



# ANALYZING THE IMPACT OF TECHNOLOGICAL ADVANCEMENTS ON RETAIL SALES IN MUTUAL FUNDS

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*Abstract:* This report examines the impact of technological advancements on retail sales in the mutual fund industry, focusing on how digital platforms, mobile applications, and automated investment tools have transformed the landscape. It explores the benefits, such as increased accessibility and convenience, alongside the challenges, including security concerns and complexity. The study analyzes customer engagement, identifying the most promising technological features, and addresses the varied effects of the COVID-19 pandemic on technology adoption in mutual fund sales. The report offers recommendations to enhance user-friendly interfaces, strengthen security measures, provide personalized financial advice, and leverage social media for investor engagement. These insights aim to guide mutual fund providers in optimizing their strategies for a technology-driven retail sales environment.

*Index Terms* – Mutual funds, Technology, Retail sales

## Introduction

The mutual funds industry has evolved significantly with the rise of fintech, leading to a paradigm shift in retail sales. Traditional distribution channels like banks and financial advisors are now complemented by digital platforms, mobile applications, and online brokerages, offering retail investors unprecedented convenience and autonomy in accessing mutual funds. This digital transformation has expanded the industry's reach, democratized financial product access, and empowered individuals to make investment decisions independently. However, it also brings challenges, such as security risks, regulatory compliance, and data privacy concerns, in a landscape marked by heightened competition. To remain relevant, financial firms must innovate and adapt, balancing technology's benefits with the need for robust risk management. This research explores the impact of these technological advancements on mutual funds' retail sales performance, providing industry stakeholders with insights to navigate this complex and evolving environment effectively.

## IMPORTANCE OF TOPIC

- Changing Dynamics of Retail Investment:

Traditional methods of investing in mutual funds through intermediaries are being replaced by digital platforms and online channels. Understanding how technological advancements influence retail sales is crucial for adapting to this evolving landscape.

- Enhanced Accessibility and Convenience for Retail Investors:

Technological innovations have democratized access to mutual funds, allowing retail investors to purchase and manage investments conveniently through digital platforms and mobile applications. This accessibility has the potential to broaden participation in financial markets and promote financial inclusion.

- Personalized Marketing and Customer Engagement:

Advanced data analytics and artificial intelligence enable financial firms to tailor marketing strategies and investment recommendations to individual investor preferences and profiles. This personalized approach enhances customer engagement and satisfaction, potentially leading to increased sales and client retention.

- Competitive Advantage for Financial Firms:

Financial firms that leverage technology effectively can gain a competitive edge in the marketplace by offering innovative digital solutions and superior customer experiences. Understanding the impact of technological advancements on retail sales helps firms identify opportunities for differentiation and strategic positioning.

- Regulatory Implications and Compliance Challenges:

The integration of technology in retail sales of mutual funds introduces regulatory considerations related to data privacy, security, and compliance. Analyzing the impact of technological advancements helps identify regulatory risks and ensures that firms navigate legal requirements effectively while harnessing the benefits of digitalization.

## OBJECTIVES

- To understand technological advancements on retail sales in Mutual funds.
- To analyse the impact of technological advancements on mutual funds.
- To know the different types of e platforms for investment choices

## REVIEW OF LITERATURE

**Vimala Viparia (2022), “Performance analysis of Mutual Funds in India”, International Journal of Management, Public policy and Research**, this paper examines the performance of Large Cap, Mid Cap, and Small Cap mutual fund schemes in India using various evaluation models. It emphasizes the importance of considering risk and return profiles over different time horizons when selecting funds. The findings suggest that different types of funds perform better in varying time periods, with large cap funds showing strength in the short term, mid cap in the mid-term, and small cap in the long term. Investors are advised to align their investment goals and time horizon with the appropriate fund type for optimal returns.

**Jayant R Kale, Venkatesh P (2012), “Indian Mutual Funds Industry: Opportunities and Challenges”, IIMB Management Review**, the paper discusses the Indian mutual fund industry, highlighting challenges like poor penetration, lack of objective research, and regulatory obstacles. It addresses the underperformance of mutual fund managers globally and debates the source of alpha in India. The industry shows growth potential but faces competition from real estate and gold investments. Regulatory frameworks, fund performance, fund flows, and governance issues are key areas of focus for the industry's development and expansion.

**Chinmay Ingole (2018), “Performance evaluation of mutual funds from the perspective of retail investor”, International Journal of Commerce and Management Research**, this research paper evaluates the performance of Indian equity mutual funds for retail investors by considering factors like expense ratios and non-systemic risk. Various performance measures such as Sharpe ratio, Jensen alpha, Treynor ratio, and M square measure are analyzed to provide a relevant evaluation. The study aims to create a measure of performance tailored to retail investors, comparing findings with other metrics for consistency and suggesting future research on monitoring top mutual funds using the proposed evaluation method.

**Manoj Kumar (2018), “Performance of select Mutual Funds In INDIA”, International Journal of Engineering Sciences & Research Technology**, The paper evaluates the performance of mutual fund schemes in India using various indicators like Sharpe Ratio, Treynor Ratio, and Jensen Alpha. It compares select equity growth funds to benchmark values, highlighting the outperformance of private sector mutual fund industries. The study emphasizes the importance of mutual funds for small investors, showcasing positive returns and the role of mutual funds in wealth creation. Methodologies like standard deviation, beta, and Sharpe Ratio are used for analysis.

**Prakash Yalavatti (2021), “A study on investors perception towards large-cap equity oriented mutual funds in INDIA”, International Journal of Advanced Research**, the paper examines mutual fund investments in India, focusing on retail investors in large-cap equity funds. It highlights areas of satisfaction such as fund management and transparency, while also identifying areas for improvement like grievance redressal and information promptness. Suggestions include encouraging young people and women to invest,

enhancing risk management, and promoting long-term investments. Most investors are mid-aged men with a graduation degree, moderately satisfied with their investments, and prefer SIPs for investing.

**Dr. Gajraj Singh Ahirwar, Govindappa Mania (2021), “Review of Mutual Funds Investment in India”, Turkish Journal of Computer and Mathematics Education**, this article provides an overview of mutual fund investment in India, discussing industry growth, benefits, and influencing factors. It includes a literature review on mutual fund studies, performance analysis, and the impact of demographics on investment decisions. Emphasizing diversification, professional management, and investor awareness, the article also addresses challenges like financial education gaps and suggests improvements in distribution and regulation for the evolving mutual fund industry in India.

**M.Muniraju, K.R. Ramachandra (2023), “Mutual Funds – Heading Towards....”, Journal of Financial Services Marketing**, the report provides an in-depth analysis of the mutual fund industry and its future trajectory. It discusses current trends, challenges, and opportunities within the industry, highlighting key factors influencing its growth. The report offers insights into potential areas of development and innovation, as well as strategies for navigating the evolving landscape of the mutual fund sector

**Dr.V. Rathnamani, R. Nandhini (2017), “ A Study on the Performace of Equity Mutual Funds (With special reference to equity large cap and mid cap mutual funds)”, Journal of International Business Analytics**, the study analyzed the performance of large and small cap equity mutual funds in India from 2012-2016, highlighting the success of SBI BLUE CHIP and FRANKLIN INDIA SMALLER COMPANIES funds. Investors should assess their needs, risk tolerance, and return expectations when choosing mutual funds. Despite growth potential in the Indian mutual fund industry, market volatility and uncertainty require careful monitoring. Statistical analysis of fund performance can assist investors in constructing a robust portfolio.

**P Bhuvaneshwari Fernando (2015), “An Evaluation on Risk and Return of Mutual Funds in India”, Kelaniya Journal of Management**, this study on Indian mutual funds from 2008 to 2010 emphasizes the importance of evaluating fund performance. Most funds showed positive returns in 2010, though some experienced negative returns in 2008. By analyzing measures like beta and standard deviation, the study highlights the relationship between fund performance and market indices. It underscores the significant role of Indian mutual funds in the financial system and resource allocation, providing valuable insights for investors.

**Sahil Jain (2012), “Analysis of Equity Based Mutual Funds in India”, IOSR Journal of Business and Management**, The study on equity-based mutual funds in India over 15 years revealed that private sector companies such as HDFC and ICICI outperformed public sector companies like LIC and UTI. Using the CAPM, it was determined that private sector mutual funds were less risky and more rewarding. Notably, LIC

was identified as the riskiest and worst performer among the companies analyzed. This suggests that investors may benefit from considering private sector mutual funds for potentially higher returns with lower risk.

## RESEARCH METHODOLOGY

### Research Gap

The impact of technological advancements on retail sales in mutual funds is underexplored, despite increasing literature on fintech's broader influence in finance. Many existing studies centers on overall fintech trends or specific technologies like robo-advisors and blockchain but lack in-depth analysis of their effects on retail sales dynamics within mutual funds. As a result, there's limited insight into how technology influences investor preferences, distribution channels, market competition, and regulatory frameworks in this context. Filling this research gap is crucial for policymakers, industry practitioners, and academics aiming to understand and adapt to the changing landscape of financial technology, ensuring that mutual fund investments remain accessible, efficient, and sustainable for retail investors.

### Research Focus

- The National distributors and others relating to the mutual fund industry functioning around Bangalore City
- The target population comprises this specific demographic.

### Sample Size and Selection

- The sample size for this research will be 100 people
- Stratified random sampling technique will be used to ensure representation across National distributors in Bangalore.

### Sample Unit

- The sample unit is chosen based on their experience in the field
- Aims to provide an overall insight into the topic

### Data Collection

- Primary data is collected from the sample respondents through a questionnaire.
- Secondary data is collected from documents such as reports, articles, and publications

## Data Analysis

- Both descriptive and qualitative approaches of analysis will be applied to the material obtained from secondary sources and questionnaires.
- . The analysis will be based on themes that emerge from the data. Using the themes, conclusions on impact of technological advancements on retail sales in mutual funds will be made.

## Statistical Tool

I will use inferential statistics such as the Chi-Square Test to analyse the data from survey-based research. Several actions must be taken during this procedure in order to make reliable judgments regarding the samples. Furthermore, the most effective ways to display our data have been determined to be graphs and pie charts.

## LIMITATIONS OF THE STUDY

- Limited availability of comprehensive data on technological adoption and its direct impact on retail sales may constrain the depth of analysis.
- Fluctuations in market conditions and investor sentiment could affect the study's ability to isolate the specific impact of technological advancements on retail sales.
- Changes in regulatory policies or industry standards during the study period may influence the observed impact of technological advancements on retail sales in mutual funds.

## DATA ANALYSIS AND INTERPRETATION

Questions	Options	Frequency	Percentage (%)
What is your age group?	20 - 25	29	28%
	25 – 30	30	30%
	30 – 35	31	31%
	35 and above	11	11%
What is your gender?	Male	52	51%
	Female	49	49%
How frequently do you use online platforms for financial transactions?	Daily	27	26.7%
	Weekly	39	38.6%
	Monthly	33	32.7%
	Never	2	2%

In the past year, have you shifted towards using digital platforms for managing your mutual fund investments?	Yes	41	40.6%
	No	43	42.6%
	I don't know	17	16.8%
What worries you the most about using technology for mutual fund investments?	Security	24	23.8%
	Lack of human interaction	41	40.6%
	Complexity	21	20.8%
	Trust in technology	15	14.9%
What features do you appreciate most when using technology for mutual fund investments?	Real time updates	21	20.8%
	User friendly interface	32	31.7%
	Automated portfolio management	37	36.6%
	Customization options	11	10.9%
Would you consider increasing your use of technology for mutual fund investments in the future?	Yes	45	44.6%
	No	40	39.6%
	Maybe	16	15.8%
How as per you has the adoption of technology influenced customer engagement in mutual fund sales?	Improved customer interaction and satisfaction	43	42.6%
	No significant change	27	26.7%
	Decreased customer engagement	15	14.9%
	Increased customer confusion	16	15.8%

Which aspect of the technological advancements holds the most promise for future growth in retail sales in mutual funds?	Personalized financial advice algorithms	30	29.7%
	Integration of social media platforms for investment decisions	38	37.6%
	Automation of investment processes	15	14.9%
	Integration of virtual reality in investment visualization	18	17.8%
How do you think the rise of mobile payment platforms has influenced retail sales of mutual funds?	Increased accessibility and convenience have boosted the sales	36	35.6%
	No significant impact on sales	20	19.8%
	Decreased sales due to security concerns	26	25.7%
How do you think pandemic has accelerated the adoption of technology in retail sales in mutual funds?	Increased sales initially, but long term impact remains uncertain	19	18.8%
	Significantly accelerated adoption due to remote work and digital reliance	29	28.7%
	Had a moderate impact on adoption	29	28.7%
	No noticeable impact on adoption	17	16.8%



	Slowed down adoption due to economic uncertainties	26	25.7%
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The survey data paints a picture of mutual fund investors' interaction with technology. The respondents are predominantly between 25-35 years old, with an almost equal gender distribution (51% male, 49% female). A majority use online platform for financial transactions, with 26.7% engaging daily and 38.6% weekly. However, adoption of digital platforms for managing mutual fund investments is evenly split, with 40.6% having shifted and 42.6% not. Concerns about technology primarily revolve around the lack of human interaction (40.6%) and security (23.8%), while the most appreciated features include automated portfolio management (36.6%) and user-friendly interfaces (31.7%). Technology's impact on customer engagement is viewed positively by 42.6%, but some see it as causing increased customer confusion (15.8%). The most promising area for future growth in mutual fund sales is the integration of social media platforms for investment decisions (37.6%). Mobile payment platforms are seen as boosting sales due to increased accessibility by 35.6%, yet 25.7% express concern about decreased sales from security issues. Lastly, the pandemic's impact on technology adoption is viewed as significant or moderate by 57.4% of respondents, but a notable 25.7% believe it caused a slowdown due to economic uncertainties.

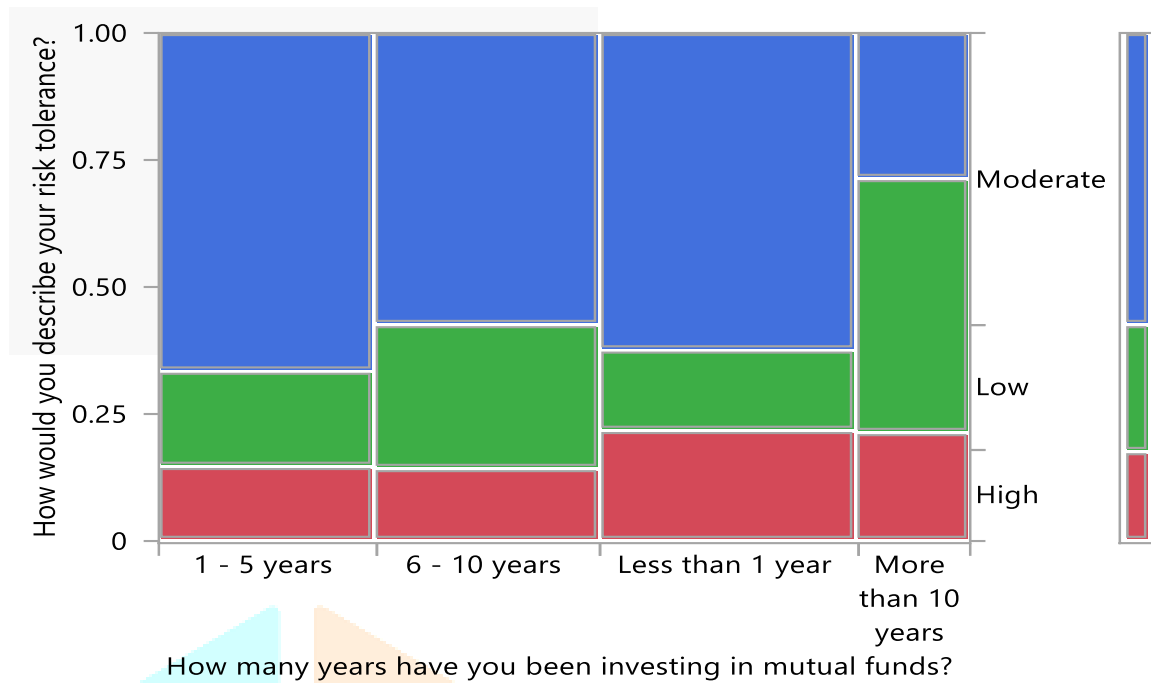
## **HYPOTHESIS TESTING (CHI – SQUARE TEST)**

### **HYPOTHESIS 1**

NULL HYPOTHESIS (H<sub>0</sub>): There is no association between the number of years an individual has been investing in mutual funds and how they describe their risk tolerance.

ALTERNATIVE HYPOTHESIS (H<sub>1</sub>): There is an association between the number of years an individual has been investing in mutual funds and how they describe their risk tolerance.

**MOSAIC PLOT**



**CONTINGENCY TABLE**

		How would you describe your risk tolerance?			
How many years have you been investing in mutual funds?	Count	High	Low	Moderate	Total
	1 - 5 years	Expected	4	5	18
		4.811881	6.683168	15.50495	
6 - 10 years	Expected	4	8	16	28
		4.990099	6.930693	16.07921	
Less than 1 year	Expected	7	5	20	32
		5.70297	7.920792	18.37624	
More than 10 years	Expected	3	7	4	14
		2.49505	3.465347	8.039604	
Total		18	25	58	101

**TESTS**

N	DF	-LogLike	RSquare (U)
101	6	4.1899966	0.0427
TEST	ChiSquare	Prob>ChiSquare	
Likelihood Ration	8.380	0.2116	
Pearson	8.577	0.1988	

- Likelihood Ratio Chi – Square 8.380
- Probability of Likelihood Ratio Chi – Square 0.2116 (or 21.16%)
- Pearson Chi – Square 8.577
- Probability of Pearson Chi – Square 0.1988 (or 19.88%)

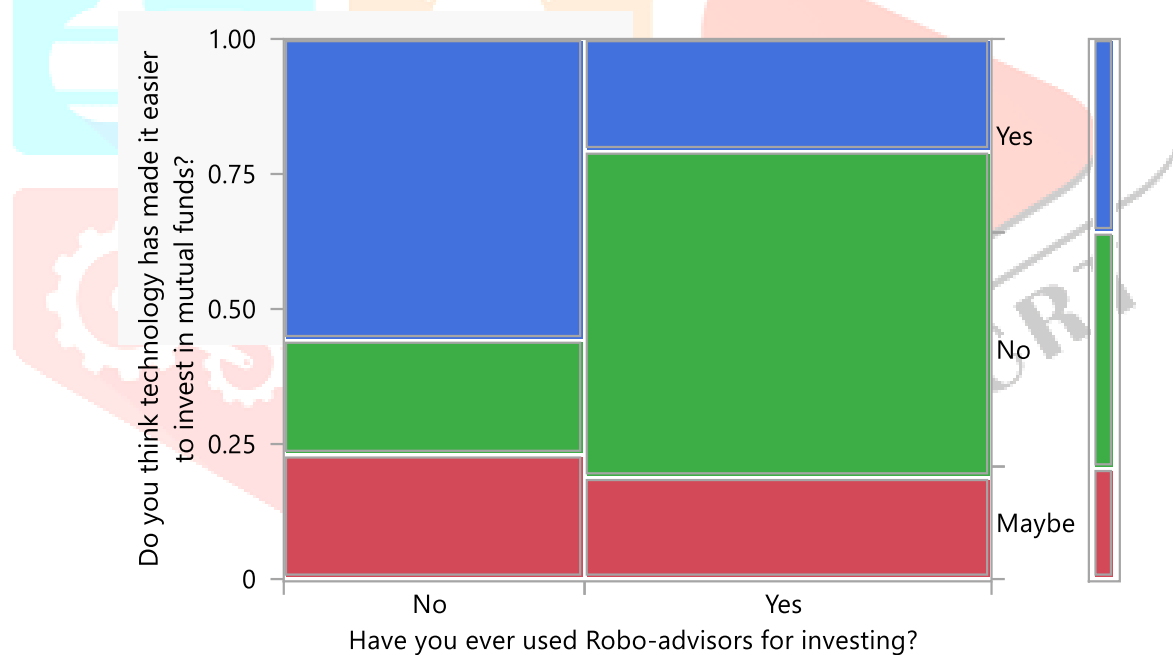
**In this case:**

- The p-value for the likelihood ratio chi-square test is 0.2116 (or 21.16%) which is more than 0.05
- The p-value for the Pearson chi-square test is 0.1988 (or 19.88%) which is also more than 0.05
- Since both p-values are more than 0.05, we failed to reject the null hypothesis. This suggests that there is no significant association between the number of years the individual is investing in mutual funds and their risk tolerance.

**HYPOTHESIS 2**

**NULL HYPOTHESIS (H0):** There is no association between the use of robo-advisors for investing and the perception that technology has made it easier to invest in mutual funds.

**ALTERNATIVE HYPOTHESIS (H1):** There is an association between the use of robo-advisors for investing and the perception that technology has made it easier to invest in mutual funds.

**MOSAIC PLOT**

**CONTINGENCY TABLE**

		Do you think technology has made it easier to invest in mutual funds?			
Have you ever used Robo-advisors for investing?	Count	Maybe	No	Yes	Total
	Expected				
No	10	9	24	43	
	8.940594	18.73267	15.32673		
Yes	11	35	12	58	
	12.05941	25.26733	20.67327		
Total	21	44	36	101	

**TESTS**

N	DF	-LogLike	RSquare (U)
101	2	9.1509498	0.0858
TEST	ChiSquare	Prob>ChiSquare	
Likelihood Ration	18.302	0.0001	
Pearson	17.571	0.0002	

- Likelihood Ratio Chi – Square 18.302
- Probability of likelihood ratio Chi – Square: 0.0001 (or 0.01%)
- Pearson Chi – Square 17.571
- Probability of Pearson Chi – Square: 0.0002 (or 0.02%)

**In this case:**

Both chi-square tests indicate p-values less than 0.05, which is a common significance level. Typically, when the p-value is less than the chosen significance level (e.g., 0.05), we reject the null hypothesis in favor of the alternative hypothesis. This suggests that there is a significant association between use of robo advisors in investing and technology making it easier to invest in mutual fund. Therefore, based on the given significance level, we reject the null hypothesis and accept the alternative hypothesis.

**FINDINGS**

- **Demographics:** Majority of participants are aged 20-35, with a balanced gender distribution.
- **Adoption of Technology:** Mixed responses on the shift towards digital platforms for managing mutual fund investments, with concerns regarding human interaction, security, and complexity.
- **Customer Engagement:** Varied perceptions on the influence of technology adoption on customer engagement in mutual fund sales.

- Promising Aspects of Technology: Participants view social media integration and personalized advice algorithms as promising for future growth.
- Impact of Mobile Payment Platforms: Mixed opinions on how mobile payment platforms influence retail sales of mutual funds.
- Pandemic Influence: Diverse perspectives on how the pandemic has accelerated or slowed down the adoption of technology in mutual fund sales.

## RECOMMENDATIONS

Recommendations include enhancing user-friendly interfaces, strengthening security measures, providing personalized financial advice, and leveraging social media platforms for investment decisions. Additionally, further research is needed to explore the long-term impacts of technology adoption on mutual fund sales and address any emerging challenges or opportunities in the evolving landscape of financial technology.

## CONCLUSION

The research highlights the complex and varied impact of technological advancements on retail sales in mutual funds. While technology offers opportunities for improved accessibility, convenience, and customer engagement, concerns regarding security, complexity, and the need for human interaction persist. The findings underscore the importance of addressing these concerns and leveraging promising aspects of technology to drive growth in mutual fund sales.

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