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A Study on Performance of Index Options

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ABSTRACT: The advent of derivative products, including forwards, futures, and options, has transformed financial markets by offering mechanisms for risk management and price stability. This paper explores the emergence and significance of derivatives, focusing on their role in mitigating asset price volatility and enhancing investor profitability. Despite global advancements, Indian stock markets have lagged in adopting these instruments. Recent improvements in market infrastructure and regulatory frameworks, such as enhanced capitalization requirements and the establishment of clearing corporations, have created a conducive environment for the growth of derivatives trading in India. This study specifically examines the benefits of index options, with a particular emphasis on the practices of Motilal Oswal, a leading Indian financial services firm. Through an analysis of index options' risk management capabilities, potential for return enhancement, and investor education, the research aims to provide a comprehensive understanding of how these tools can be effectively utilized in the Indian context. The findings underscore the evolving landscape of financial derivatives in India and highlight the critical need for informed investment strategies in a dynamic market environment.

KEYWORDS: Commodity exchanges, Currency futures, Evaluation, Global market Stock, International markets, Performance, Trading volumes.

I. INTRODUCTION

The emergence of the market for derivative products, most notably forwards, futures and options, can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of fluctuations in asset prices. By their very nature, the financial markets are marked by a very high degree of volatility. Through the use of derivative products, it is possible to partially or fully transfer price risks by locking-in asset Prices. As instruments of risk management, these generally do not influence the Fluctuations in the underlying asset prices. However, by locking-in asset prices, Derivative products minimize the impact of fluctuations in asset prices on the Profitability and cash flow situation of risk-averse investors. While forward contracts and exchange traded in futures has grown by leaps and bound, Indian stock markets have been largely slow to these global changes. However, in the last few years, these have been substantial improvement in the functioning of the securities market. Requirements of the adequate capitalization for market intermediaries, margining and establishment of clearing corporations have reduced market and credit risks. However, there were inadequate advanced risk management tools. And after the ICE (Information, Communication, Entertainment) meltdown the market regulator felt that in order to deepen and strength the cash market trading of derivatives like futures and options was imperative.

DERIVATIVES

Derivatives have become very important in the field of finance. They are very important financial instruments for risk management as they allow risks to be separated and traded. Derivatives are used to shift risk and act as a form of insurance. This shift of risk means that each party involved in the contract should be able to identify all the risks involved before the contract is agreed. It is also important to remember that derivatives are derived from an underlying asset. This means that risks in trading derivatives may change depending on what happens to the underlying asset.

II. NEED FOR THE STUDY

Need for a Study on the Benefits of Index Options: Motilal Oswal Perspective. The necessity for conducting a study on the benefits of index options, particularly through the eyes of Motilal Oswal, a leading player in India's financial services sector, cannot be overstated. Such a study is pivotal for several compelling reasons. Firstly, it addresses the critical need for educational enrichment in financial literacy, providing investors and market participants with a detailed

understanding of how to effectively utilize index options in their investment strategies. This enhanced knowledge empowers market entities to make informed decisions, crucial for navigating the complexities of the financial markets. Secondly, it serves as a strategic tool for risk management, enabling investors to hedge against potential market downturns and volatility. Furthermore, the study offers invaluable insights into the regulatory landscape governing index options, highlighting compliance guidelines and ethical trading practices. This is particularly significant for financial service providers like Motilal Oswal, who can leverage these insights to innovate and develop tailored financial products that cater to the evolving needs of their clients. Additionally, by analyzing the role of index options in global markets, the study fosters a broader economic understanding and highlights trends and patterns that can guide strategic investment decisions. Overall, a comprehensive study on the benefits of index options, as seen through Motilal Oswal's perspective, is essential for nurturing an informed, strategic, and ethically sound approach to financial market participation.

III. SCOPE OF THE STUDY

The Study is limited to “Derivatives” with special reference to futures and Option in the Indian context and the **SBI Card** have been taken as a representative sample for the study. The study can't be said as totally perfect. Any alteration may come.

The scope of this study is to comprehensively explore the benefits and strategic applications of index options in the Indian financial market, with a specific focus on the insights and practices of Motilal Oswal, a leading financial services company in India. The project aims to provide a detailed analysis of how index options, particularly those based on the Nifty and Bank Nifty indices, can be leveraged by investors to manage risk, generate income, and enhance portfolio returns. This study will encompass several key areas like Market overview, Strategies and Applications, Motilal Oswal's Perspective.

IV. OBJECTIVE OF THE STUDY

1. To Evaluate the risk management capabilities of index options offered by SBI Card Analyze the potential for index options to enhance returns for investors.
2. To Explore the educational resources and support provided by Motilal Oswal for investors using index options.

V. REVIEW OF LITERATURE

Swagata Bhanja, Kapil Arora 2023 Innovative merchandise involves both ETFs and Index Funds. ETFs are bundles of securities traded on the stock market. While Index Funds are shared funds that trace the results of wide-ranging market indices but can likewise venture into stocks, the blend produces a finance product that amalgamates both a stock and a shared fund. Only at the day's end can the total value of their entire assets be procured or redeemed. • The proposed evaluation strives to evaluate the show of index funds and exchange traded funds (ETFs) that pursue the same.

Pinkesh Dharma Dabholkar, 2020 Indexing, as a passive investment strategy, has gained immense momentum in both overseas and Indian markets. At the global level, Index funds have done exceedingly well by offering whole new opportunities to retail and institutional investors. The first index fund was introduced in 1972, in the US, since then it has strengthened to a sizable portion throughout the world market. Although the growth of index funds was slow initially, the subsequent growth has been phenomenal. End of 2019, the assets managed by index funds at the global level have crossed through a \$ 10tn level (The Morningstar). Passive investing looks more of a win-win for all stakeholders. Compared to an index fund, no economic benefit accrues to the average investor using actively managed equity mutual funds (Frino & Gallagher, 2001). Recent studies in the area have proved that except for a few, mutual funds have failed to outperform the market index (Carhart 1997; Elton et al. 1996; Goel, Sharma, and Mani 2012; Muruga Nandan 2011). In the presence of passive investing, fund houses can bring down the expenses incurred in research and fund managers' salaries. It also becomes easy for market regulators to keep track of fund portfolios.

Dinesh C Pandey, NS Bohra, Shobhit Garg 2020 A mutual fund is a financial product in which pool of money incorporated by retail and institutional investors, managed by professional fund managers. It offers expertise of professional fund manager to small or individual investor's equity portfolio, debt bonds, and other asset class. This paper study and analyze comparative performance of index Fund and Large cap fund. This study cover span of last decade, the

period of 2010–2019. The Result analysis is done with the help of three parameters such as active returns, tracking error and Jensen's alpha. Data gathered from the secondary sources for this research.

Rahul Bhatia, Bhanu Sireesha 2020 For long, it has been an on-going discussion among investors, statisticians, fund managers, traders, etc. as to whether index funds are outperforming mutual funds or not. Index funds are passively managed and mutual funds are actively managed. The statistics shows that India behaves differently compared to US in this matter.

Priya Mahajan, Sanjeev Saxena 2014 In this paper we compared the index funds and ETFs performance during the time period from 1st April 2008 to 31st March 2013 using the daily NAV's of 7 ETFs and 14 Index funds that track the same index. Various statistical techniques i.e. risk, return, beta, Sharpe ratio, Treynor ratio, Jensen Alpha, tracking error have been used with respect to these two passive investment vehicles tracking the same benchmark Index. Only those ETF and Index funds schemes have been taken for the study which are benchmarked against S&P CNX Nifty. The study is an attempt to find out whether these two passive investment schemes are being successful in beating their benchmark index and further which of the schemes have performed better than the other in the given study period.

Prashanta Athma, B Mamatha 2013 Mutual Fund is a trust that pools money from a group of investors (sharing common financial goals) and invest the money thus collected into asset classes that match the stated investment objectives of the scheme. Index Funds (IFs) focuses on the performance of specific stock indices, as opposed to other types of ETFs that are based on oil or other commodities. Index funds spread the risk factor over the entire index, As such; large institutional investors like pensions funds as well as older individual investors who are looking to reduce the risk in their portfolios often find Index Funds a preferable alternative to buying stock of individual companies.

Kiran Hiremath, R Shalini, Somi Ghosh 2010 The recent financial scandals have made investors wary investing in stock markets. Since then many retail investors are adopting a very cautious approach. Many have become conservative and are using mutual fund route to invest in the market. The Mutual Fund inflows however are beginning to pick up off late with the good performance of Equity Funds. The Balanced Funds are once again increasing their equity proportions anticipating a bull

VI. RESEARCH METHODOLOGY

To achieve the objectives of studying the stock market data has been collected. Research methodology carried for this study can be two types

PRIMARY:

The data, which is being collected for the first time and it is the original data. In the project the primary data has been provided by SBI staff and authorities.

SECONDARY:

The secondary information is mostly taken from websites, books, journals, etc.... from SBI and Motilal Oswal.

DESCRIPTION OF THE METHOD

The following are the steps involved in the study.

Selection of the scrip:-

The scrip selection is done on a random and the scrip selected SBI Card the lot is 1000 & 1000 Profitability position of the futures buyers and sellers and also the option holder and option writers is studied.

Data Collection:-

The data of the SBI has been collected from the "The Economic Times" and the internet. The data consist of the April Contract and period of data collection is from 01st Jan.2024 to 30th Mar. 2024.

Analysis:-

The analysis consist of the tabulation of the data assessing the profitability positions of the futures buyers and sellers and also option holder and the option writer, representing the data with graphs and making the interpretation using data.

VII. LIMITATIONS OF THE STUDY

The study does not take any Nifty Index Futures and Options and International Markets into consideration. This is a study conducted within a period of 45 days. During this limited period of study, the study may not be a detailed, Full – fledged and utilitarian one in all aspects.

VIII. DATA ANALYSIS AND INTERPRETATION

Symbol	Date	Expiry	Option type	Strike Price	Settle Price	Underlying Value	pay-off	I.V	P/L
SBICARD	1-Jan-24	28-Mar-24	CE	640	138.05	766.35	-11.7	785.5088	7.45875
SBICARD	2-Jan-24	28-Mar-24	CE	640	144.45	773.15	-11.3	792.4788	8.02875
SBICARD	3-Jan-24	28-Mar-24	CE	640	141.1	769.85	-11.25	789.0963	7.99625
SBICARD	4-Jan-24	28-Mar-24	CE	640	141.15	770.1	-11.05	789.3525	8.2025
SBICARD	5-Jan-24	28-Mar-24	CE	640	142.45	771.6	-10.85	790.89	8.44
SBICARD	8-Jan-24	28-Mar-24	CE	640	138.15	767.65	-10.5	786.8413	8.69125
SBICARD	9-Jan-24	28-Mar-24	CE	640	132.6	762.05	-10.55	781.1013	8.50125
SBICARD	10-Jan-24	28-Mar-24	CE	640	135.7	765.45	-10.25	784.5863	8.88625
SBICARD	11-Jan-24	28-Mar-24	CE	640	132.55	762.35	-10.2	781.4088	8.85875
SBICARD	12-Jan-24	28-Mar-24	CE	640	136.6	766.7	-9.9	785.8675	9.2675
SBICARD	15-Jan-24	28-Mar-24	CE	640	137.45	768.05	-9.4	787.2513	9.80125
SBICARD	16-Jan-24	28-Mar-24	CE	640	136.55	767.3	-9.25	786.4825	9.9325

Interpretation: The provided data table details the performance of SBICARD call options with a strike price of 640 and an expiration date of March 28, 2024, over the period from January 1, 2024, to January 16, 2024. Each entry includes the settle price, underlying value, pay-off, implied volatility (I.V.), and profit/loss (P/L) for the option on a given date. Over this period, the settle prices ranged from 132.6 to 144.45, reflecting fluctuations in the underlying value of SBICARD, which varied between 762.05 and 773.15. The pay-off values consistently indicate a negative performance, suggesting the options were out of the money during this time frame. Implied volatility (I.V.) and profit/loss (P/L) values also varied, with I.V. reflecting market expectations of future volatility and P/L showing the daily gains or losses from the options. Overall, the data highlights the dynamic nature of options trading, influenced by the underlying security's performance and market volatility expectations.

SBICA RD	17- Jan-24	28- Mar- 24	CE	640	121.8	752.2	-9.6	771.00 5	9.205
SBICA RD	18- Jan-24	28- Mar- 24	CE	640	119.7 5	750.25	-9.5	769.00 63	9.2562 5
SBICA RD	19- Jan-24	28- Mar- 24	CE	640	118.6	749.2	-9.4	767.93	9.33
SBICA RD	20- Jan-24	28- Mar- 24	CE	640	114.1 5	744.75	-9.4	763.36 88	9.2187 5
SBICA RD	23- Jan-24	28- Mar- 24	CE	640	99.6	729.9	-9.7	748.14 75	8.5475
SBICA RD	24- Jan-24	28- Mar- 24	CE	640	115.6	746.95	-8.65	765.62 38	10.023 75

SBICA RD	25- Jan-24	28- Mar- 24	CE	640	128	759.85	-8.15	778.84 63	10.846 25
SBICA RD	29- Jan-24	28- Mar- 24	CE	640	85.7	715.55	- 10.15	733.43 88	7.7387 5
SBICA RD	30- Jan-24	28- Mar- 24	CE	640	82.75	712.55	-10.2	730.36 38	7.6137 5
SBICA RD	31- Jan-24	28- Mar- 24	CE	640	85.05	715.35	-9.7	733.23 38	8.1837 5
SBICA RD	1-Feb- 24	28- Mar- 24	CE	640	81.75	711.95	-9.8	729.74 88	7.9987 5
SBICA RD	2-Feb- 24	28- Mar- 24	CE	640	80.9	711.25	-9.65	729.03 13	8.1312 5
SBICA RD	5-Feb- 24	28- Mar- 24	CE	640	73	703.15	-9.85	720.72 88	7.7287 5
SBICA RD	6-Feb- 24	28- Mar- 24	CE	640	77.65	708.6	-9.05	726.31 5	8.665
SBICA RD	7-Feb- 24	28- Mar- 24	CE	640	92.7	725.15	-7.55	743.27 88	10.578 75
SBICA RD	8-Feb- 24	28- Mar- 24	CE	640	89.05	721.45	-7.6	739.48 63	10.436 25
SBICA RD	9-Feb- 24	28- Mar- 24	CE	640	86	718.4	-7.6	736.36	10.36
SBICA RD	12- Feb-24	28- Mar- 24	CE	640	80.25	712.85	-7.4	730.67 13	10.421 25
SBICA RD	13- Feb-24	28- Mar- 24	CE	640	87.65	721	-6.65	739.02 5	11.375
SBICA RD	14- Feb-24	28- Mar- 24	CE	640	85.7	719.15	-6.55	737.12 88	11.428 75
SBICA RD	15- Feb-24	28- Mar- 24	CE	640	80.3	713.55	-6.75	731.38 88	11.088 75
SBICA RD	16- Feb-24	28- Mar- 24	CE	640	84.25	718.05	-6.2	736.00 13	11.751 25

SBICA RD	19- Feb-24	28- Mar- 24	CE	640	93.65	728.4	-5.25	746.61	12.96
SBICA RD	20- Feb-24	28- Mar- 24	CE	640	104.5 5	739.75	-4.8	758.24 38	13.693 75
SBICA RD	21- Feb-24	28- Mar- 24	CE	640	103.9	739.25	-4.65	757.73 13	13.831 25

SBICA RD	22-Feb-24	28-Mar-24	CE	640	105.2	740.75	-4.45	759.2688	14.06875
SBICA RD	23-Feb-24	28-Mar-24	CE	640	103.4	739.05	-4.35	757.5263	14.12625
SBICA RD	26-Feb-24	28-Mar-24	CE	640	93.95	729.45	-4.5	747.6863	13.73625
SBICA RD	27-Feb-24	28-Mar-24	CE	640	95.65	729.45	-6.2	747.6863	12.03625
SBICA RD	28-Feb-24	28-Mar-24	CE	640	93.2	729.45	-3.75	747.6863	14.48625
SBICA RD	29-Feb-24	28-Mar-24	CE	640	83.5	719.65	-3.85	737.6413	14.14125
SBICA RD	1-Mar-24	28-Mar-24	CE	640	81.55	717.9	-3.65	735.8475	14.2975
SBICA RD	2-Mar-24	28-Mar-24	CE	640	84.7	721.3	-3.4	739.3325	14.6325
SBICA RD	4-Mar-24	28-Mar-24	CE	640	80.1	716.9	-3.2	734.8225	14.7225
SBICA RD	5-Mar-24	28-Mar-24	CE	640	79.1	716.05	-3.05	733.9513	14.85125
SBICA RD	6-Mar-24	28-Mar-24	CE	640	65.5	702.2	-3.3	719.755	14.255
SBICA RD	7-Mar-24	28-Mar-24	CE	640	70.4	707.5	-2.9	725.1875	14.7875
SBICA RD	11-Mar-24	28-Mar-24	CE	640	67.1	704.8	-2.3	722.42	15.32

SBICA RD	12-Mar-24	28-Mar-24	CE	640	62.75	700.55	-2.2	718.0638	15.31375
SBICA RD	13-Mar-24	28-Mar-24	CE	640	47.95	685.3	-2.65	702.4325	14.4825
SBICA RD	14-Mar-24	28-Mar-24	CE	640	64.2	702.35	-1.85	719.9088	15.70875
SBICA RD	15-Mar-24	28-Mar-24	CE	640	61.05	699.3	-1.75	716.7825	15.7325
SBICA RD	18-Mar-24	28-Mar-24	CE	640	62.75	701.5	-1.25	719.0375	16.2875
SBICA RD	19-Mar-24	28-Mar-24	CE	640	59.6	698.5	-1.1	715.9625	16.3625
SBICA RD	20-Mar-24	28-Mar-24	CE	640	53.3	692.3	-1	709.6075	16.3075
SBICA RD	21-Mar-24	28-Mar-24	CE	640	63.5	702.65	-0.85	720.2163	16.71625
SBICA RD	22-Mar-24	28-Mar-24	CE	640	64.8	704.1	-0.7	721.7025	16.9025
SBICA RD	26-Mar-24	28-Mar-24	CE	640	57.1	726	28.9	744.15	47.05
SBICA RD	27-Mar-24	28-Mar-24	CE	640	52.65	692.55	-0.1	709.8638	17.21375
SBICA RD	28-Mar-24	28-Mar-24	CE	640	52.65	689.5	28.10	758.10	16.375
									748.0162

Graph Showing Settle Price of Option Contract

Interpretation: The provided data table tracks the performance of SBICARD call options with a strike price of 640 and an expiration date of March 28, 2024, over a series of dates from January 17, 2024, to March 28, 2024. Each record captures the settle price, underlying value, pay-off, implied volatility (I.V.), and profit/loss (P/L) for the option on each date. Throughout this period, settle prices varied from 47.95 to 121.8, reflecting changes in the underlying value of SBICARD, which fluctuated between 685.3 and 752.2. Consistently negative pay-off values suggest that the options remained out of the money for most of the observed period. The implied volatility (I.V.) and profit/loss (P/L) values demonstrate market expectations of future volatility and the daily financial outcomes from the options. This data highlights the complexities of options trading, showing how the underlying asset's performance and market conditions impact option values.

IX. FINDINGS

The analysis of pay-off and profit and loss for Option contracts traded on the NSE from October 1, 2023, to December 28, 2023, reveals the following results:

SBICARD: This stock incurred a total loss of 748.0162 during the specified period.

Profit Per Employee - Uptrend Net profit per employee has been continuously increasing over the last 3 years with a growth of 23.45% last year.

The company's annual revenue growth of 25.6% outperformed its 3-year CAGR of 15.39%.

X. SUGGESTIONS

SBICARD: Over the three-month period from October 1, 2023, to December 28, 2023, SBICARD experienced a total loss of 748.0162. It is advisable for investors to review their positions and consider strategies to mitigate such losses in future trades.

The way things look, it appears to be a long pause. The interest rate will remain stable. So as a commercial lender, it will give us the opportunity to maintain NIMs and to improve. The fact remains that we must be mindful of the quality of assets.

The cost to income ratio continues to be their focus.

XI. CONCLUSION

In a bullish market, where prices are rising, call option writers are likely to incur greater losses. To navigate this scenario, investors are advised to buy call options to capitalize on the upward trend. Conversely, in such a market, put option holders may face losses, so it is recommended that they write put options instead. In a bearish market, characterized by falling prices, call option holders are prone to higher losses. Therefore, investors should consider writing call options to benefit from the downward movement.

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