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A Study on the Impact of Digital Stock Brokers in Stock Market

Smt. Dr. U. Homiga[1], Ms. Sandhiya V [2]

[1]MBA, M.Phil, PhD, NET,CTFC, PGDCBM, Faculty, NICM, Chennai.
[2]B.Com, MBA, NICM, Chennai.

ABSTRACT:

This study talks about the rise of digital stock brokers has revolutionized the landscape of stock market participation, democratised access and altering traditional brokerage paradigms. This research investigates the multifaceted impact of digital stock brokers on the stock brokers. Through a comprehensive literature review and empirical analysis, this study examines how digital brokers have empowered individual investors, enhanced market liquidity, lowered transaction cost, increased market efficiency and comparison between traditional and digital stock brokers. Additionally, it explores the role of technological advancement (mobile trading platforms, algorithmic trading). As considering the respondents as population size for the study. The finding contributes to a deeper understanding of transformative influence of digitalization in financial market and provide insights for policy makers, market participants and academics.

INTRODUCTION:

In this study it was scrutinised the impact of digital stock brokers on considering its features functions along with the influence of investors behaviour and decision making, assessing the market dynamics, technology advancement, competitive landscape among digital stock brokers and traditional stock brokers and to investigate the risk management strategies implemented by the stock brokers. There are some factors that are being used to select the digital stock brokers they are considering user friendliness, trading timing, security basis, recommendations that are being provided by the digital stock brokers, regulatory information from SEBI, risk management features and the Participation of investors using the investment apps.

The impact of digital stock brokers on the stock market is multifaceted, with both positive and negative implications. While digital brokerage platforms have democratized access to the stock market and empowered investors with advanced tools and resource.

Who is digital stock brokers?

Stock brokers are the individuals or companies who act as an intermediary or the registered representative who provide transaction facility to the financial market participants by buying and selling the bonds, securities etc, according to the need of the participants. Stock brokers are the intermediaries between the investor and the stock exchange. Financial market participants are also known as investors.

EVOLUTION OF THE STUDY:

- Early days of online trading in India (late 1990s – early 2000s):
- Introduction of online trading platforms (early 2000s)
- (late 2000s – early 2020s)
- Zerodha's disruption (2010s)
- Sebi's regulatory measures (2016)
- Mutual funds investments apps (late 2010s)
- Rise of discount brokerage firms (2018)
- Covid-19 accelerates digital adoption (2020)
- Diversification of investment apps (2021)
- Technology advancements and innovations (2022 and beyond)

OBJECTIVES OF THE STUDY:

PRIMARY OBJECTIVE:

To analyse the features, functionalities and impact of digital stock brokers (investment apps) platforms on the stock market.

SECONDARY OBJECTIVE:

1. To investigate the availability of digital stock brokers influences investors behaviour and decision making
2. To assess the changes in market dynamics, including trading volumes, volatility and liquidity, attributed to the rise of digital stock brokers.
3. To study the technological advancements that enable digital stock brokers.
4. To analyse the competitive landscape among digital stock brokers and traditional brokerage firms.
5. To investigate the risk management strategies implemented by investors and brokerage firms in the digital era.

REVIEW OF LITERATURE:

Saan Chaudry, Chimay Kulkarni 2021 "Design pattern of investment apps and their effect on investing behaviour": This paper introduces design guidelines for promoting healthy investing behaviours in smartphone apps like Robinhood and Public, which aim to democratize investing. These apps allow inexperienced retail investors to easily trade stocks, options, and other securities. The paper discusses design implications and future opportunities.

A.Johir, M.Wasiq, H.Kasur, M.Asif -2023"Assessment of user adaptation behaviour of stock market investment through online application**":** This study explores user adoption behavior for stock market investment via online applications. It examines factors such as user awareness, benefits, reliability, safety, risk, financial literacy, technical aspects, and dependency

PS. Nair, A.Shiva, N.Yadav, P.Tandon - 2023" Determinants of mobile apps adoption by retail investors for online trading in emergence of financial market**":** This study aims to explore how mobile applications affect the investment decisions of retail investors in stocks and mutual funds, particularly in emerging financial markets. It investigates the application of mobile technologies in e-trading by retail investors.

A. Guddati, D.Bhat – 2021 "Analysis of Pre-existing Investment Behaviour and Influence of Trading Apps": This paper examines trading apps like Robinhood and their impact on financial inclusion for millennials, analysing investment behaviour, biases, and the design of Robinhood's business model. Interviews with experts and casual investors reveal perceptions, criticisms, and potential solutions. Findings suggest trading apps may exacerbate harmful investment behaviour and amplify existing biases among retail investors.

M Anand, VS Abhilash – 2022 "Behavioural intention of investors regarding trading apps in India with an implication of UTAUT model": This study explores investor intentions towards trading apps in India using the UTAUT model. Data from 395 investors, current and potential users, were collected via structured questionnaires, supplemented by secondary data. Statistical analyses, including chi-square tests in SPSS, reveal that efficiency and risk significantly impact intentions to use trading apps.

RH Hooker, 2017 "The determinants and implications of millennials' stock market investment habits and opinions**":** This research examines the unique determinants influencing millennials' investment decisions, diverging from earlier generations. Despite financial constraints, many millennials are hesitant to invest due to factors like education, biases, and values.

HYPOTHESIS OF THE STUDY:

Risk management features available in digital stock brokers in stock market and different level of expertise in trading and investment

NULL HYPOTHESIS H0- There is no significant difference in the utilization of risk management features among different level of expertise in trading and investment.

ALTERNATE HYPOTHESIS H1 – There is significant difference in the utilization of risk management features among different level of expertise in trading and investment

LIMITATIONS:

Selection Bias:

Investors who choose to use digital stock brokers may differ systematically from those who prefer traditional brokerage services. This selection bias could influence the results, as digital broker users might have different risk appetites, investment strategies or financial goals.

Geographical Limitations:

The study's findings may be specific to certain geographical regions or markets, limiting their applicability to a global context. Variations in market structures, investors behaviours and regulatory frameworks across regions could affect the generalizability of results.

Data Privacy And Confidentiality:

Accessing sensitive financial data related to investors transaction and portfolios must adhere to strict data privacy and confidential regulations. Compliance with these regulations could restrict data access and analysis, limiting the depth of the study.

Technological Limitations:

Rapid advancement in technology may outpace the research timeline, making it difficult to capture the latest innovations and their effects accurately. Moreover, the study may not account for potential future disruptions the digital stock brokerage industry.

Financial Literacy and Education:

Investors outcomes may be influenced by factors such as a financial literacy, investment knowledge and risk awareness, which are difficult to measure. Variations in investors education level and awareness of digital stock brokerage options could confound research findings.

RESEARCH METHODOLOGY:

To study on the impact of digital stock brokers in stock market on different boundaries. A structured survey for gathering essential information. Essential information was gathered from 130 respondents. In this research, quantitative, explanatory and correlation research was being used. Sampling plan for selecting the sample size was purposive sampling. Data analysis and statistical data analysis was the research analysis method used for the research purpose. The statistical analysis chose for the study was chi square and rank correlation.

TOOLS AND TECHNIQUES:

DATA COLLECTION METHOD: This study utilized **QUESTIONNAIRE** as its research instruments for data collection methods.

ANALYSIS OF DATA:

DATA ANALYSIS: The initial examination and exploration of the data to gain an understanding of its characteristics and identify any notable patterns or trends. Tabulation and visual representation of datum.

STATISTICAL ANALYSIS: The summarizing data characteristics, utilizing statistical graphics and summary statistics. Its primary aim is to reveal patterns, trends, and relationships in the data, guiding further analysis or hypothesis testing. They are **CHI SQUARE, RANK CORRELATION.**

DATA ANALYSIS:

QUESTIONARRIE	PARTICULARS	NO: OF RESPONDENTS	PERCENTAGE
AGE	18-24	80	61.5
	25-34	24	18.5
	35-44	17	13.1
	45-54	7	5.4
	55-above	2	1.5
	Total	**130**	**100**
GENDER	Male	72	55.4
	Female	55	42.3
	Others	3	2.3
	Total	**130**	**100**
EMPLOYMENT	Unemployed	9	6.9
	Self employed	17	13.1
	Student	59	45.4
	Retired	3	2.3
	Part time employment	12	9.2
	Full time employment	30	23.1
	Total	**130**	**100**
MONTHLY INCOME	10,000-20,000	26	20

	20,001-30000	21	16.2
	30,001-40,000	12	9.2
	40,001-above	19	14.6
	Nil	52	40
	Total	**130**	**100**
LEVEL OF EXPERTISE	Beginner	71	54.6
	Intermediate	42	32.3
	Advanced	11	8.5
	Expert	6	4.6
	Total	**130**	**100**
RISK MANAGEMENT FEATURES	Stop loss order	33	25.4
	Take profit order	36	27.7
	Alerts & notification	33	25.4
	Portfolio diversification tools	9	6.9
	None	19	14.6
	Total	**130**	**100**
PARTICIPATION LEVEL	Highly increased	68	52.3
	Partially increased	37	28.4
	No change	11	8.4
	Partially decreased	8	6.1
	Highly decreased	6	4.6
	Total	**130**	**100**
TYPES OF TRADING	Intraday trading	33	25.3
	Swing trading	22	17
	Position trading	30	23.07
	Options trading	24	18.5
	Algorithmic trading	21	16.15
	Total	**130**	**100**
SUITABLE TRADING APPD	Zerodha	32	24.6
	Angel one	25	19.2
	Upstox	31	23.8
	Groww	27	20.8
	5paisa	8	6.2
	Paytm money	3	2.3
	SBI securities	2	1.6
	ICICI	2	1.6

	Total	**130**	**100**
FRIENDLINESS OF APPS	Very user friendly	55	42.3
	Moderately user friendly	63	48.5
	Not user friendly	12	9.2
	Total	**130**	**100**

STATISTICAL ANALYSIS:

TEST 1: CHI SQUARE

Chi square is a statistical test used to determine whether there is a significant association between two categorical variables. It compares the observed frequencies of categorical data with the frequencies that would be expected if the variables were independent. Chi square test is commonly used in business to analyse data and test hypothesis.

AIM: To test whether there is significant difference in the utilization of risk management features among different level of expertise in trading and investment

HYPOTHESIS FOR THE STUDY:

NULL HYPOTHESIS H0- There is no significant difference in the utilization of risk management features among different level of expertise in trading and investment.

ALTERNATE HYPOTHESIS H1 – There is significant difference in the utilization of risk management features among different level of expertise in trading and investment

OBSERVED VALUE:

PARTICULARS	**ALERTS**	**NONE**	**PORTFOLIO**	**STOP LOSS**	**TAKE PROFIT**	**TOTAL**
ADVANCED	4	1	1	2	3	11
BEGINNER	16	13	7	14	21	71
EXPERT	-	-	-	5	1	6
INTERMEDIATE	13	5	1	12	11	42
TOTAL	33	19	9	33	36	**130**

EXPECTED VALUE:

2.60	1.60	0.76	2.80	3.04
18.02	10.38	4.91	18.02	19.66
1.52	0.88	0.41	1.52	1.67
10.67	6.13	2.91	10.67	11.63

CALCULATED VALUE: $(O-E)^2 / E$

O	**E**	**O-E**	**$(O-E)^2$**	**$(O-E)^2 / E$**
4	2.60	1.4	1.96	0.75
16	18.02	-2.02	4.08	0.22
0	1.52	-1.52	2.31	1.51

13	10.67	2.33	5.42	0.50
1	1.60	-0.6	0.36	0.22
13	10.38	2.62	6.87	0.66
0	0.88	-0.88	0.77	0.87
5	6.13	-1.13	1.27	0.20
1	0.76	0.24	0.81	1.06
7	4.91	2.09	4.37	0.89
0	0.41	-0.41	0.16	0.39
1	2.91	-1.91	3.64	1.25
2	2.80	-0.8	0.64	0.22
14	18.02	-4.02	16.16	0.90
5	1.52	3.48	12.11	8
12	10.67	1.33	1.76	0.16
3	3.04	-0.04	0.0016	0.0005
21	19.66	1.34	1.80	0.09
1	1.67	-0.67	0.44	0.26
11	11.63	-0.63	0.40	0.034
				∑= **18.1805**

DEGREE OF FREEDOM:

(C-1) (R-1)

= (5-1) (4-1)

= (4) (3)

= 12

The calculated value was **18.1805**, whereas the table value was **21.026**

∴ The calculated value is lesser than the table value.

CV< TV

Hence H0 is accepted H1 is rejected

There is no significant difference in the utilization of risk management features among different level of expertise in trading and investment.

INTERPRETATION: Through this analytical tool, chi square the calculated value was 18.1805, with the corresponding table value was 21.026. Since the calculated value was less than table value NULL HYPOTHESIS is accepted. It showed that there is no significant difference in the utilization of risk management features among different level of expertise in trading and investment.

TEST 2 : RANK CORRELATION

Rank correlation in statistics refers to a measure of the strength and direction of association between the rank of two variables. Common rank correlation measures include Spearman's correlation.

X= Types of trading in digital stock brokers.

Y= Digital stock brokers influencing the participation level of the investor.

X	33	22	30	24	21
Y	68	37	11	8	6

RANK CORRELATION:

X	**Y**	**R1**	**R2**	**D^2= (R1-R2)^2**
33	68	1	1	0
22	37	4	2	4
30	11	2	3	1
24	8	3	4	1
21	6	5	5	0
				∑= 6

$$R = 1 - \frac{6\Sigma D2}{N3-N}$$

$$=1 - \frac{6(6)}{53-5}$$

$$=1 - \frac{36}{125-5}$$

$$=1 - \frac{36}{120}$$

$$=1 - 0.3$$

$$r = 0.7$$

r = 0.7 lies between -1 to +1

∴ It is positively correlated

INTERPRETATION: The rank correlation r = 0.7 lies between -1 to +1. So, it indicates a very strong positive correlation between the types of trading by the investors and their participation level. That is the r value is 0.7, it is perfect and positive correlation of ranks.

KEY FINDINGS:

- Investment ideas are moderately increasing in the minds of the younger generation. thus, educational institution and organization can educate their people on investment ideas.
- Large volume of people are beginners in their trading platforms. So, the investment apps can enhance the information resources such as tutorials, webinars and teach them about the market dynamics and risk management techniques to enhance and encourage them to invest more.
- Investment apps can update the investors about the regulatory measures that have been issued by the RBI and SEBI.
- Online trading platforms faces technical glitches & software bug which can disrupt trading operations and create frustration among investors. So technical stability and error free platform can be provided by the investment apps

CONCLUSION:

The rise of digital stock brokers has significantly impacted the stock market attracting both existing and new investors with enhanced accessibility both existing and new investors with enhanced accessibility and convenience. These platforms offer advanced tools and resources, like real time data and trading algorithmics, empowering investors to make informed decisions.

However, challenges such as technology disruptions, software bugs, and concerned about data privacy and cybersecurity persist. Despite these challenges, digital stock brokers have democratized market access. Moving forward, collaborations among regulators, policy makers and market participations is crucial to balancing innovations with market integrity and stability, ensuring digital brokers continue to shape the future of finance effectively.

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