

# A Study on Options and Swaps Transactions in India

## Abstract

Options and swaps help the participants called hedger who wants to avoid price risk. Risk management function of the options and swaps market helped them in reducing the risk of price fluctuations. In contrast, of the hedgers who want to reduce their price risk, speculators take positions in the market thereby increasing their own risk. Arbitrageurs are the person who enjoys the price differences and earn risk less profit. Volatility in prices, technological developments have contributed to the explosive growth in derivative market. In this study it has seen lots of people who consider derivatives in a negative light, it's because they typically use derivatives for two reasons either to increase leverage or to speculate on an asset's movement. But with proper planning and management, derivatives can be seen as a valuable tool for hedging or reducing existing exposure, as financial risks like Currency, Interest Rate, Default/Credit Risk can be minimized by the help of derivatives. For doing this, it is essential to identify business risks accurately and to use the right control techniques, because derivative products can be used as insurances policies by paying premium.

An Individual/Corporate may think that they can reduce their risk, but in case of event specific risk and unsystematic risk it's not the same thing. Event specific risks can only be managed by buying insurance & unsystematic risks can be managed by diversification.

**Keywords:** Options and Swaps, Risk Management.

## Introduction

### Options and Swaps

- Options are very time sensitive investments. An options contract is for a short period - generally a few months. The buyer of an option could lose his or her entire investment even with a correct prediction about the direction and magnitude of a particular price change if the price change does not occur in the relevant time period (i.e., before the option expires). Some investors are more comfortable with a longer term investment generating ongoing income - a "buy and hold" investment strategy. Options are less tangible than some other investments. Stocks offer certificates, as do bank Certificates of Deposit, but an option is a "book-entry" only investment without a paper certificate of ownership. It is easy to take a position using option markets without having to purchase the underlying asset. Indeed, it is not even possible to buy the underlying asset in some Case. Interest rates cricket matches and presidential election. They are well organized and designed to eliminate counter-party risk as well as the double-coincidence-of-wants" problems. Orderly, Efficient and Liquid Markets Standardized option contracts allow for orderly, efficient, and liquid option markets. Flexibility
- Options are an extremely versatile investment tool. Because of their unique risk/reward structure, options can be used in many combinations with other option contracts and/or other financial instruments to seek profits or protection. Leveraging equity option allows investors to fix the price for a specific period of time at which an investor can purchase or sell 100 shares of equity for a premium (price), which is only a percentage of what one would pay to own the equity outright. This allows option investors to leverage their investment power while increasing their potential reward from equity's price movements.
- Limited risk for buyer other investments may have no boundaries, of risk options trading offers a defined risk to buyers. An option buyer absolutely cannot lose more than the price of the option, the premium. Because the right to buy or sell the underlying security at a specific price expires on a given date, the option will expire worthless if the

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conditions for profitable exercise or sale of the option contract are not met by the expiration date. An uncovered option seller (sometimes referred to as the uncovered writer of an option), on the other hand, may face unlimited risk.

4. A swap involves a series of payments over its tenor, and can be considered a series of forward contracts. In contrast, forwards, futures and options only involve a single or two payment(s) (i.e. when the option is purchased and when it is exercised). In general, neither party pays any money to the other at the initiation of a swap. Thus, a swap has zero value at the start. As it is seen later, each party of a currency swap pays the notional principal to the other, but the amounts exchanged are equivalent.
5. Swaps are usually settled in cash. Each date on which the parties make payments is called a settlement date (or a payment date), and the time between two settlement dates is called the settlement period. Swap contract has a termination date, which is the date of the final payment.
6. Swaps are created and traded over-the-counter, and therefore can be customized to suit the specific needs of the counterparties. It has no guarantor such as the exchanges offer for futures and exchange traded options. In fact, all over-the-counter instruments (e.g. forward contracts) have default risk. In a currency swap, since periodical payments are made in different currencies, these payments are made in full without netting.
7. One party makes payment to the other, who in turn makes a payment to the first party. In interest rate swaps, the obligations of the parties are offset against each other, and the party who owes it makes net payment. An interest rate swap can be valued as a long position in one bond and a short position in another bond as a portfolio of forward contracts.
8. Swap contracts are custom-tailored arrangements between financial institutional. Each party of the swap contract trades one set of payments they receive for a set of payments the other party receives. Swaps can be incredibly complicated, but we will focus on a basic interest rate swap (known as the plain vanilla swap).

#### **Objectives of The Study**

1. Analyze the operational efficiency and evaluate the performance of the financial derivatives market in India.
2. To know and examine effective management tool of financial derivatives in Indian stock market.
3. Evaluate the growth of options and swaps transaction in the terms of risk management.

#### **Limitations of The Study**

1. Different brokers have different options and swaps contract strategies for hedging the risk.
2. Swaps transactions found few by the investor so the practical examples are few.
3. Only few brokers, investors, SEBI members, and C.A. responded the questionnaire.
4. In the research period the environment of election affect this research work because parties were

about to change and the stock market was high so transaction of option and swap were rare only.

#### **Review of Literature**

Narender.L.Ahuj-Paper title: Commodity derivatives market in India: Development, Regulation & future prospects 2006. This articles finding were organized commodity derivatives in India started as early as 1875, barely about a decade after they started in Chicago. However, many feared that derivatives fuelled unnecessary speculation and were detrimental to the healthy functioning of the markets for the underlying commodities. As a result, after independence, commodity options trading and cash settlement of commodity futures were banned in 1952. A further blow came in 1960s when, following several years of severe draughts that forced many farmers to default on forward contracts (and even caused some suicides), forward trading was banned in many commodities considered primary or essential.

Bose Suchismita, -Paper title: The Indian derivatives market revisited,2006

The major findings derivatives products provide certain important economic benefits such as risk management or redistribution of risk away from risk-averse investors towards those more willing and able to bear risk. Derivatives also help price discovery, i.e. the process of determining the price level for any asset based on supply and demand.

Riddhi Kapadia -Paper title:A Study on Derivatives Market in India: Current Scenario and Future Trends.2006,The derivative market has become multi-trillion dollar markets over the years. Derivatives are financial commitments indexed or linked in some capacity to changes in the value of underlying assets. The bulk of the derivatives trading internationally are linked to currencies and interest rates, other derivatives are linked to equity or equity indices. A very small volume of derivatives, compared to the total, is indexed to traditional commodities. Small by comparison to other derivatives markets, these commodities-indexed derivatives markets are large compared to the underlying physical commodity markets.

Rene'M.Stulz,-Paper title: Should we fear Derivatives? (Journal of economic perspectives),Nov 3,2004 . Derivatives allow firms and individuals to hedge risks and to take risks efficiently. They also can create risk at the firm level, especially if a firm uses derivatives episodically and is inexperienced in their use. For the economy as a whole, a collapse of a large derivatives user or dealer may create systemic risks. On balance, Derivatives help make the economy more efficient. However, neither users of derivatives nor regulators can be complacent. Firms have to make sure that derivatives are used properly. So should we fear derivatives? The answer is "no." We should have a healthy respect for them. We do not fear planes because they may crash and do not refuse to board them

## Remarking An Analisation

because of that risk. Instead, we make sure that planes are as safe as it makes economic sense for them to be. The same applies to derivatives. Typically, the losses from derivatives are localized, but the whole economy gains from the existence of derivatives markets.

Avadhani, S. (2000) -"Investment Management and Mutual Funds "In this book author has given Financial derivatives came into the spotlight, when during the post-1970period, the US announced its decision to give up gold dollar parity, the basic king pin of the Bretton Wood System of fixed exchange rates. With the dismantling of this system in 1971, exchange rates could not be kept fixed .Interest rates became more volatile due to high employment and inflation rates. Less developed countries like India opened up their economies and allowed prices to vary with market conditions. Price fluctuations made it almost impossible for the corporate sector to estimate future production costs and revenues. The derivatives provided an effective tool to the problem of risk and uncertainty due to fluctuations in interest rates, exchange rates, stock market prices and the other underlying assets. The derivative markets have become an integral part of modern financial system in less than three decades of their emergence. This book describes the evolution of Indian derivatives market, trading mechanism in its various securities, the various unsolved issues and the future prospects of the derivatives market.

### Research Methodology

The universe of this study is the stock market. In the stock exchange, the categories are the

NSE (National Stock Exchange) and BSE (Bombay Stock Exchange). The population divided into various categories brokers, clearing and trading members, investors, SEBI members, and Chartered Accountants. Each division of stock exchange is select as the unit of study. From every division major cities of India taken for this study Mumbai, Ahmedabad, Kolkata, and the entire state of Rajasthan has taken. For the purpose of the data collection, a structured questionnaire executed. These areas have randomly chosen to provide a proper area of balance in terms of geographically coverage in the division. Kolkata is less developed and isolated. Ahmedabad and Mumbai are developed, at last, the entire state of Rajasthan taken which is under developed.

In this study stratified, quota, convenient random sampling method has been use.

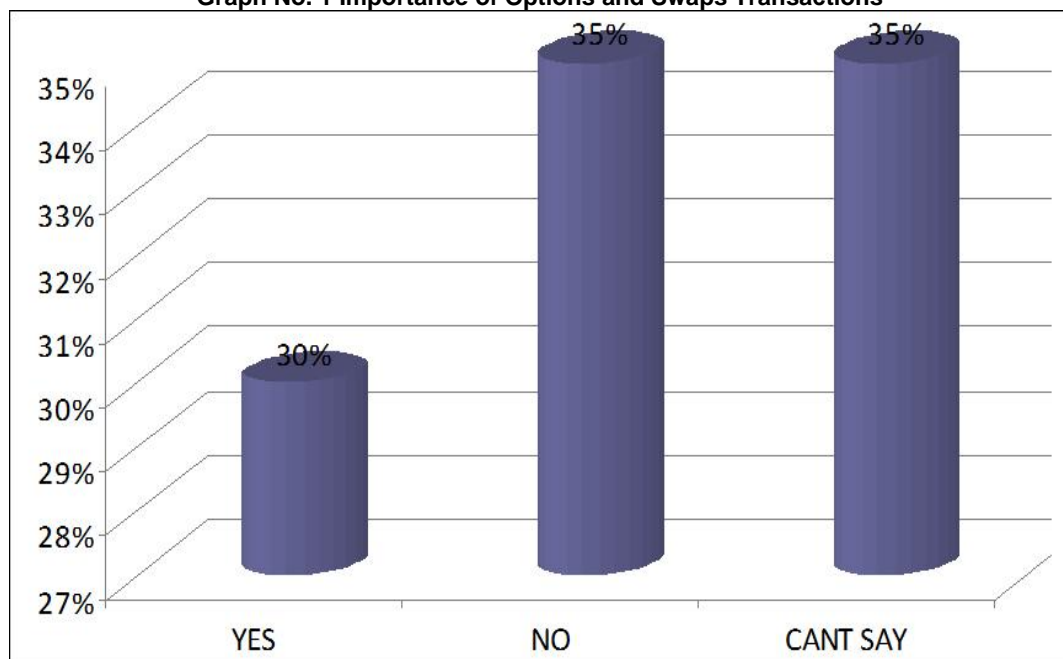
### Data Interpretation And Analysis

The methods and procedures applied for discovering answers meaningful questions through the applications of scientific method known as methodology. The methods applied in the investigation of any phenomena are such, which validate the study to be scientific, reliable, and precise. Research methodology refers to the methods that determine how data is collect and analyzed. .The scientific method involves induction of hypotheses based on observation. Deduction of implications and confirm or reject of the hypotheses.

Q 1.Do you think that options and swaps transactions are the most important instrument for hedging the risk?

- a. Yes
- b. No
- c. Can't say

Graph No. 1 Importance of Options and Swaps Transactions



This question was asked to know options and swaps transactions are the most important instrument for hedging the risk. 30% opinioned in the favor .35% viewed that it is not an important

instrument for hedging the risk. At last 35% cannot give answer.

### Remarking An Analisation

Q2. Do you think that most of the investors, brokers deal in option and swaps for hedging of their risk since none is ready to bear the risk?

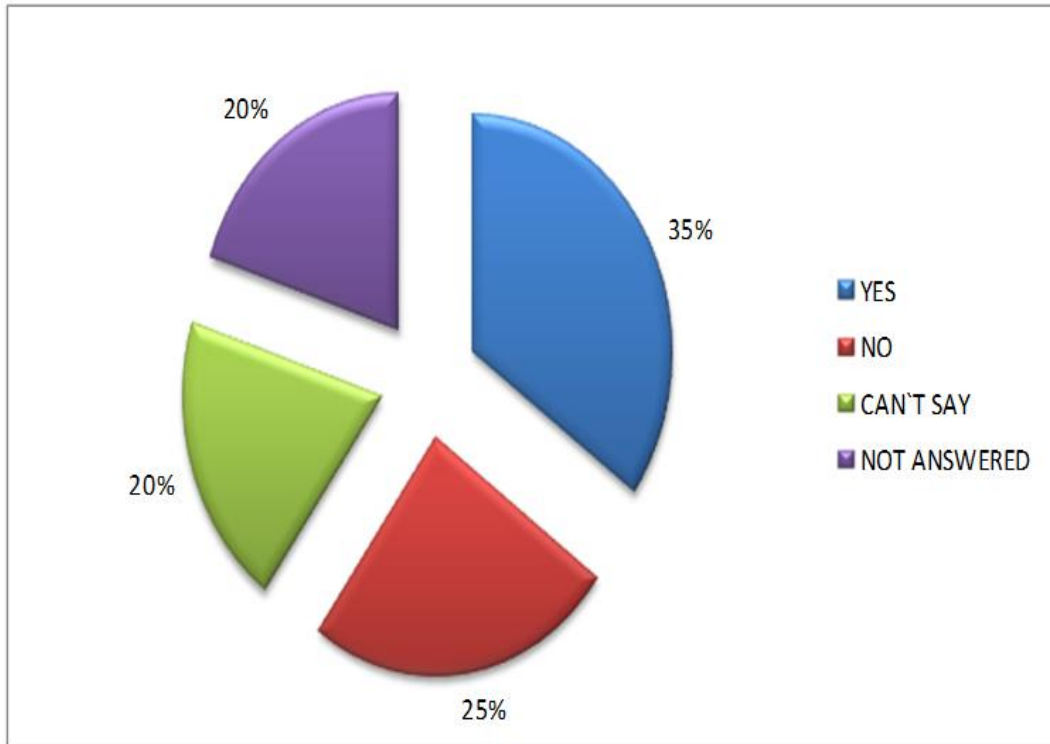
a. Yes

b. No

c. Can't say

d. Not answered

Graph No 2 Options and Swaps Hedge Risk



From above given graph and data's it is clear that 35% agree that the options and swaps are best in risk hedging, 25% disagree. At last 20% cannot answer and not given the answer.

Q3. You rank according to the well functioning?

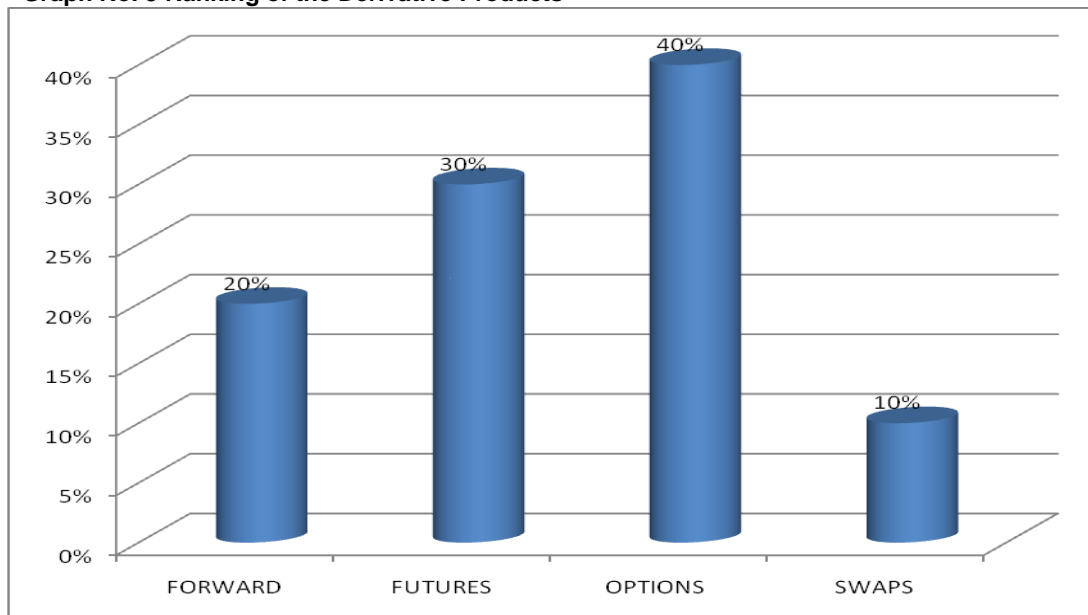
a. Forward

b. Futures

c. Options

d. swaps

Graph No. 3 Ranking of the Derivative Products



Respondents were asked to rank the derivative products according to their well functioning 40% with the option because they think that it is very

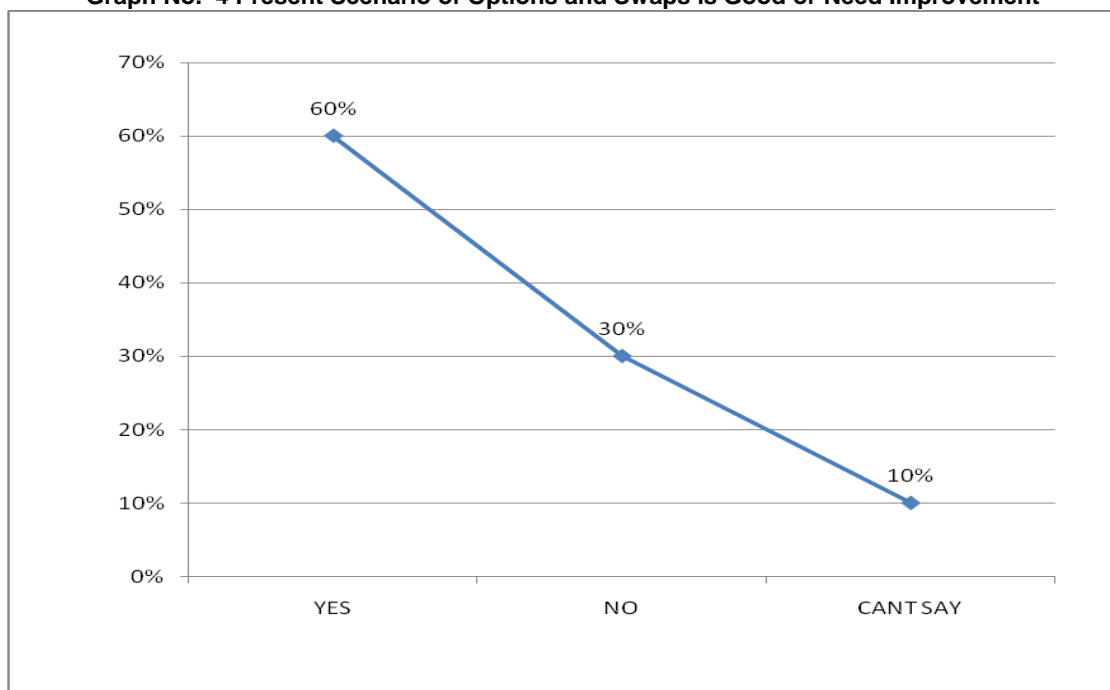
important in the terms of functioning .30% given the futures contract and 2<sup>nd</sup> rank.20% with the forward

contract and 3<sup>rd</sup> rank. At last is the swap contract 4<sup>th</sup> rank.

**Q4.** Do you agree that the present scenario of options and swaps is good or needed some improvements?

- a. Yes
- b. No
- c. Can't say

**Graph No. 4 Present Scenario of Options and Swaps is Good or Need Improvement**



From the above graph it is clear that the present scenario is very much safe for the option and swaps transaction 60% respond that there is no need improvement required. 30% want improvement and 10% can't say about the options and swaps contracts.

**Hypotheses 1**

It is presume that most of the investors, brokers deal in option and swaps for hedging of their risk since none is ready to bear the risk.

**Ho:** It is presume that most of the investors, brokers deal in option and swaps for hedging of their risk since none is ready to bear the risk.

**H2:** It is presuming that most of the investors, brokers deal in option and swap for not hedging their risk since is ready to bear risk.

**Table No 6.7 Showing Analysis of Hypotheses2**

Risk Hedging	Yes	No	Can't say	Total
<b>Yes</b>	35	30	60	<b>125</b>
<b>No</b>	25	35	30	<b>90</b>
<b>Can't say</b>	20	35	10	<b>65</b>
<b>Not answered</b>	20	-	-	<b>20</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>300</b>

Pearson chi square =55.063

d.f. =12.592

Since the chi-square calculated (55.063) is more than the critical value (12.592)at 5% level of significance, the null hypothesis is rejected because calculated chi-square is more than the table value. It is presume that most of the investors, brokers deal in option and swaps for not hedging of their risk since none is ready to bear the risk.

**Conclusion**

1. It is understood that it is an instrument by the use of it we can control, avoid, shifts and manage different type of risk efficiently by using different strategies, like hedging arbitrage, spreading etc. most of the trading of derivative require margins to enhance liquidity and reduce transaction cost in the market .One can easily enter into the derivatives market paying margin and can earn profit at the lowest investment if he has in depth knowledge of market volatility.
2. Admittedly, the application may look intimidating at first glance. It is full of disclosures, legal qualifications and the kind of small print that is worrisome. Yet the purpose of the application is simple enough. Your broker just wants you to state that you know enough about options and swap to make your own trading decisions.
3. Options are marked to market continuously, swaps are marked to market at coupon payment dates, and forward contracts are settled only upon delivery (at maturity). Therefore, the credit risk exposure is greatest under a forward contract, where no third party guarantor exists as in options (the options clearing corporation for exchange-traded options) and swaps (the swap intermediary).
4. In this study it has seen lots of people who consider derivatives in a negative light, it's because they typically use derivatives for two reasons either to increase leverage or to speculate on an asset's movement. But with proper planning and management, derivatives can be seen as a valuable tool for hedging or

reducing existing exposure, as financial risks like Currency, Interest Rate, Default/Credit Risk can be minimized by the help of derivatives. For doing this, it is essential to identify business risks accurately and to use the right control techniques, because derivative products can be used as insurances policies by paying premium. An Individual/Corporate may think that they can reduce their risk, but in case of event specific risk and unsystematic risk it's not the same thing. Event specific risks can only be managed by buying insurance & unsystematic risks can be managed by diversification.

5. In this study, it is find out that the major financial risks and the way-out to use derivatives for managing those risks. Before going to the risk management, we have to understand some of the basic concepts of derivatives. Arbitrage, Speculation & Hedging  
 Speculation: - Betting on the future price of the assets & minimizing the investment amount by taking position in derivatives, is known as Speculation. The major role of speculator is to create liquidity in the market. Arbitrage: -It is a practice of taking advantage of price difference in two different markets. Hedging: - Controlling the risks of adverse price movement, by taking an investment position in the derivatives market, is known as hedging.

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