



# A Study On The Impact Of Virtual Trading Applications On Retail Investors Behavior

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## ABSTRACT

Finance is defined as the management, creation and study of money and investments. The management of finance has become very important for individuals to save the money for future. There are several options like Fixed deposits, Insurance, Gold Deposits, Bonds, Real estates, Stock market investments, Mutual Funds, Post office schemes etc for saving the money. Due to the invention of various virtual trading applications the participation in the stock market investments has increased. There are various virtual trading applications like Upstox, Zerodha kite, Grow, Angel one, Dalal Street, Trading view etc. The present research study is mainly focused on understanding the awareness and impact of various virtual trading applications in retail investors behaviour. The study also focused on understanding the motivating factors and the behavioural patterns of the retail investors. The present research study also aimed to identify the challenges and reason for using virtual trading applications. The present research study is 'Descriptive' in nature. The data collected is through a standardized questionnaire circulated to the respondents living in Hyderabad city, Telangana state. The sampling technique used in the study is 'Cluster sampling'. The study concluded that there is a moderate impact of virtual trading applications on retail investors in decision making.

**KEYWORDS:** Behaviour, Finance, Investments, Motivation, Retail Investors, Virtual trading.

## 1. Introduction

### 1.1 Introduction

Financial management is management of the finances the individual earns. It is important for the individuals who are earning the income. There are various options of managing the money like investment in stock market, mutual funds, real estate, gold schemes, bonds, insurance etc. It is observed through statistics that only 17% of the population are investing in stock markets throughout India. Lack of

awareness, no proper guidelines on investments, less returns due to the market conditions, due to lengthy procedures, fear of losing money, fear of security, being a risk averse personality, changes in politics also impacting the prices of share etc are some of the reasons for the less investments in stock market. The guidelines for the digital trading for investment in stock market was issued by Securities Exchange Board of India (SEBI) in January 2000. Since August 2000, brokers who have been authorized by their local stock exchanges to offer Internet-based trading platforms have been registered with SEBI. Through the interface or email, investors can also be updated on trade activity and see the status of their orders. It is typically possible for users to connect their brokerage, DEMAT, and bank accounts into a single interface. Additionally, there is just one screen with the entire order routing mechanism and one window for all exchanges. The digital transformation has made everything easier in a convenient way. The invention of digital applications technology has made work easier for the people who are investing for different purposes. There is an increase in the percentage of investment due to the digital invention where people are finding it easier to invest, to monitor, and observe the changes in the investment patterns. The investors can buy or sell the share at their convenient place like in office, in mobile, during travel etc. They can monitor or check the portfolio 24/7 at their convenience. There are different virtual trading applications like Upstox, Zerodha kite, Grow, Money bhai, Trading view, Dalal street, Sensibull, Track Invest, Stock Simulator, MoneyPot, Virtual trading app 2.0, StockPe, ICICI direct, Stock trainer etc. The first virtual trading application. ICICI Securities, which introduced its online trading platform named "ICICIdirect" in April 2000, is sometimes credited as being the first company in India to develop a digital trading application for the stock market. The present research study is aiming at understanding the impact of the Virtual trading applications on the retail investors behaviour and understanding the awareness and challenges faced by the investors during the investments.

### 1.2 Objectives of the study:

- To understand the awareness of various virtual trading applications
- To evaluate the impact of virtual trading applications on retail investors behavior.
- To identify the challenges and reasons for using Virtual Trading Applications

### 1.3 Need and scope of the study:

Due to the innovations in technology, people are doing things conveniently and at a faster pace. The invention of digital payments in banking increased the users due to its convenience and time saving factor. Even though there are security concerns people are using it with some safety measure. Before 19<sup>th</sup> century most of the people used to save money in trunk boxes or they used to invest in gold, bonds, and lands. But now a days people have started investing in Stock markets, Mutual funds, Commodity markets etc. Due to the increase in users the invention of digital applications has come into picture. The invention of various virtual trading applications made the users trade or invest in stock market at their convenience from their place. The study mainly focused on understanding the awareness of various virtual trading applications and the impact of it on retail investors' behavior. The study also identified the challenges and reasons for using these applications for investments.

## 1.4 Research Methodology:

The present research study is Descriptive in nature. The data collected for the study is through primary and secondary sources. As a part of primary data collection, a structured questionnaire is prepared and circulated to the respondents living in Hyderabad city, Telangana State. The data is also collected through secondary sources like websites and journals. The sample size of the study is 110. The technique used for the study is 'Cluster Sampling Method'. Data which is collected was analyzed using simple frequencies in a tabular form.

**1.4.1 Statistical tool:** As a part of statistical analysis and hypothesis testing, the T test using two equal variances and Chi square test is used to test the following hypothesis.

### Hypothesis formulation:

Null Hypothesis( $H_0$ ): There exists no relationship between the gender and the awareness of Virtual Trading Applications.

Alternate Hypothesis( $H_1$ ): There exists a relationship between the gender and the awareness of Virtual Trading Applications.

## 2. Review of literature

- 1. Arvinth and Jaya Laxmi (2024):** This study delves into how stock trading apps have impacted retail investors' behaviour in Coimbatore's stock market. Findings are expected to reveal how these apps shape investor behaviour, democratizing investing and fostering greater participation in the market. Overall, stock trading apps have revolutionized the investment landscape in Coimbatore, providing retail investors with unprecedented access and opportunities.
- 2. Jha and Dangwal (2024):** This study investigates the factors influencing the intention to use and actual usage of investment related FinTech services among Gen Z and Millennial retail investors in India. The findings highlight distinct factors affecting behavioural intention, including performance expectancy, perceived risk, price value, and the relationship between perceived risk and service trust. Notably, habit emerges as a common factor influencing actual usage across both age groups. The study provides insights for financial providers and policymakers, emphasizing the need to consider different factors affecting behavioural intention among these demographics. Overall, it contributes to understanding the heterogeneous behaviour of the population in adopting FinTech services in India.
- 3. Nair et al. (2023):** This study explores how mobile applications influence retail investors' decisions in stocks and mutual funds in emerging financial markets. It finds that factors like ease of use, performance expectations, and perceived returns drive investors' intentions to use these apps, with habit also playing a role. Surprisingly, perceived risk is less significant than perceived return. The study suggests future research could explore investors' personality traits and address variations among investors. Practical implications include guiding investors, financial advisors, and technology firms on optimizing mobile app usage. This research offers a fresh perspective on

technology adoption among retail investors in emerging markets within the realm of behavioural finance.

4. **Anand and Abhilash (2022):** The study explores investor behaviour towards trading apps in India using the UTAUT model. Primary data from 395 investors and secondary data were analysed. Key findings highlight the impact of efficiency and risk variables on behavioural intentions. The study notes a link between awareness of trading apps and investors' professions, with intentions varying across professions but not significantly with income levels. It aims to understand factors influencing investors' adoption of trading apps, considering benefits and risks, and how income and profession may influence awareness and usage.
5. **Anitha S Mane and Snehal R Khune (2012):** This study investigates the impact of stock trading applications on Indian youth investors' perceptions and behaviours. It finds that these apps have made the stock market more accessible, leading to changes in trading frequency and risk-taking behaviour. Understanding investor perceptions is crucial for preventing market overheating and stabilizing investment behaviour. By educating investors about the influence of their perceptions on trading, risks can be mitigated. The study's findings highlight the dynamic interaction between investors' beliefs, behaviours, and performance, offering insights into investor behaviour and success.

### 3. Data Analysis & Interpretation:

#### 3.1(a) Age

Age	Frequency	Percentage
a) 15-25	57	51.82%
b) 26-36	30	27.28%
c) 37-47	23	20.90%
Total Respondents	110	100%

Source: Primary Data

#### 3.1(b) Gender

Gender	Frequency	Percentage
a) Male	63	57.28%
b) Female	47	42.72%
c) Prefer not to say	0	0%
Total Respondents	110	100%

Source: Primary Data

## 3.1(c) Education

Education	Frequency	Percentage
Undergraduate	63	57.28%
Postgraduate	47	42.72%
PhD	0	0%
Total Respondents	110	100%

**Objective 1:** To understand the awareness of various virtual trading applications.

## 3.1.1 Awareness of virtual trading applications.

	Yes	No	Maybe	Total Respondents
Are you aware of the charges using the applications?	70	20	20	110
Are you able to check the performance of your portfolio in applications you are using?	60	33	17	110
Do you take the help of brokers or intermediaries for handling your portfolio?	23	87	0	110

Source: Primary Data

**Interpretation:** As per the above the data 70% of the respondents are aware of the chargers for using trading application, 60% of respondents can check the performance of their portfolio in the applications which means either they are not aware of how to check, or they are facing issues. And out of the 110 respondents 23 are getting help from intermediaries.

**Test-1: T-TEST OF INDEPENDENT VARIABLES**

**Null Hypothesis(H<sub>0</sub>):** There exists no relationship between the gender and the awareness of Virtual Trading Applications.

**Alternate Hypothesis(H<sub>1</sub>):** There exists a relationship between the gender and the awareness of Virtual Trading Applications.

**RESULTS:**

<b>t-Test: Two-Sample Assuming Equal Variances</b>		
	Male	Female
Mean	0.698413	0.765957
Variance	0.173707	0.128816
Observations	63	47
Pooled Variance	0.154587	
Hypothesized Mean Difference	0	
df	108	
t Stat	-0.89131	
P(T<=t) one-tail	0.187372	
t Critical one-tail	1.659085	
P(T<=t) two-tail	0.374745	
t Critical two-tail	1.982173	

Source: Primary Data

**Interpretation:** Since the absolute value of the t-statistic (0.89131) is less than the critical value (1.982173 for two-tail test), we fail to reject the null hypothesis. This means that there is not enough evidence to conclude that there is a significant difference between the means of the male and female groups. Thus, Null hypothesis is accepted, Alternate hypothesis is rejected.

**Result:** There exists no relationship between the gender and the awareness of Virtual Trading Applications.

**Test-2: CHI-SQUARE TEST**

**Null Hypothesis:** There exists no relation between the Education and Mostly invested platforms using Virtual Trading Applications.

**Alternate Hypothesis:** There exists relation between the Education and Mostly invested platforms using Virtual Trading Applications.

**Results:**

No. of options	Observed frequency (E)	Expected frequency (O-E)	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E	
Stocks	63	22	41	1681	76.4
Mutual funds	27	22	5	25	0.45
Debt instruments	7	22	-15	225	10.22
Commodities	3	22	-19	361	16.4
Insurance	10	22	-12	144	6.54
	$\sum X=110$		TOTAL		110.01

**Degree of Freedom (DF) =4,  $\alpha=5\%$ , Table Value= 9.488**

**Interpretation:** Since, the Calculated Chi-Square Statistic = 110.73 and Critical Value = 9.488. The calculated value (110.73) is much greater than critical value (9.488) so, we reject the Null Hypothesis and Alternate Hypothesis is accepted.

**Result:** There exists relation between the Education and Mostly invested platforms using Virtual Trading Applications.

### 3.1.2 Source of awareness about virtual trading applications.

	Friends	Word of mouth	Colleagues	Family	Total Respondents
How did you come to know about Virtual trading applications	63	20	20	7	110

Source: Primary Data

**Interpretation:** It is observed that most of the respondents got to know about the virtual trading applications through their friends (63%). Whereas the rest have known from different sources like word of mouth 20%, colleagues 20% and Family 7%.

**Objective 2:** To evaluate the impact of virtual trading applications on retail investors' behavior.

### 3.2.1 Confidence levels upon the usage of Virtual Trading Applications.

	Very Confident	Confident	Not Confident	Total Respondents
Confidence levels of users	20	43	47	110

Source: Primary Data

**Interpretation:** It is observed from the above data that most of the respondents are not very confident in using the virtual trading applications out of the responses collected.

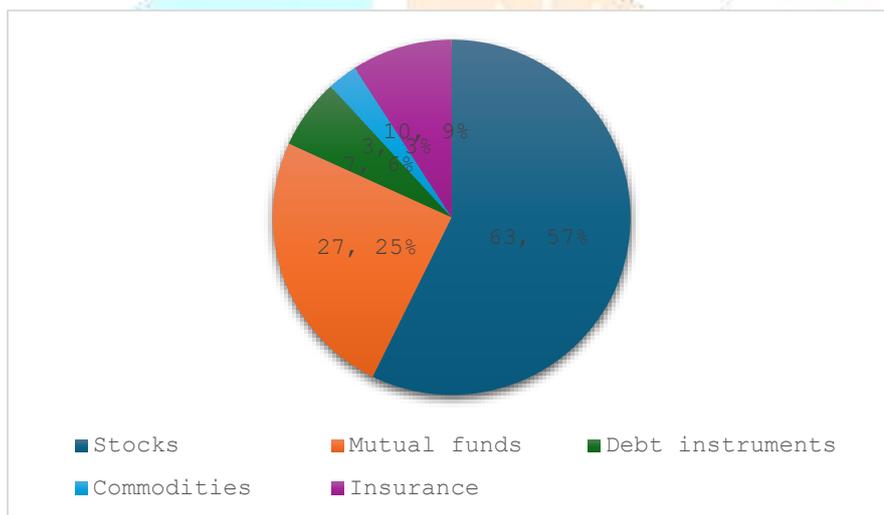
3.2.2 How often do you use Virtual Trading Applications.

	Never	Rarely	Sometimes	Often	Always	Total respondents
Frequency of using VTA	30	37	23	10	10	110

Source: Primary Data

**Interpretation:** It is observed that most of the respondents used Virtual trading applications rarely (37) followed by the respondents who never used the virtual trading applications (30) and only 10 respondents have regularly used the applications.

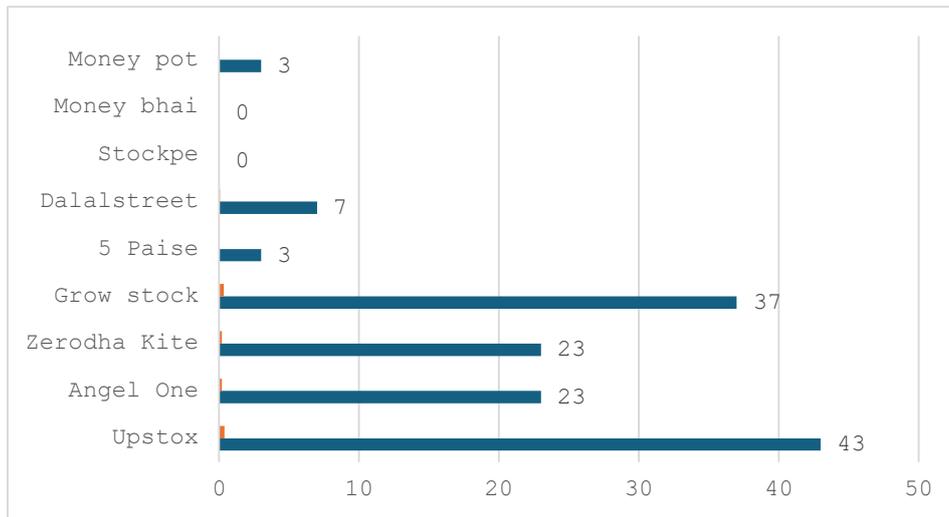
**Mostly invested platforms using Virtual Trading applications.**



Source: Primary Data

**Interpretation:** Most of the respondents have invested in stocks (63.57%) followed by mutual funds (27.25%) and insurance (10.9%).

**Rigorously used Virtual Trading applications.**



Source: Primary Data

**Interpretation:** From the respondents, It is observed that “Upstox”,(43) is the rigorously used virtual trading applications followed by “Grow stock”(37) and Zerodha and Angel one are the next most used applications.

**Objective 3:** To identify the challenges and reasons for using Virtual Trading Applications

3.3.1 Reasons for using Virtual Trading Applications

	Convenience	Security	Reducing paperwork	Time Saving	Total Respondents
Reasons for using Virtual Trading Applications?	50	27	6	27	110

Source: Primary Data

**Interpretation:** It is observed that most people are using virtual trading applications as it is very convenient to use, and security is also one of the reasons for using these applications.

3.3.2 Challenges faced while using Virtual Trading Applications?

	Security	Interface	No proper guidelines	More brokerage charges	Total respondents
Challenges while using Virtual Trading Applications?	20	30	37	23	110

Source: Primary Data

**Interpretation:** It is observed from the above data that the major challenge faced by the respondents is not having proper guidelines (37) followed by lack of proper interface within the application (30) and the other factors are also affecting equally with security (20), and More brokerage charges (23).

#### 4. Findings & Conclusions:

**Objective 1:** From the above research it is found that most of the respondents are having good awareness about the charges for using the applications, and moderate respondents can check the performance of the portfolio and the respondents are able to use the Virtual Trading Applications by themselves without the help of intermediaries. The respondents are aware of the applications by their friends followed by word-of-mouth publicity and colleagues.

**Objective 2:** It is observed that there is moderate impact of Virtual Trading applications as it increased the usage of the applications frequently, and rigorously used trading application is Upstox, followed by Grow stock. Most of the respondents are not very confident in using the applications due to the security concerns and because of not having proper guidelines. The respondents are using virtual trading applications for investing in stock markets followed by mutual funds and insurance.

**Objective 3:** From the above research it is found that the respondents are using the virtual trading applications as it is very convenient to use, and it is time saving process compared to the traditional trading process and the challenges faced by the respondents are no proper guidelines and security concerns.

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