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A STUDY ON THE OPTION TRADING STRATEGIES OF THE INVESTORS

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ABSTRACT

Options are the financial instruments which are gaining momentum in the recent past. But trading in options is very difficult if the right option at the right strike price and the time to expiry is not selected. Thus to help the investors this study has been conducted to study the factors affecting options and the opinions of investors regarding the trade in derivatives. The study was conducted by collecting the responses from the investors dealing in derivatives through a structured questionnaire. The analysis was done by factor analysis using SPSS.

KEYWORDS: *Options, Trading strategies, Derivatives*

INTRODUCTION

The advent of globalization has drastically increased the volume of international trade among many countries. The increased volume of international trade has opened doors for many opportunities for the industry. This in return increased the role of financial systems of all countries. The financial markets were busy developing new financial instruments and standardizing their usage. The regulations were reformulated by the government and new regulatory bodies were established by many countries. For instance in India, the regulatory body for financial markets, the Securities and Exchange Board of India was established in 1992 and the National Stock Exchange was also established in the same year. National Stock Exchange was first to introduce online trading in India which have completely transformed the way of trading in India.

One of the financial instruments which gained its momentum after globalization is Derivatives. A derivative is a contract which derives its value from the underlying asset. The value of the derivatives is thus dependent on the value of the underlying asset. The underlying asset may be gold, currency, stocks, indices or a commodity like cotton, pork, iron, wheat, etc,. Derivatives are mainly classified into four instruments:

- **Forwards:** A forward is a contract between two parties to buy or sell an asset at a pre-determined price on a future date. Thus a forward is a customized contract which involves the delivery of an asset at the time of expiry of the contract.

- **Futures:** A future is a standardized Forward. That is a contract between two parties to buy or sell an asset at a predetermined price on a future date is under the purview of a stock exchange. The stock exchange will regulate trading in futures. Thus all the investors should follow the rules and regulations of the stock exchange. The futures

are mainly traded for benefitting from the price changes of the underlying asset which will be credited to the individual account of the investor through marking to the market system. Thus in futures, the delivery of asset is not observed as in forwards.

- **Swaps:** Swaps are financial instruments which help the investors to have an exchange of cash flows of one financial instrument with the other party's financial instrument.

- **Options:** Options are the agreements which give right to the investor rather than an obligation to exercise a contract. That is in futures and forwards the two parties are having obligation to execute the contract even though they end up in losses due to price fluctuations in the open market. But this disadvantage is suppressed in options where the investor is supposed to pay option premium to enter into the contract and exit the contract if he is not interested to execute with the minimum loss of option premium. Thus the investors need to be very careful in investing in options and the time to come out of the contract. Thus the option premium is being affected by factors like:

- Strike Price,

- Underlying Price,

- Time Until Expiration,

- Implied Volatility,

- Dividends,

- Interest rate

In this regard, there are different trading strategies being developed for the option holders to get benefitted from these contracts. The trading strategies are created depending on the factor affecting and the positions they will hold in an option contract. The trading strategies are as follows:
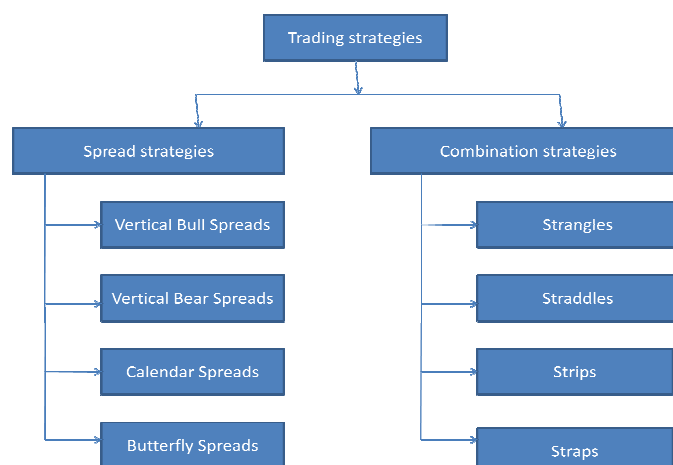

Figure 1

REVIEW OF LITERATURE

Pasha (2003), observed the changes in the financial markets of India in the last two decades. New financial instruments have been introduced including the Derivatives due to the recommendation of expert committees. The Indian

capital market is large enough but the size of retail investors in the derivatives market is still very low due to the myths they have regarding derivatives. Lack of awareness regarding derivatives is not allowing people to invest in derivatives. Thus Pasha has conducted a study in Andhra Pradesh, India to know the perceptions of retail investors. He identified 10 myths and studied about them. The investors actually opined that the derivatives are only for risk handling. They are highly regulated. Derivatives are to be used by high-risk taking organizations only. Thus the Indian financial markets need to create awareness to investors and remove their myths.

Jeannette Switzeris & Jalilvand (2000), studied the differences in the use of derivatives between U. S, European and Canadian risk managers. The study was done by collecting data from 154 usable responses from Canadian no financial corporations. 75% of Canadian respondents were using derivatives while U. S. firms responded as 35% to 85%. The study found that the derivative products are more widespread in Canada rather than in the US and Europe. But in all the areas the risk management programs are in introductory stage only. Most firms have written the policies but do not check their result. The policies are never integrated with a firm's strategic plan. Canadian risk managers are less inclined than their counterparts in taking positions based on their views.

Alex Frino (2009), studied on various trading strategies of derivatives. The study is to examine and collect data on a particular derivative trading strategy taken by investment managers. They examined the extent to which the fund managers use index futures to manage fund flows and their impact on their alpha and market timing measures of performance. The study finds that the funds that don't use derivatives give lower returns and give negative market timing skills when they receive funds. But the performance of funds using derivatives is not dependent on investor's liquidity demands. The unconditional performance of the average user fund is equivalent to the performance of average non-user fund conditional on zero fund flow.

Mistry (2006), conducted a study on Derivative Trading Strategies in Indian Stock Markets. Mistry studied the opinion of investors on the derivative trading strategies and identified the factors affecting the investors in selecting the strategies. Mistry studied on five strategies in four market conditions.

Dr. Rao (2013), examined the rapid growth of derivatives in terms of the number of stock options available, the participation of investors in trading and trading volume and especially retail investors are showing a lot of interest to trade in the derivatives market. But the lack of knowledge in derivatives led the investors to lose a lot of money. Thus the success of investment depends on the selection of the best investment strategies and identifying the impact of various factors affecting options. In this view, this study has been conducted to develop investment strategies for retail investors by using technical analysis on the auto industry.

(Wang, 2012) Seyhun and Wang studied the validity of the Option pricing models based on the assumptions they have prescribed like Black Scholes model assume that the markets are perfect markets etc. But in the real markets, it is not applicable. This paper evaluates the standard option pricing models about the relation of past stock returns and stock option prices. The autocorrelation structure for individual stock returns is the main factor for the valuation effect. Their findings imply that their evidence suggests them that the pricing pressure of previous stock returns is strong enough to result in systematic boundary condition violations, which are not related to any option pricing model.

(Khediri, 2010) Khediri conducted the study to assess the valuation impact of the use of derivatives in the French market by collecting data from 250 non-financial firms during 2000 – 2002. He used a linear regression framework and panel data techniques. They observed that the organization's decision to use derivatives does not effect the firm value. And

the usage of derivatives is resulting in lower firm value. Thus the managers should explain to the investors that firms use derivatives for hedging purposes and hence how that financial policy increases the shareholder's value.

OBJECTIVES OF THE STUDY

To identify the factors affecting the option strategies.

RESEARCH METHODOLOGY

Descriptive study is conducted to study trading strategies of investors and the important factors considered by analysts in using these strategies.

METHOD OF DATA COLLECTION

Primary Data: Data is collected from the investors who trade in Derivatives with the support of a structured questionnaire.

Secondary Data: Data collected from various sources of print (newspapers, magazines, journals, research reports, and books) and electronic media (websites, e-journals and databases). For the Theoretical study of the performance of the option spread strategies, the closing index values of Nifty for the last Thursday are selected for the period 1 September 2013-September, 2018.

Research Instrument: Structured questionnaire.

Sampling Procedure: The samples are drawn using a non-probability method of sampling. Further, the respondents need to be a user of the options in the derivative market and for this, it can be considered as the judgmental sampling method. Also, snowball sampling was used to select the respondents through referrals.

Sample Size: 100 investors

Data Analysis

Frequency analysis was being conducted for all questions in the questionnaire using SPSS. Factor analysis was used to find the relation among the variables affecting options and to group the significant variables after reducing them.
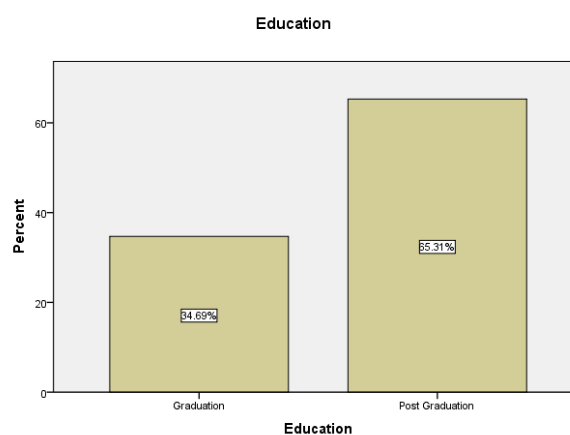

Figure 2: From the Data Collected 65.31% of Respondents are Postgraduates and 34.69% are Graduates.

It is observed that 75.51% of the respondents are men and only 24.49% are women. It indicates that females are not dealing with derivatives at a larger scale.

Figure 3: Experience Trading

Factor Analysis

Table 1: Communalities

	Initial	Extraction
SMEAN(COS_trend)	1.000	.471
SMEAN(COS_Asset)	1.000	.509
SMEAN(COS_Risk)	1.000	.747
SMEAN(COS_StrikePrice)	1.000	.563
SMEAN(COS_Volatility)	1.000	.697
SMEAN(COS_Premium)	1.000	.537
SMEAN(COS_PCR)	1.000	.677
SMEAN(COS_Time)	1.000	.597
SMEAN(COS_ADR)	1.000	.303
SMEAN(COS_VI)	1.000	.431
SMEAN(COS_TradeSize)	1.000	.617
SMEAN(COS_Spread)	1.000	.548
SMEAN(COS_TradingVolume)	1.000	.648
SMEAN(COS_Greek)	1.000	.609
SMEAN(COS_OI)	1.000	.513
SMEAN(COS_SPG)	1.000	.663

Extraction Method: Principal Component Analysis.

Table 2: Component Matrixa

	Component				
	1	**2**	**3**	**4**	**5**
SMEAN(COS_trend)	.449	.088	-.282	-.127	-.407
SMEAN(COS_Asset)	.601	-.298	-.029	-.157	-.182
SMEAN(COS_Risk)	.462	-.592	.081	-.266	.324
SMEAN(COS_StrikePrice)	.339	.067	.558	-.077	-.355
SMEAN(COS_Volatility)	.442	-.118	-.031	.694	-.072
SMEAN(COS_Premium)	.535	-.268	-.389	-.046	.159
SMEAN(COS_PCR)	.567	.286	-.506	.050	-.123
SMEAN(COS_Time)	.515	.457	.009	.302	.180
SMEAN(COS_ADR)	.446	-.052	.203	.121	.213
SMEAN(COS_VI)	.591	-.031	-.124	.255	-.008
SMEAN(COS_TradeSize)	.440	.381	.011	-.033	.527
SMEAN(COS_Spread)	.553	.157	.260	-.371	.110
SMEAN(COS_TradingVolume)	.677	-.138	-.208	-.231	-.272
SMEAN(COS_Greek)	.595	.357	.076	-.332	.103
SMEAN(COS_OI)	.435	.212	.433	.110	-.281
SMEAN(COS_SPG)	.551	-.429	.296	.284	.088

Extraction Method: Principal Component Analysis
a. 5 components extracted.

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.748**
Bartlett's Test of Sphericity	Approx. Chi-Square	355.205
	df	120
	Sig.	.000

The value for KMO is 0.748 which is more than 0.5 which means that the factor analysis can be conducted for the above data.

Table 4: Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.312	26.953	26.953	4.312	26.953	26.953	2.188	13.673	13.673
2	1.378	8.613	35.566	1.378	8.613	35.566	1.903	11.892	25.565
3	1.256	7.847	43.413	1.256	7.847	43.413	1.898	11.862	37.427
4	1.169	7.306	50.719	1.169	7.306	50.719	1.637	10.231	47.658
5	1.014	6.337	57.056	1.014	6.337	57.056	1.504	9.398	57.056
6	.996	6.226	63.281						
7	.889	5.556	68.838						
8	.856	5.351	74.189						
9	.776	4.850	79.038						
10	.709	4.432	83.470						
11	.594	3.714	87.184						
12	.535	3.344	90.528						
13	.479	2.992	93.520						
14	.396	2.474	95.994						
15	.345	2.154	98.148						
16	.296	1.852	100.000						

Extraction Method: Principal Component Analysis
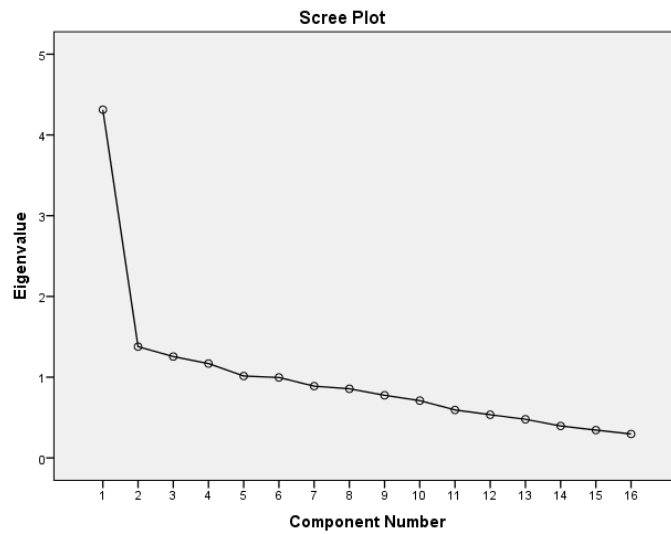
Figure 4: Component Number

Table 5: Component Matrix[a]

	Component				
	1	**2**	**3**	**4**	**5**
SMEAN(COS_trend)	.449	.088	-.282	-.127	-.407
SMEAN(COS_Asset)	.601	-.298	-.029	-.157	-.182
SMEAN(COS_Risk)	.462	-.592	.081	-.266	.324
SMEAN(COS_StrikePrice)	.339	.067	.558	-.077	-.355
SMEAN(COS_Volatility)	.442	-.118	-.031	.694	-.072
SMEAN(COS_Premium)	.535	-.268	-.389	-.046	.159
SMEAN(COS_PCR)	.567	.286	-.506	.050	-.123
SMEAN(COS_Time)	.515	.457	.009	.302	.180
SMEAN(COS_ADR)	.446	-.052	.203	.121	.213
SMEAN(COS_VI)	.591	-.031	-.124	.255	-.008
SMEAN(COS_TradeSize)	.440	.381	.011	-.033	.527
SMEAN(COS_Spread)	.553	.157	.260	-.371	.110
SMEAN(COS_TradingVolume)	.677	-.138	-.208	-.231	-.272
SMEAN(COS_Greek)	.595	.357	.076	-.332	.103
SMEAN(COS_OI)	.435	.212	.433	.110	-.281
SMEAN(COS_SPG)	.551	-.429	.296	.284	.088

Extraction Method: Principal Component Analysis

a. 5 components extracted.

Rotated Component Matrixa

Table 6: Component Matrix[a]

	Component				
	1	2	3	4	5
SMEAN(COS_trend)	.667	.020	-.016	.044	.151
SMEAN(COS_Asset)	.470	.010	.472	.120	.226
SMEAN(COS_Risk)	.073	.092	.856	.006	-.022
SMEAN(COS_StrikePrice)	.063	.029	.089	.038	.741
SMEAN(COS_Volatility)	.138	.000	.059	.818	.070
SMEAN(COS_Premium)	.450	.169	.448	.203	-.253
SMEAN(COS_PCR)	.696	.335	-.102	.237	-.115
SMEAN(COS_Time)	.158	.598	-.140	.424	.124
SMEAN(COS_ADR)	-.006	.306	.309	.288	.174
SMEAN(COS_VI)	.354	.217	.192	.466	.066
SMEAN(COS_TradeSize)	.011	.771	.099	.103	-.053
SMEAN(COS_Spread)	.202	.491	.312	-.148	.382
SMEAN(COS_TradingVolume)	.694	.089	.346	.064	.187
SMEAN(COS_Greek)	.345	.615	.137	-.116	.283
SMEAN(COS_OI)	.121	.178	-.026	.233	.642
SMEAN(COS_SPG)	-.002	.031	.567	.518	.269

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Table 7: Component Transformation Matrix

Component Transformation Matrix					
Component	1	2	3	4	5
1	.572	.476	.446	.385	.317
2	.068	.617	-.759	-.115	.157
3	-.597	.059	.159	-.016	.784
4	-.234	-.131	-.286	.916	-.091
5	-.508	.610	.344	.015	-.502

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Thus Five Components are being Derived from the Factor Analysis they are as Follows

- Market Trend: The market trend indicates the overall movement of the market conditions, the option premium paid by other investors, the trading volume of options and put-call ratio of investors.

- Trading factors: These include the factors like time to expiry, type of spread and the Greek letters.

- Investor View: These factors are the view of investors that is the underlying asset they want to trade, their risk-taking capacity and the strike price gap.

- Volatility: Volatility indicates the volatility in the price of the underlying asset.

- Option Price: This includes the strike price of the option and open interest.

Findings of the Study

- Most of the respondents are post-graduates which mean that the investors will be able to gain knowledge through various sources to select the best strategy.

- Most of the investors are males which show that females are not having more interest in options.

- The option trading strategies are being mainly affected by the market trend.

- The investors are dealing with derivatives for hedging purpose rather than speculation.

CONCLUSIONS

The option trading strategies are getting popular in the present days to help the investor in getting profits from the stock markets without much risk. The strategy best selected is earning huge amount of profits to the investors and vice versa. Thus the investors are hereby suggested to gain knowledge about the strategies and get benefitted from them.

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