

**A COMPREHENSIVE STUDY ON FINANCIAL DERIVATIVES:
ANALYZING THE MECHANICS AND APPLICATIONS OF FUTURES
AND OPTIONS WITH REFERENCE TO INDIA BULLS**

¹N. Shwetha, ²Mohammed Samreen

¹Associate Professor, ²MBA Student

DEPARTMENT OF MBA

Sree Chaitanya College of Engineering, Karimnagar

To Cite this Article

N. Shwetha, Mohammed Samreen, "A Comprehensive Study On Financial Derivatives: Analyzing The Mechanics And Applications Of Futures And Options With Reference To India Bulls", *Journal of Science Engineering Technology and Management Science*, Vol. 02, Issue 08, August 2025, pp: 231-235, DOI: <http://doi.org/10.63590/jsetms.2025.v02.i08.pp231-235>

Submitted: 03-07-2025

Accepted: 07-08-2025

Published: 14-08-2025

ABSTRACT

Financial derivatives, particularly futures and options, form the basis of the subject. In order to protect themselves against potential losses caused by changes in the value of underlying commodities, bonds, currencies, stocks, and stock indexes, traders have turned to the derivative market, which has been around for millennia. Futures contracts were developed to address the shortcomings of forward contracts in the derivatives market. In derivatives, options also play a significant role. When the market is going up, the writer of the call option makes more money. When the market goes down, the holder of the call option loses more money, while the writer of the put option makes more money. In this case, the writer is advised to hold the put option. An innovation to the cash market is the derivatives market. Every day, it approaches the level of the cash market in terms of turnover. While investors in the cash market are required to pay the whole amount, those in the derivatives market are required to pay premiums or margins, which constitute a portion of the total amount. The main function of derivatives is to provide a hedge against risk. Due to the fact that the derivatives industry is still relatively new in India and is thus unfamiliar to many investors, SEBI must take measures to educate the public. Some of SEBI's restrictions, including as those pertaining to contract size and FILL involvement in the derivatives market, need to be revised if the derivatives market in India is to grow. Minimising contract sizes is necessary since small investors just do not have the capital to pay such a high premium.

This is an open access article under the creative commons license
<https://creativecommons.org/licenses/by-nc-nd/4.0/>



1. INTRODUCTION OF DERIVATIVES

The emergence of the market for derivatives 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.

Derivatives are risk management instruments, which derive their value from an underlying asset. The underlying asset can be bullion, index, share, bonds, currency, interest, etc. Banks, Securities firms, companies and investors to hedge risks, to gain access to cheaper money and to make profit, use derivatives. Derivatives are likely to grow even at a faster rate in future.

SCOPE OF THE STUDY

The Study is limited to “Derivatives” with special reference to Futures and Option in the Indian context and the Indian market have been taken as a representative sample for the study. The study can't be said as totally perfect. Any alteration may come. The study has only made a humble attempt at evaluation of derivatives market only in India context. The study is not based on the international perspective of derivatives markets, which exists in NASDAQ, CBOT etc.

OBJECTIVES OF THE STUDY

- To understand the objectives of trading in derivatives.
- To present the trading procedure of Futures & Options.
- To study the pay-off on Futures & Options.
- To suggest recommendations for people who invest in options.
- To analyze the derivatives market in India
- To analyze the operations of futures and options
- To find the profit/loss position of futures buyer and also the option writer and option holder.
- To study about risk management with the help of derivatives.

LIMITATIONS OF THE STUDY

The following are the limitations of this study.

- The results obtained can not be generalized.
- The study in other major aspects can give more accurate results.
- The study is done only for a period of 45 days.
- Secondary Data may not be authentic in all the cases.
- The scrip chosen for analysis is M/s. RELIANCE POWER LTD and the contract taken is January 2016. Ending one-month contract.
- The data collected is completely restricted to the M/s. . RELIANCE POWER LTD of January 2016; hence this analysis cannot be taken universal.

2. TYPES OF DERIVATIVES

The following are the various types of derivatives.

FORWARDS:

A forward contract is a customized contract between two entities, where settlement takes place on a specific date in the future at today's pre-agreed price.

FUTURES:

A futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Futures contracts are special types of forward contracts in the sense that the former are standardized exchange traded contracts.

OPTIONS:

Options are of two types-calls and puts. Calls give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date. Puts give the buyer the right, but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

Warrants:

Options generally have lives of up to one year; the majority of options traded on options exchanges having a maximum maturity of nine months. Longer-dated options are called warrants and are generally traded over-the counter.

LEAPS:

The acronym LEAPS means long-term Equity Anticipation securities. These are options having a maturity of up to three years.

BASKETS:

Basket options are options on portfolios of underlying assets. The underlying asset is usually a moving average of a basket of assets. Equity index options are a form of basket options.

SWAPS:

Swaps are private agreements between two parties to exchange cash flows in the future according to a prearranged formula. They can be regarded as portfolios of forward contracts. The two commonly used Swaps are:

Interest rate Swaps:

These entail swapping only the related cash flows between the parties in the same currency.

Currency Swaps:

These entail swapping both principal and interest between the parties, with the cash flows in one direction being in a different currency than those in the opposite direction.

SWAPTION:

Swaptions are options to buy or sell a swap that will become operative at the expiry of the options. Thus a swaption is an option on a forward swap. Rather than have calls and puts, the swaptions market has received swaptions and payer swaptions. A receiver swaption is an option to receive fixed and pay floating. A payer swaption is an option to pay fixed and receive floating.

3. FINDINGS

- Derivatives market is an innovation to cash market. Approximately its daily turnover reaches to the equal stage of cash market. The average daily turnover of the NSE derivative segments

- In cash market the profit/loss of the investor depend the market price of the underlying asset. The investor may incur huge profits or he may incur huge profits or he may incur huge loss. But in derivatives segment the investor the investor enjoys huge profits with limited downside.
- In cash market the investor has to pay the total money, but in derivatives the investor has to pay premiums or margins, which are some percentage of total money.
- Derivatives are mostly used for hedging purpose.
- In derivative segment the profit/loss of the option writer is purely depend on the fluctuations of the underlying asset.

SUGGESTION

- In bullish market the call option writer incurs more losses so the investor is suggested to go for a call option to hold, where as the put option holder suffers in a bullish market, so he is suggested to write a put option.
- In bearish market the call option holder will incur more losses so the investor is suggested to go for a call option to write, where as the put option writer will get more losses, so he is suggested to hold a put option.
- In the above analysis the market price of **M/S. HDFC** is having low volatility, so the call option writers enjoy more profits to holders.
- The derivative market is newly started in India and it is not known by every investor, so SEBI has to take steps to create awareness among the investors about the derivative segment.
- In order to increase the derivatives market in India, SEBI should revise some of their regulations like contract size, participation of FII in the derivatives market.
- Contract size should be minimized because small investors cannot afford this much of huge premiums.
- SEBI has to take further steps in the risk management mechanism.
- SEBI has to take measures to use effectively the derivatives segment as a tool of hedging.

4. CONCLUSIONS

An improvement over the cash market is the derivatives market. Every day, it approaches the level of the cash market in terms of turnover. Quantity traded in the NSE derivative divisions on a daily basis. Investors in the cash market stand to gain or lose according to the movement in the value of the underlying asset. The investor stands to gain or lose a substantial amount of money. Nevertheless, investors in the derivatives industry may reap substantial gains with little risk. Instead of paying the whole amount in the cash market, investors in derivatives must pay premiums or margins, which are percentages of the total. Hedging is the primary usage of derivatives. In the derivatives market, an option writer's gain or loss is directly tied to the movement of the underlying asset.

BIBLIOGRAPHY

BOOKS:

- Derivatives Dealers Module Work book–NCFM
- Financial Markets and Services–GORDAN and NATRAJAN
- Financial Management – PRASANNA CHANDRA

MAGAZINES:

- Business Today
- Business World
- Business India

WEBSITES:

- WWW.derivativesindia.com
- www.indiainfoline.com
- www.nesindia.com
- www.dlfindia.com
- www.bseindia.com
- www.sebi.gov.in
- www.google.com