the pre-COVID-19 scenario is very different from the current economic environment.

To construct a bridge between liquidity and integrity, Dufresne et al. (2024) explain that it is difficult to say that liquidity fully integrates investment because of research on the credit default swap index (CDX) and Standard & Poor's 500 (SPX) options volatility in the stock market. Retail stock investors should therefore understand the relationship between liquidity and integration to address this issue.



As the LIPOR method is a linear model that connects integrity with perception, Akhtar and Das (2019) described that retail equity investors had to contemplate comprehending market forecasts by means of the "Theory of Planned Behavior." It is critical for investors to understand the dynamic flow of the stock market and the connection between investment intention and financial literacy. Due to ignorance, investors frequently overlook assessing the strike price and the intrinsic value of a share when thinking about long-term liquidity obligations.

However, retail stock investors should be able to perform basic technical analysis to determine whether to hold onto particular shares. Businesses have a duty to share dividends from their profits on a set schedule. Retail equity investors need to be aware of their investment returns in these types of situations as per stock market competencies.

To overcome these challenges, Kezaabu et al. (2024), express that understanding the relationship between Managerial Competence and Integrating Reporting procedures is crucial for retail stock investors, because it has a substantial impact on the possible return on their investments. The study emphasizes that "Integrity" and "Perception" work together to create the Knowledge Factor.



After acquiring knowledge, a gap occurs due to the lack of concentration, because investors often do not observe their investment. Ayyildiz and Iskenderoglu (2024) investigated the role of machine-learning algorithms in predicting the future value of individual shares. According to their research, neural network algorithms are particularly good at determining the ideal average value of an index. This ability is useful in all international stock markets, as it helps determine the best prices in the face of interest rate swings, which are frequently impacted by specific monetary policies implemented by central banks worldwide. Many nations obtain loans from the World Bank and the International Monetary Fund (IMF) to aid in their development in the face of changing economic circumstances.

Many countries follow the Federal Reserve's practices to establish responsive bank interest rates, repo rates, and reserve repo rates. These techniques impact monetary and fiscal policies, ultimately exacerbating market volatility. However, investors frequently find it difficult to carefully monitor the stock market because of their obligations to other professions, which could result in losses.

According to Astuti and Wijaya (2024), overcoming such conditions depends on financial knowledge, technology development, and the accessibility of starting capital for stock market investments, which shows a link between observation and risk awareness. Retail stock investors, therefore, require close monitoring and keen perception, which makes them a Personnel Factor, as explained in the above figure.

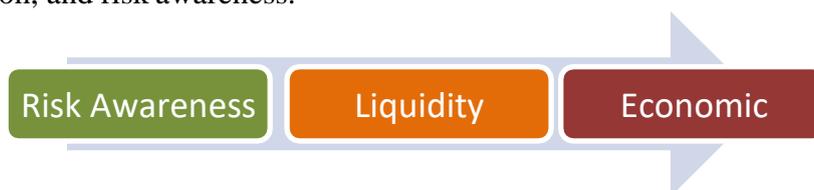


To retain the linear property of the LIPOR method, four crucial elements are outlined by Kaur (2024) as necessary to raise retail stock investors' understanding of their protection. She emphasizes the importance of comprehending SEBI rules in order to manage stock market investments. This highlights how the connection between observation and risk awareness is important for retail equity investors to stay informed about investments, as expected in the above figure.

Investors are advised by SEBI to ensure that the company or group they plan to invest in has sufficient resources by conducting a thorough investigation. To warn retail equity investors about fraudulent trading platforms that allegedly provide stock market access to Indians through the Foreign Portfolio Investors (FPIs) route, SEBI issued a cautionary advisory on February 26.

This information was reported by Live Mint (<https://www.livemint.com/market/stock-market-news/dont-fall-for-social-media-stock-scams-warns-sebi-11709002591562.html>). Considering the predominance of shell businesses in the current market, retail stock investors should consider the company's reviews from the previous five years before purchasing their shares.

Retail investors should consider capitalization analysis, evaluation of business risk, and return on investment, as recommended by Suharti and Murwaningsari (2024). Through careful observation, these factors help us understand how industrial factors behave. Thus, the Industrial Factor develops as a result of careful observation, acquaintance with all the plans and regulations pertaining to industrial expansion, and risk awareness.



However, to expedite economic growth, according to a survey by Kenedi (2024) that examined the Indonesian stock market between March 3, 2021, and June 21, 2021, retail equity investors were in a favorable position to invest in the stock market, especially given that the prices of gold and other assets declined and could support economic growth. Furthermore, according to the LIPOR method, "Risk Awareness" and "liquidity" interact to shape economic elements.

Liquidity is crucial for retail equity investors, because it makes it possible for them to participate in the stock market. This liquidity helps reduce debt reliance on bank loans, while also promoting industry growth and development. Economically, the relationship between the profits of a retail equity investor and the growth of the market is similar to that of an industrialist or an entrepreneur. Therefore, it can be said that "Risk Awareness" is crucial in addition to market liquidity because high volatility tends to deter investment interest in the stock market.

Benefits of AI tools with association of the LIPOR Approach

➤ **Technical Efficiency:**

Solutions that utilize artificial intelligence (AI) collect data on a particular share as well as simpler problems. The LIPOR strategy can be beneficial in determining the kind of information that is relevant to particular sharing using AI methodologies.

➤ **Practical Assessment:**

Retail investors in equities can take advantage of technical analysis and the LIPOR approach to analyze individual shares. Tools for artificial intelligence (AI) assist in assessing gathered data by applying various statistical and mathematical methods to obtain solutions.

➤ **Effective Risk Awareness:**

By comprehending the LIPOR technique, a retail equity investor can use technical assessment to evaluate a certain share. AI technology facilitates the use of collected data by enabling the implementation of various statistical and mathematical techniques to produce solutions.

➤ **Appropriate Return:**

Investing in equities is a symbol of industrial growth in a dynamic economic landscape. Thus, by combining AI techniques with the LIPOR method, retail stock investors can swiftly modify their targets to reflect market volatility.

➤ **Enhance Analysis:**

Artificial Intelligence (AI) technologies have proven to be beneficial in discerning current investing patterns and improving the understanding of analytical concepts. In addition, retail stock investors can remain informed about their investments using the LIPOR method.

Literature Review

The stock market not only acts as a catalyst for industrial growth but also offers retail equity investors a main way to generate attractive profits.

According to Li et al. (2019), applying deep reinforcement learning theory and modeling is an effective way to verify empirical findings. Moreover, the LIPOR methodology developed by Gupta and Loya (2024) effectively overcomes the gap between Deep Learning techniques and empirical data analysis. Retail stock investors may find it difficult to locate relevant information on certain companies or industries.

To address this issue, NekoeiQachkanloo et al. (2019) proposed the use of an artificial counseling system. Its goal is to aid individual investors in retail stocks by predicting stock prices and recommending optimal budgetary allocations to attain targeted returns. There is a larger requirement for stock market investment skills in developing countries with less developed technological infrastructure. The concept, elucidated in the LIPOR methodology, highlights the amalgamation of "Observation" and "Risk Awareness."

Septiriana et al. (2024) stated that applying analytical algorithms that utilize artificial intelligence (AI) appears to be a helpful technique for lowering the possibility of fraudulent actions. Conventional procedures are insufficient to keep retail equity investors safe from stock market scams.

The finest stock market assessment procedure includes three vital elements that are helpful in determining the correlation between LIPOR and AI and are necessary for the retention of AI for analysis in the stock market: 1) forecasting stock market volatility, 2) comprehending stock market behavior, and 3) performing fundamental stock investment analysis.

To forecast the stock market volatility:

According to (Strader et al., 2020), assessing large datasets is crucial to estimate the expected future value of certain shares when making stock market predictions. They draw attention to how useful it is to use machine learning algorithms to match investment goals with information gathering.

(Li & Sun, 2020) clarified the use of support vectors in machine learning to enhance astute stock market investment methods by optimizing the implementation of machine learning algorithms.

In the meanwhile, (Khan et al., 2022) emphasize the importance of social media for retail equity investors, highlighting its capacity to provide relevant news essential for well-informed stock market investment decisions, where predictive analytics can be facilitated by machine learning classifiers.

1) To comprehend the behavior of the stock market:

Retail equity investors seem to have the propensity to be overconfident in their investment decisions in the current stock market environment, frequently becoming fixated on individual business shares. However, in the bigger picture of stock market investing, this tendency is not important.

(Adil et al., 2021) emphasize the importance of financial literacy and show how best to correlate it with the way that investment biases and decision-making processes interact. They suggest that investors can better understand market behavior using AI techniques to understand investment biases and decisions made in conjunction with LIPOR.

According to Goodell et al. (2021), machine learning (ML) and artificial intelligence (AI) have become essential components for understanding stock market dynamics. To recognize fundamental concepts, trends, and financial studies, investors are increasingly dependent on AI and ML algorithms.

Thus, it can be deduced that retail equity investors will have the best understanding of the subject if they sincerely try to comprehend stock market behavior in the context of LIPOR and Atechnologies.

2) To perform fundamental analysis for stock investment:

The stock market is important to maintaining economic stability, and financial evaluation and expansion require a methodical approach to technical analysis that concerning to (Nti et al., 2020), Retail equity investors need to be skilled at applying a thorough evaluation of fundamental technical analysis to anticipate market trends in order to maximize profits from stock market investments. The stock market landscape is full of opportunities and challenges, especially considering the recent spike in volatility in prominent market indices.

According to Kumar et al. (2023), Artificial Intelligence (AI), Machine Learning (ML), and Neural Networks have become indispensable instruments for carrying out basic technical analyses when maneuvering through these intricate and unstable circumstances. Thus, from the standpoint of stockholders, the incorporation of AI technologies with a systematic examination of LIPOR is crucial.

Objectives:

1. To investigate how LIPOR affects retail investors' decisions about equity investments.
2. To evaluate how AI can improve retail investors' investment strategy.
3. To study how Retail Equity Investor REI mediates the relationship between LIPOR and AI-driven equity stakes.

Hypotheses:

As per the analysis of literature reviews, these hypotheses are also identified to obtain an in-depth analysis of the modern finance investment analysis regarding AI and LIPOR, which are proposed as follows:

H1a: There is no significant relationship between LIPOR and investor investment awareness.

H1b: A significant relationship exists between LIPOR and investor- awareness.

H2a: There is no positive relationship between the LIPOR and investor investment awareness.

H2b: A significant positive relationship exists between LIPOR and investor investment awareness.

H3a: There is no significant relationship between LIPOR and REI in the Investor investments.

H3b: A significant positive relationship exists between LIPOR and Investor investment REI.

H4a: AI does not significantly impact the effectiveness of REI.

H4b: Integrating AI technologies significantly enhances the effectiveness of research and experimental innovations.

H5a: There is no significant difference in the level of awareness among the groups exposed to AI.

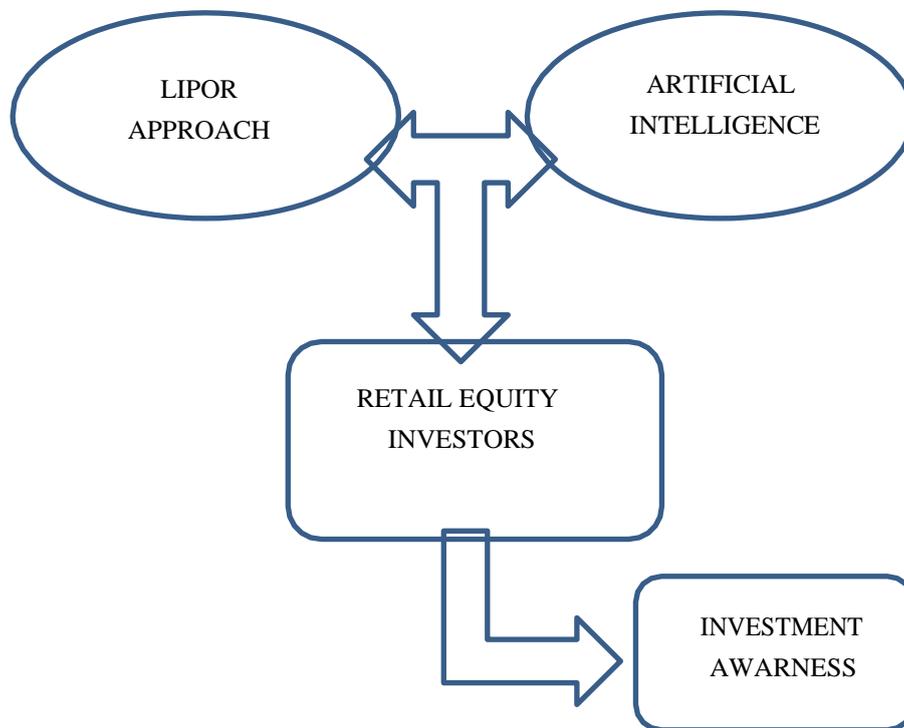
H5b: There is a significant difference in the level of awareness among the groups exposed to AI.

H6a: REI does not mediate the relationship between LIPOR and Awareness.

H6b: REI mediates the relationship between the LIPOR and Awareness.

Research Design

Research model of stock market analysis by using LIPOR and Artificial Intelligence



Source: An authors own model

The above model shows how a relationship between the LIPOR approach and Artificial Intelligence exists for Retail Equity Investors to assess Investment Awareness. In the above model, the LIPOR approach and Artificial Intelligence were independent variables. To create a sense of meaning, Retail Equity Investors are mediators that link Investment Awareness where Investment Awareness is a dependent variable.

Data Collection

Empirical research papers from 2015 onwards were used to support the credibility of data concerning modern finance. Retail equity investors are prompted to invest in equities as part of a dynamic strategy. Retail investors lose capital in the equity market because of overconfidence. Therefore, a relationship between LIPOR and AI is mentioned for the purpose of dealing with and overcoming this difficulty, and it involves the use of Retail Equity Investors (REI) as mediators for equity investing in the stock market.

Sampling:

- Population: Stock trading participants who are retail equity investors.
- Sample Size: A statistically meaningful sample size was established via power analysis to guarantee accurate and broadly applicable findings.

Research Methods

In this study, data analysis techniques such as correlation, regression, and intercorrelation matrices are employed to obtain facts that can be justified by quantitative research. Additionally, the p-value of the estimated data was determined using the Sobel test to identify the mediator effect. In this research article, the KMO and Bartlett tests were also utilized to determine the validity of the variables. ANOVA is a highly helpful tool for analyzing the variability of stock market volatility. Therefore, in this study, the variability of the components was analyzed using coefficients and ANOVA.

Tools and Software:

Google Form: For data collection, a Google form was created using a structured questionnaire and floated to the respondent.

MS. Excel: to collect the data from Google Forms and for further analysis and state the objectives of the study.

SPSS 25: For statistical analysis. Ethical Consideration

It is crucial to ensure ethical rigor in research, particularly when working with human participants and financial data. This section outlines the ethical considerations for the study, which examines how AI and LIPOR interact through the eyes of retail equity investors (REI) in the stock market.

- **Acquiescence Consent**

Participation is entirely voluntary; ensure everyone is aware of this and that they can stop participating at any time without facing any repercussions.

Intricate Information: Educate participants with adequate details about the purpose of the research, methods, potential dangers, and benefits, so they may decide whether to participate in it.

Documentation: Formal consent was obtained from all participants before they were involved in surveys or interviews.

- **Secretiveness:**

Obscurity: Assign codes to data to preserve participants' anonymity instead of using personal identification..

Data Protection: Robust security measures are used to prevent misuse, unauthorized access, and breaches of private and business data.

Limited Opportunity: Use secured storage for digital data and limited access to raw data to members of the authorized research team only.

• **Security and Data Handling**

Safe Storage: Encrypted databases for electronic content and lockable cabinets for physical documents.

Data Retention: Complies with institutional and regulatory standards for data retention and disposal and retains data only as long as necessary to achieve the goals of the research.

Third-party Compliance: Verify that any software or services provided by third parties and utilized in data processing adhere to all applicable data protection laws.

Data Analysis

S.No.	State	Responded
1	Andhra Pradesh	12
2	Delhi	11
3	Gujarat	9
4	Haryana	13
5	Madhya Pradesh	14
6	Maharashtra	10
7	Rajasthan	19
8	Uttar Pradesh	16

As per the research survey for further study, the aforementioned 104 samples were collected from eight states (Andhra Pradesh, Delhi, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh). The samples were collected using a convenient methodology. To identify the hypotheses, 35 literature reviews and one copyright were used in this research paper for qualitative research.

Reliability Test

Case Processing Summary			
		N	%
Cases	Valid	104	100.0
	Excluded ^a	0	.0
	Total	104	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.896	.889	22

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.648	3.404	4.663	1.260	1.370	.058	22
Item Variances	1.395	.225	1.699	1.474	7.538	.101	22

A reliability value of 0.905 suggests that the items within the scale are highly correlated, meaning that they measure the same underlying construct consistently. Overall, a reliability value of 0.905 indicates a highly reliable and consistent measurement tool, providing strong support for the validity and dependability of the research findings.

Validity Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.589
Bartlett's Test of Sphericity	Approx. Chi-Square	612.978
	Df	6
	Sig.	.000

Total Variance Explained			
Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	3.122	78.040	78.040
Extraction Method: Principal Component Analysis.			

A KMO measure of 0.589 indicates that the sample was suitable for factor analysis. Bartlett's test of sphericity was highly significant ($p < 0.001$), indicating significant correlations between the variables. Therefore, the data is suitable for factor analysis, and you can confidently proceed that the underlying factor structure will be meaningful.

Correlation Matrix

		LIPOR	AI	REI	AWARENESS
Correlation	LIPOR	1.000	.589	.968	.791
	AI	.589	1.000	.402	.804
	REI	.968	.402	1.000	.657
	AWARENESS	.791	.804	.657	1.000

correlation matrix that shows the relationships among the variables LIPOR, AI (Artificial Intelligence), REI (Retail Equity Investors), and AWARENESS. Positive correlations indicate that as one variable increases, the others also tend to increase.

H1a: There is no significant relationship between LIPOR and investor investment awareness.

H1b: A significant positive relationship exists between LIPOR and Investor investment awareness.

Variables Entered/Removed^a			
Model	Variables Entered	Variables Removed	Method
1	LIPOR ^b	.	Enter
a. Dependent Variable: AWARENESS			
b. All requested variables entered.			

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. Change
1	.968 ^a	.937	.936	1.098	.937	1511.22	1	102	.000

a. Predictors: (Constant), LIPOR

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1820.761	1	1820.761	1511.222	.000 ^b
	Residual	122.892	102	1.205		
	Total	1943.654	103			

a. Dependent Variable: AWARENESS
 b. Predictors: (Constant), LIPOR

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.712	.520		-3.293	.001
	LIPOR	.911	.023	.968	38.874	.000

a. Dependent Variable: AWARENESS

H2a: There is no significant relationship between the LIPOR and investor investment awareness.

H2b: A significant positive relationship exists between LIPOR and investor Investment Awareness.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	LIPOR ^b	.	Enter

a. Dependent Variable: AWARENESS
 b. All requested variables entered.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.968 ^a	.937	.936	1.098	.937	1511.22	1	102	.000

a. Predictors: (Constant), LIPOR

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1820.761	1	1820.761	1511.222	.000 ^b
	Residual	122.892	102	1.205		
	Total	1943.654	103			

a. Dependent Variable: AWARENESS
 b. Predictors: (Constant), LIPOR

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.712	.520		-3.293	.001
	LIPOR	.911	.023	.968	38.874	.000

a. Dependent Variable: AWARENESS

Each coefficient represents the change in the dependent variable for a one-unit change in the independent variable, holding the other variables constant. An F-statistic p-value of 0.000 indicates that the overall model is statistically significant.

As the p-value for the coefficient is less than 0.05, and the overall model is significant, we reject the null hypothesis and conclude that there is a significant relationship between LIPOR and investor investment awareness.

H3a: There is no significant relationship between LIPOR and REI in the Investor investments.

H3b: A significant positive relationship exists between LIPOR and investor investment REI.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	LIPOR ^b	.	Enter
a. Dependent Variable: REI			
b. All requested variables entered.			

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.791 ^a	.626	.623	2.607	.626	170.996	1	102	.000
a. Predictors: (Constant), LIPOR									

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1161.858	1	1161.858	170.996	.000 ^b
	Residual	693.056	102	6.795		
	Total	1854.913	103			
a. Dependent Variable: REI						
b. Predictors: (Constant), LIPOR						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.486	1.234		8.495	.000
	LIPOR	.728	.056	.791	13.077	.000
a. Dependent Variable: REI						

Each coefficient represents the change in the dependent variable for a one-unit change in the independent variable, holding the other variables constant.

An F-statistic p-value of 0.000 indicates that the overall model is statistically significant.

Since the p-value for the coefficient is less than 0.05, and the overall model is significant, we reject the null hypothesis and conclude that there is a significant relationship between LIPOR and investor investment REI.

H4a: AI does not significantly impact the effectiveness of research and experimental innovations.

H4b: Integrating AI technologies significantly enhances the effectiveness of research and experimental innovations.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	AI ^b	.	Enter
a. Dependent Variable: REI			
b. All requested variables entered.			

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. Change
1	.402 ^a	.161	.153	3.998	.161	19.603	1	102	.000
a. Predictors: (Constant), AI									

ANOVA ^a						
Model		Sum of Df	Mean Square	F	Sig.	
1	Regression	313.331	1	313.331	19.603	.000 ^b
	Residual	1630.323	102	15.984		
	Total	1943.654	103			
a. Dependent Variable: research and experimental innovations						
b. Predictors: (Constant), AI						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.271	1.802		5.700	.000
	AI	.547	.124	.402	4.428	.000
a. Dependent Variable: research and experimental innovations						

Each coefficient represents the change in the dependent variable for a one-unit change in the independent variable, holding the other variables constant.

An F-statistic p-value of 0.000 indicates that the overall model is statistically significant.

As the p-value for the coefficient is less than 0.05, and the overall model is significant, we reject the null hypothesis and conclude that there is a significant relationship between LIPOR and investor

investment awareness.

H5a: There is no significant difference in the level of awareness among the groups exposed to AI.

H5b: There is a significant difference in the level of awareness among the groups exposed to AI.

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	AI ^b	.	Enter
a. Dependent Variable: AWARENESS			
b. All requested variables entered.			

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. Change	F
1	.804 ^a	.647	.643	2.535	.647	186.615	1	102	.000	
a. Predictors: (Constant), AI										

ANOVA ^a						
Model		Sum of Df	Mean Square	F	Sig.	
1	Regression	1199.365	1	1199.365	186.615	.000 ^b
	Residual	655.548	102	6.427		
	Total	1854.913	103			
a. Dependent Variable: AWARENESS						
b. Predictors: (Constant), AI						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.044	1.143		9.665	.000
	AI	1.071	.078	.804	13.661	.000
a. Dependent Variable: AWARENESS						

Each coefficient represents the change in the dependent variable for a one-unit change in the independent variable, holding the other variables constant.

An F-statistic p-value of 0.000 indicates that the overall model is statistically significant.

As the p-value for the coefficient is less than 0.05, and the overall model is significant, we reject the null hypothesis and conclude that there is a significant relationship between AI and investor investment awareness.

H6a: REI does not mediate the relationship between LIPOR and Awareness.

H6b: REI mediates the relationship between the LIPOR and Awareness.

Using the Sobel test, we calculated the critical ratio to test whether the indirect effect of the IV on the DV via the mediator is significantly different from zero.

Input:		Test statistic:	Std. Error:	p-value:
a	.791	Sobel test: 8.94779678	0.07107493	0
b	.804	Aroian test: 8.94290157	0.07111383	0
s _a	.084	Goodman test: 8.95270004	0.071036	0
s _b	.028	Reset all	Calculate	

And the indirect effect analysis results for $X \rightarrow M \rightarrow X$ using Sobel Test are as follows: Test statistic = 8.94779678

Std. Error = 0.07111383 p-value = 0.000000

The most important parameter here is the p-value which in this case is less than 0.05 therefore we can conclude that the indirect effect between relationship and satisfaction via discounts is statistically significant ($p\text{-value} \leq 0.05$).

Result and Discussion:

The current financial era is extremely turbulent and crucial for stock market equity investment decisions. The use of AI in conjunction with the LIPOR technique has a favorable effect on decision making in this type of situation.

Participants who actively participate in stock market investments have provided a valuable positive intention to determine the suitability and reliability of the LIPOR approach by following the research survey process, the results of which are mentioned in the data analysis.

Although LIPOR is useful for technical data analysis, further studies are being conducted on LIPOR methodology. Numerous opportunities for conducting research in finance in conjunction with AI have been identified through the gaps in earlier literature. Additionally, the effects of digitalization on stock investments are extensive enough to support the superiority of a study.

However, according to the data analysis of the aforementioned hypotheses, it was found that the mediator variable REI is much impactful in an indirect way to the LIPOR and AI, rather than directly.

Conclusion

Chen and Chen (2016) argue that artificial intelligence (AI), fuzzy time series (FTS), neural networks (NN), and genetic algorithms (GA) are important tools for predicting standard stock prices and assisting with investment decisions. According to Rabada and Mascarhenas (2018), a rapidly changing technology landscape means that retail equity investors must take a proactive approach to comprehend market volatility.

The LIPOR technique stands out as a unique method for making investment decisions because it

uses cooperative connections with AI to successfully negotiate the complexity of the stock market. Finally, as explained by Prasad and Seetharaman (2021), there are both benefits and drawbacks to the application of AI in finance. However, as the cross-sectional analysis based on survey data shows, AI is still essential in the changing field of financial development. However, as noted by Akour et al. (2024), there are issues with economic factor analysis, such as constraints on the data accuracy.

It is advised to use AI, data analysis, and other tools to improve decision-making processes to lessen these problems. It is clear from our analysis of research survey data and conversations that retail equity investors may maximize their stock market returns by adopting the LIPOR strategy and combining it with AI, which will improve their understanding and ability to make decisions.

Suggestions:

➤ According to the above research, it is interpreted that the market is moving in dynamism and investors are adopting new technologies related to AI. Therefore, there is a need to focus on investor behavior.

➤ Furthermore, AI is in its initial phase to establish in the market for human welfare, so complete data related to a specific topics are not available, so it may be a research topic to research financial decision hassle-free by using appropriate AI tools, which will be effective for investor behavior.

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