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# A Study on Financial Derivatives (Futures & Options) and Development of Financial Derivatives Market in India

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***Abstratct – The growth of the equity derivative business has been an unprecedented one. The retail and institutional investors occupied a key role in development of derivatives trading in India. It is been known that most of the contributors in equity derivatives are Retail investors (which includes small brokers trading for themselves) have contributed 51.04% higher when comparing with institutional investment. Higher portion of funds where poured by retail investors.***

***Key Words: Derivatives, Options, Operation Strategies of Options, Performance of Options.***

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## INTRODUCTION

The Financial Markets facilitate the exchange of liquidity, value revelation, worldwide exchanges with combination of budgetary markets, global exchange and the transfer of riskin derivatives market apart from the increasing or upgrading of capital in capital markets. The financial Markets include Money Market, Government Securities Market, Capital Market, Subsidiaries Market and Outside Trade Market, of which Capital market plays a key role to encourage the exchange of assets from the savers (financial specialists) to the borrowers (issue of Securities). This transfer of funds will be optimum if the capital market is efficient. The underlying might be even another derivative contract, such as futures or options. The returns on derivatives are derived from the above underlying assets. In a way, the performance of derivatives depends on how the underlying assets perform.

## RESEARCH METHODOLOGY:

Our study on the topic operational strategies and investors preferences towards various investment avenues in market is based exclusively on secondary data taken from various articles, newspapers and bulletins and reports issued be NSE, BSE.

## LITERATURE REVIEW:

"**Investment property portfolio management and financial derivatives" by** Patrick MCAllister, Johan R. Mansfield. His study on Derivatives has been an expanding and controversial feature of the financial markets since the late 1980s. They are used by a wide range of manufactures and investors to manage risk. This paper analyses the role and potential of financial derivatives investment property portfolio management. The limitations and problems of direct investment in commercial property are briefly discussed and the main principles and types of derivatives are analyzed and explained. The potential of financial derivatives to mitigate many of the problems associated with direct property investment is examined.

**"Derivatives, risk and regulation: chaos or confidence? by** R Dixon, R.K. Bhandari said that there has been an extraordinary increase in the use of financial derivatives in the capital markets. Consequently derivative instruments can have a significant impact on financial Institutions, individual investors and even national economics. This relatively recent change in the status of derivatives has led to calls for regulation. Using derivatives to hedge against risk carries in itself a new risk was brought sharply into focus by the collapse of Barings Bank in 1995. The principle concerns of regulators about how legislation may meet those concerns are the subject of current debate between the finance industry and the regulators. Recommendations have been made and reviewed by some of the key players in the capital markets at national and global level. A call for regulation through increased legislation are not universally welcome, whereas the regulators main concern is that the stability of international markets could be regulation. Consigners the expanding role of banks and securities houses in the light of their sharp;

reactions to increase in interest rates and the effect their presence in the derivatives market may have on market volatility. Includes the reaction of some dealers land users to the recommendations of G-30 report and looks at some key factors in overcoming potential market volatility.

**Options:** They are the second, most important group of derivative securities, first being futures. It is "a contract between two parties where by one party acquires the right, but not the obligation to buy or sell a particular commodity of financial instrument at a specified date." Options are of two types.

(a). call option (b). Put option.

**Call option:** Call option gives the holder the right but not the obligation to buy an asset by certain date for price.

**Put option:** Put option gives the holder the right but not the obligation to sell an asset by a certain date for a certain price.

**Complex Derivatives**

Using futures and options it is possible to build number of complex derivatives. It is designed to suit the particular needs and circumstances of a client.

**Example**: SWAPS, Credit Derivatives

**Weather Derivative**

This is new tool for risk management. This is a contract between 2 parties that stipulate how payment will be exchanged between parties depending on certain meteorological conditions during the contract period. They are based on data such as temperature, rainfall, snowfall etc. The Primary objective of the derivative is to initiate the volume risks, which will influence the Balance Sheet and Profit and Loss figures.

## FUNCTIONS OF DERIVATIVES:

**Risk Management:** It involves structuring of financial contracts to produce gains or losses that counter balances the losses or gains arising from movements in financial prices. Thus risks are reduced and profit is increased of a financial enterprises.

**Price Discovery:** This represents the ability to achieve and disseminate price information without price information investors; Consumers and producers cannot make decisions. Derivatives are well suited for providing price information.

**Transactional Efficiency:** Transactional efficiency is the product of liquidity. Inadequate liquidity; results in high transaction costs. This increases investment and causes accumulation of capital. Derivatives increases market liquidity, as a result transactional costs are lowered, and the efficiency in doing business is increased.

## RISK OF DERIVATIVES:

Any comment about derivative would be inadequate without a word of caution. There are 4 inherent risks associated with derivatives. These risks should be clearly understood before establishing position in derivatives market.

**a)** **Credit Risk:** The exposure to the possibility of loss resulting from a counter party's failure to meet its financial obligation.

**b)** **Market Risk:** Adverse movements in the price of financial asset or commodity.

**c)** **Legal Risk:** An action by a court or by regulatory body that could invalidate a financial contract.

**d)** **Operations Risk:** Inadequate controls, Human error system failure of fraud.

## PERFORMANCE OF OPTIONS TRADING IN INDIA:

Derivatives market in India has registered an "explosive growth" and is expected to continue the same in the year to come. Introduced in 2000, financial derivatives market in India has shown a remarkable growth both in terms of volumes and numbers of traded contracts. NSE alone accounts for 99 percent of the derivatives trading in Indian markets. The introduction of derivatives has been well received by stock market players. Trading in derivatives gained popularity soon after its introduction. In due course, the turnover of the NSE derivatives market exceeded the turnover of the NSE cash market.

**Derivatives Products Traded in Derivatives Segment of BSE**

The Bombay Stock Exchange (BSE) created history on June 9, 2000 when it launched trading in Sensex based futures contract for the first time. It was then followed by trading in index options on June 1, 2001; in stock options and single stock futures (31 stocks) on July 9, 2001 and November 9, 2002, respectively. It permitted trading in the stocks of four leading companies namely; Satyam, State Bank of India, Reliance Industries and TISCO (renamed now Tata Steel). Chhata (mini) SENSEX 7 was launched on January 1, 2008. With a same or 'mini' market lot of 5, it allows for comparatively lower capital outlay, lower trading costs, more precise hedging and flexible trading. Currency futures were introduced on October 1, 2008 to enable participants to hedge their currency risks

through in the U.S. dollar-rupee future platforms. Table 1 summarily specifies the derivative products and their date of introduction on the BSE.

**Table 1: Products Traded in Derivatives Segment of the BSE**

| S. No. | Product | Traded with underlying Asset | Introduction Date |
|---|---|---|---|
| 1 | Index Futures | SENSEX | June 9,2000 |
| 2 | Index Options | SENSEX | June 1,2001 |
| 3 | Individual Stock Option | Concerned Company Stock | July 9,2001 |
| 4 | Individual Stock futures | Concerned Company Stock | November 9,2002 |
| 5 | Weekly Option | 4 Stocks | Se[tember 13,2004 |
| 6 | Chhota(mini) | SENSEX | January 1, 2008 |
| 7 | Currency Futures | US Dollar Rupee | October 1, 2008 |

**Source: Compiled from BSE data**

**Derivatives Products Traded in Derivatives Segment of NSE:**

NSE started trading in index futures, based on popular S&P CNX Index, on June 12, 2000 as its first derivatives product. Trading in the index options was introduced on June 4, 2001. On November 9, 2001, Futures on individual securities started. As stated by the Securities & Exchange Board of India (SEBI), futures contracts are available 233 securities. Trading in options on individual securities commenced w.e.f. July 2, 2001. The options contracts, available on 233 securities, are of American style and cash settled. Trading in interest rate futures was started on 24 June, 2003 but it was closed subsequently due to pricing problem. The NSE achieved another landmark in product introduction by launching Mini Index Futures & Options with a minimum contract size of Rs. 1 lac. NSE created history by launching currency futures contract on US Dollar-Rupee on August 29, 2008 in Indian Derivatives market. Table 2 presents a description of the types of products traded at F & O segment of NSE

**Table 2 : Products Traded in F & O Segment of NSE**

| S. No. | Product | Trading with underlying Asset | Introduction Date |
|---|---|---|---|
| 1 | Index Futures | S&P CNX Nifty | June 12,2000 |
| 2 | Index Options | S&P CNX Nifty | June 4, 2001 |
| 3 | Individual stock option | Concerned Company Stock | July 2, 2001 |
| 4 | Individual stock Future | Concerned Company Stock | November 9, 2001 |
| 5 | Interest Rate Future | T- Bills and 10 Years Bond | June 23, 2003 |
| 6 | IT Futures & Option | CNX IT | August 29,2003 |
| 7 | Nifty Futures & Options | Bank | June 13,2005 |
| 8 | Nifty Juniors Futures & Options | CNX | June 1, 2007 |
| 9 | Futures & Options | CNX100 | June1, 2007 |
| 10 | Midcap 50 Futures & Options | NIFTY | October5,2007 |
| 11 | Mini index Futures & Options | S&P CNX Nifty index | January 1, 2008 |
| 12 | Long Term Option Contracts | S&P CNX Nifty index | March 3, 2008 |
| 13 | Currency Future | US Dollar Rupee | August 29, 2008 |

**Source: Compiled from NSE data.**

## IMPORTANT TABLE REFERENCES

**Influencer**

| Influencer | No. of Respondents | Percent |
|---|---|---|
| Brokers | 36 | 36.0 |
| Friends & Relatives | 40 | 40.0 |
| Advertisement | 9 | 9.0 |
| Banks | 15 | 15.0 |
| **Total** | **100** | **100.0** |

**Perception towards Capital Market Instruments**

| Statement | Cash Market | Options Market | Commodities Market | Futures Market |
|---|---|---|---|---|
| Highly favorable | 29 | 20 | 27 | 30 |
| Favorable | 28 | 26 | 18 | 24 |
| Neutral | 27 | 26 | 30 | 18 |
| Unfavorable | 9 | 18 | 17 | 18 |
| Highly Unfavorable | 7 | 10 | 8 | 10 |
| **Total** | **100** | **100** | **100** | **100** |

**Basis of overcoming risk**

| Basis of overcoming risk | No. of Respondents | Percent |
|---|---|---|
| Financial Experts | 24 | 24.0 |
| News Paper | 49 | 49.0 |
| Friends | 18 | 18.0 |
| Others | 9 | 9.0 |
| **Total** | **100** | **100.0** |

**Investment Options in derivatives**

| Investment options in derivatives | No. of Respondents | Percent |
|---|---|---|
| Stock Index Futures | 29 | 29.0 |
| Stock Index Options | 27 | 27.0 |
| Futures on Individual stocks | 26 | 26.0 |
| Options on Individual stocks | 18 | 18.0 |
| **Total** | **100** | **100.0** |

**Perception towards derivative trading in India**

| Perception of Investors | Frequency | Percent |
|---|---|---|
| Grow Very fast | 17 | 17.0 |
| Grow Moderately | 37 | 37.0 |
| Grow Slowly | 37 | 37.0 |
| Can't say anything | 9 | 9.0 |
| **Total** | **100** | **100** |

## CONCLUSION:

Option strategies provide means of risk reduction, anyone who is at risk from a price change can use options to offset that risk. Different strategies are useful for different market perceptions of the price movements. Option trading strategies are used both hedging and speculation. In different market perception and price movements different strategies are useful. Option strategies are complex positions created including a combination

of options and underlying shares which help the investor to benefit from his view. Hence the complexities of the investment risks and their management gives rise to commensurate solution through a serious of innovative strategies in the form of combination of options of different types. It is indeed attribute to the versatility of the mechanics of option trading that a customized solution can be worked out for each specific risk management problem. Solution of these issues will definitely lead to boost the investors' confidence in the Indian derivative market and bring an overall development in the all the segments of this market.

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