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Study on Investor Buying behaviour on Derivative Market

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ABSTRACT:

This study delves into the complex dynamics of investor buying behavior in the derivative market, a pivotal component of the global financial landscape. It explores how investors utilize derivatives for risk hedging, speculation, and portfolio diversification. The research employs a comprehensive approach, integrating quantitative and qualitative methods through surveys, interviews, and market analytics. By scrutinizing factors such as market volatility, information asymmetry, regulatory influences, and macroeconomic elements, the study aims to unveil patterns in investor decision-making.

Utilizing statistical tools and econometric models, the research sheds light on the impact of financial education and investor experience on attitudes towards derivative instruments. The findings are expected to contribute to the development of effective risk management strategies, investor education initiatives, and regulatory frameworks. Ultimately, the study seeks to provide valuable insights for financial professionals, policymakers, and academic researchers, fostering a more resilient and informed derivative market ecosystem.

Introduction:

The derivative market is a vibrant and essential component of the world's financial system, providing investors with a wide range of options for speculation, risk management, and portfolio optimization. Understanding investor purchasing patterns in the derivatives market is crucial in this situation because it affects financial stability, regulatory frameworks, and market efficiency. In order to understand the derivative market's complex role in forming the modern financial ecosystem, this study attempts to disentangle the many levels of decision-making among participants in the market.

For investors trying to make sense of an increasingly complicated financial landscape, derivatives—which include everything from swaps to futures and options—have become essential instruments. An extra level of complexity to investor strategies is added by the market's capacity to offer opportunities for both profit generation and risk mitigation. As such, understanding the variables impacting investor choices in this domain becomes critical for a range of stakeholders, such as market players, regulators, and legislators.

In order to provide a full understanding of investor preferences, risk perceptions, information sources, and decision-making processes, this research employs a comprehensive research framework and combines quantitative and qualitative approaches. The study intends to provide insights that help guide the creation of efficient risk management plans, investor education initiatives, and regulatory policies by examining the effects of market dynamics, regulatory settings, and macroeconomic factors.

This research basically aims to reveal more about the psychological and economic factors influencing investor behavior by dissecting the derivative market. The results of this study are expected to support a more knowledgeable and robust derivative market by adding to the body of knowledge about investor decisions while also providing useful information for financial professionals and policymakers.

Review of literature:

Ms. Shalini H S, Dr. Raveendra P V, (2014), Over the past decade, global trade and business have expanded due to globalization and liberalization, leading to increased demand for international money and financial instruments. This growth has raised financial risks for corporations, necessitating the development of derivatives in Indian financial markets. Derivatives, serving as risk management tools, provide commitments to future prices, mitigating the impact of adverse movements in exchange rates, interest rates, and stock prices. The derivatives market in India, established in 2000, has experienced remarkable growth, surpassing the cash segment in terms of turnover and traded contracts within twelve years. This study explores the history, concepts, types, regulations, market trends, and challenges of derivatives in India, comparing its status to the global derivative market.

Dr. Veena K.P, Dr. C. Mahadeva Murthy, (2015), The derivative market's emergence and growth are driven by the desire of risk-averse individuals to protect against uncertainties stemming from asset price fluctuations. Derivatives derive their value from underlying assets like equity, forex, or

commodities, serving as vital instruments for risk management. Common derivatives include forwards, futures, and options, facilitating the separation and trading of risks. Despite lacking physical existence, derivatives arise from contractual agreements between parties involving assets such as shares, debentures, commodities, currencies, or financial securities. This study focuses on the demographic profile of respondents, motivational factors influencing equity derivatives investment, and challenges faced by investors in the Equity Derivative Market. Primary data was collected through a survey of 60 respondents at Angel Broking Pvt Ltd. in Mysore City. It concludes that systematic risk in the Equity Derivative market is influenced by external factors beyond a company's control, impacting both the overall market and equity financial derivatives.

Tejashwini K. C. (2023), Behavioral finance, a burgeoning field, delves into how psychological factors shape decision-making in complex situations, particularly exploring shifts in mindsets when individuals invest in various financial instruments. This study focuses on understanding the mindset of retail investors across different investment sectors and what considerations guide their investment decisions. The essay delves into the significant impact of heuristics, prospect theory, and herding influences on the stock market decisions made by individual retail investors. Primary research involved the creation of a structured questionnaire, with data collected from 60 retail investors in Davangere. The primary objectives were to analyze the effects of behavioral finance on retail investors and investigate how this influence shapes their investment decisions. The study aims to uncover the factors influencing retail investors' decisions to invest and explore various theories associated with behavioral finance.

Ms. Amala Sara John (2020), In the 1990s, financial sector reforms in India transformed its capital markets into a dynamic global player. With increased economic activity and currency volatility, risk hedging techniques, especially derivative instruments, gained rapid popularity among a diverse range of investors. These instruments became essential for risk-averse economic agents seeking protection from asset price fluctuations. The shift to derivatives has brought speculative trading into a more controlled environment. This paper explores investor perceptions of derivative trading, conducting a study in Pathanamthitta district, Kerala, to analyze awareness and attitudes towards investment in derivative instruments. Analysis methods include percentage analysis, weighted average, and chi-square tests.

Ankit Jain, Mrinal Mishra, and Prasanna Tantri, (2017), In the context of India's rule-based determination of equity derivative lot sizes, this study investigates the consequences of small investors entering the derivatives markets. The findings reveal that the involvement of small investors contributes to heightened stock valuation in both spot and derivative markets. Notably, measures of price efficiency and liquidity show significant improvement. Contrary to global regulatory concerns, there is no substantial increase in volatility detected. The results indicate a positive impact of small investor participation on both equity spot and derivative markets.

Objectives:

1. To examine the correlations between investor preferences for derivatives and their demographics.
2. To evaluate how risk perception affects decision-making in derivative investments

Analysis of Data

Table 1

Age wise classification of the respondents

Age	**No. of Responses**	**Percentage**
20-30	39	39%
30-40	28	28%
40-50	22	22%
Above 50	11	11%
Total	100	100%

(Source: Primary Data)

Interpretation

Based on survey results, the respondents' ages are categorized in the accompanying table. Here's a succinct explanation:

Three-quarters of the replies, or most, come from respondents who are between the ages of twenty and thirty. With 28% of the responders, the 30- to 40-year-old age range is the next important one. Twenty-two percent of the replies come from the 40–50 age range. The smallest proportion of respondents—11 percent of the total—are those over 50. This distribution shows the predominance of younger people in the dataset and offers insights on the age demographics of the surveyed community.

Table 2

The preferred derivative instrument ranking

Ranking of the factors that make a derivative instrument preferred					
	Rank 1	Rank 2	Rank 3	Rank 4	Total
transferability of risk	25	48	19	8	100
High return	47	30	14	9	100
Low investment	40	27	20	13	100
High liquidity	27	38	22	13	100

(Source: Primary Data)

Weighted average score

Weighted average scores		
Reasons	**Weight**	**Rank**
High Return	31.5	I
Low Investment	29.4	II
Transferability of Risk	29	III
High Liquidity	27.9	IV

Interpretation

The favoured ranking of derivative instruments according to the criteria that went into choosing them is shown in the table. Respondents ranked variables such as high return, low investment, high transferability of risk, and high liquidity on a scale from 1 to 4. The weighted average scores show the overall preference, with the most desired factor being high return, which receives the highest score (31.5). pretty second place with a score of 29.4, minimal investment comes pretty close behind. With a score of 29, transferability of risk is ranked third, while high liquidity is ranked lowest, at 27.9. This research shows which criteria were most important to the respondents when choosing their derivative instruments.

Table 3

The derivatives market's risk factor ranking

The derivatives market's risk factor ranking					
	Rank 1	Rank 2	Rank 3	Rank 4	Total
price volatility	24	56	14	6	100
finite contract period	29	48	21	2	100
margin pressure	60	18	16	6	100
time value	53	25	18	4	100

(Source: Primary Data)

Weighted average score

weighted average scores		
Risk	**Weight**	**Rank**
margin pressure	3.32	I
time value	3.27	II
finite contract period	3.04	III
price volatility	2.98	IV

Interpretation

Based on the risk aspects of the derivatives market, the table presents the preferable derivative instrument rating. Factors including price volatility, finite contract duration, margin pressure, and time value were ranked (1–4) by respondents. The overall preference is shown by the weighted average scores, where margin pressure is the most favored element with the highest score (3.32). With a score of 3.27, time value comes in second place and is highly preferred. Price volatility receives the lowest rating (2.98), while finite contract period comes in third place with a score of 3.04. This research shows how the questioned respondents prioritized risk considerations while choosing their derivative instruments.

Table 4

Ranking of derivative instruments based on their overall performance

Ranking on overall performance of Derivative instruments					
	high	strong	moderate	lowest	Total
forwards	21	42	29	8	100
futures	48	39	9	4	100
options	32	30	36	2	100
swaps	4	28	53	15	100

(Source: Primary Data)

weighted average scores		
Instrument	**Weight**	**Rank**
futures	33.1	I
options	29.2	II
forwards	27.6	III
swaps	22.1	IV

Interpretation

The ranking of derivative instruments according to respondents' perceptions of their overall performance is shown in the table. The participants ranked forwards, futures, options, and swaps in the following order: high, strong, moderate, and lowest. The weighted average ratings show the overall preferences, and the most preferred derivative instrument is futures, which have the highest score (33.1). Options comes in second place with a score of 29.2, not far behind. With a score of 27.6, forwards are ranked third, and swaps are ranked least favoured with a score of 22.1. This research clarifies how respondents to the survey regarded various derivative instruments in terms of performance hierarchy.

Hypothesis Testing

H0: The proportion of their investment and gender do not significantly differ from one another.

H1: The proportion of their investment and gender do significantly differ from one another.

H0: The relationship between the proportion of investments and income level is not statistically significant.

H1: The relationship between the proportion of investments and income level is statistically significant.

Table 5

Chi-square test

	Gender		
	Male	Female	Total
20-30	28	14	42
30-40	39	8	47
40-50	6	1	7
Above 50	2	2	4
Total	75	25	100

Observed Frequency (O)	**Expected Frequency (E)**	**(O-E)2**	**(O – E)2/E**
28	31.5	12.25	0.38
14	10.5	12.25	1.16
39	35.25	14.06	0.39
8	11.75	14.06	1.19
6	5.25	0.56	0.1
1	1.75	0.56	0.32

2	3	1	0.33
2	1	1	1
			4.87

χ calculated = 4.87

Degrees of freedom (*df*) is calculated as (Number of Rows−1) × (Number of Columns).

df= (4−1) × (2−1)=3

At a significance level (let's say 0.05) with 3 degrees of freedom, the critical chi-square value is 7.815.

The calculated value (4.87) is less than table value (7.815). So we accept the null hypothesis. The analysis reveals that there is no significant difference between the gender and percentage of investment.

Table 6

Chi-square test

		annual income			
Investment	**below 100000**	**100000- 200000**	**200000- 300000**	**Above 300000**	**total**
Less than 5%	4	18	34	5	61
5%- 10%	3	2	9	11	25
10%- 15%	0	5	0	7	12
More than 15%	0	0	0	2	2
Total	7	25	43	25	100

Observed Frequency	**Expected Frequency**	**(O – E)2/E**
4	4.27	2.69
18	15.25	9.27
34	26.23	26.4
5	15.25	31.2
3	1.75	0.77
2	6.25	1.11
9	10.75	23.8
11	6.25	15.3
5	3	1.21
7	3	1.17
0	0.86	6.87
2	0.5	0.28

At a significance level (let's say 0.05) with 9 degrees of freedom, the critical chi-square value is 16.92.

χ2 calculated =120.15

Since, the calculated value is greater than the critical value. So we reject the null hypothesis.

There is a significant association between investment and annual income categories.

Therefore, the chi-square value for the given data is 120.15, and at a 0.05 significance level with 9 degrees of freedom, we reject the null hypothesis of independence.

Conclusion

To sum up, the examination of the given data produces insightful information about a number of topics. The first table displays the respondents' age distribution and shows that people in their 20s and 30s make up the majority of the sample. The respondents' preferences for derivative instruments are shown in the second table, whereby high return is shown as the most desired feature. Margin pressure is emphasized as a key risk element in the derivatives market in the third table. The rating of derivative instruments' overall performance is shown in the fourth table, where futures are the most favoured option. Chi-square tests for hypothesis testing indicate that there is a strong correlation between investment and yearly income categories but not between gender and investment proportions. These results offer a thorough comprehension of respondent preferences, perceptions of performance, and risk concerns in relation to derivative instruments.

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