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A STUDY ON DERIVATIVES (FUTURE AND OPTIONS) AT INDIA INFOLINE LIMITED

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I. ABSTRACT

The study is based proceeding Financial Derivatives with orientation to futures and options. Derivative instruments are used to hedge against value changes in underlying commodities, bonds, currencies, stocks and stock indices. 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 cash market the profit/loss of the investor depends on the market price of the underlying asset. The investor may incur huge profit or he may incur huge loss. But in derivatives segment the investor enjoys huge profits with limited downside. Derivatives are mostly used for hedging purpose. In order to increase the derivatives market in India, The investor may incur huge profit or he may incur huge loss. But in derivatives segment the investor enjoys huge profits with limited downside. Derivatives are mostly used for hedging purpose. 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. In a nutshell the study throws a light on the derivatives market.

II. STATEMENT OF THE PROBLEM

Difficult to find best security, people want to more return at same time risk should be less. Therefore, study aim is to understand derivatives with special reference to futures and options. And getting the value of derivatives is very difficult in valuation of derivatives tools are very much complicated but we can take decision.

III. INTRODUCTION

Derivatives are an important breed of financial instrument which are central to today„s financial markets. In India, the derivative market segment is very popular and quite active. It is very clear that in currency markets, commodity markets and stock markets involving all the market participants face considerable risk on account of price fluctuations regarding assets traded in these markets. In a financial market system, derivatives can improve a market„s efficiency by price discovery, liquidity and transfer of risk. Moreover, investors and business houses use derivatives to hedge or manage their risks. The unfamiliarity and complexity of trading in derivatives has created an air of doubt among the investors inducing them to take differing perspectives on derivatives.

A derivative instrument helps to hedge the risk involved in the trading of an underlying asset. In short derivatives are those financial instruments which derive value from an underlying asset or index. The underlying assets are of two types, namely commodities like gold, cotton, pepper etc. and financial assets like shares, currencies, bonds etc. Based on the underlying assets, the derivatives are classified into commodity and financial derivatives. The basic purpose of these instruments is to provide commitments to prices for future dates for giving protection against adverse movements in future prices, in order to reduce the extent of financial risks. Not only this, they also provide opportunities to earn profit for those persons who are ready to go for higher risks. In other words, these instruments, indeed, facilitate to transfer the risk from those who wish to avoid it to those who are willing to accept the same. Therefore, by lock-in asset prices investors can minimize the impact of price fluctuations with profitability.

Every modern economy is based on a sound financial system. A financial system is a set of institutional arrangements through which financial surpluses are mobilized from the units generating surplus income and transferring them to the others in need of them. The activities include production, distribution, exchange and holding of financial assets/instruments of different kinds by financial institutions, banks and other intermediaries of the market. The financial markets have two major components; they are money market and capital market.

IV. NEED OF THE STUDY:

The study has been done to know the futures of derivatives and also to know the derivative market in India. This study also covers the recent developments in the derivative market taking into account. The trading of BHEL, ITC, ONGC, through this study I came to know the trading done in derivative and their use in the stock market

V. OBJECTIVE OF THE STUDY:

- To study the Derivative trading.
- To study the performance of future trading since 01 April 2022to 30April 2022 of BHEL, ONGC.
- To compare the prices of BHEL, ONGC for the respective duration.
- To evaluate the profit/loss position of spot &futures
- To study the different ways of buying and selling of future

VI. SCOPE OF THE STUDY:

The study is limited to “Derivatives” With special reference to Futures in the Indian context and the India Info line has been taken as representative sample for the study. The study cannot be said as totally perfect, any alteration may come. The study has only made humble attempt at evaluating Derivatives Markets only in Indian Context. The study is not based on the International perspective of the Derivatives Markets.

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VII. RESEARCH METHODOLOGY

The study is both descriptive and analytical in nature. The primary data has been collected personally by approaching the online share traders who are engaged in share market. The secondary data has been collected from the books, journals and websites which deal with online share trading.

Research Design

A research design is an arrangement of condition for collection and analysis of the data in a manner that aims to combine relevance to the research purpose with economy in procedure.
The study is descriptive in nature i.e., descriptive research. Descriptive research is concerned with describing the characteristics of a particular individual or group. This includes surveys and fact-finding enquiries of different kinds. The main characteristic of this method is that the researcher has no control over the variables; one can only report what has happened or what is happening. Thus, the research design in case of descriptive study is a comparative design throwing light on all the areas and must be prepared keeping the objectives of the study and the resources available. This study involves collection of data from Junior level Executives.

Methods of Data Collection

Primary Sources: The primary data was collected through personal interviews of investors.

Secondary method: The secondary data collection method includes:

- **Websites**
- **Journals**
- **Text books**

Sampling Unit: Businessmen, Government Servant, Retired Individuals

VIII. LIMITATIONS OF THE STUDY:

The following are the limitations of this study.

- The subject of derivatives is vast it requires extensive study and research to understand the debt of various instrument operating in the market only a recent phenome. But the various international examples have also been added to make the study more comfortable.
- There are various other factors also which define the risk and return preferences of an investor however the study was only contained towards the risk minimization and profit maximization objective of an investor.
- The derivative market is dynamic one premium, contract rates strike price fluctuate on demand & supply basis. Therefore, data related to few trading session was only considered and interpreted.
- The scrip chosen for analysis is completely restricted to BHEL & ONGC and the contract taken is 01-APR-2022 ending one-month contract.

IX. REVIEW OF LITERATURE

ARTICLE 1
TITLE: A Study on Financial derivatives (futures & options) with reference to IIFL.
AUTHOR: Dr.T. Sreelatha

JOURNALS: International Journal of Emerging Technologies and Innovative Research, July-2018.

ABSTRACT:

Prices in an organized derivatives market reflect the perception of market participants about the future and lead the price of underlying to the perceived future level. In recent times the Derivative markets have gained importance in terms of their vital role in the economy. The increasing investments in stocks (domestic as well as overseas) have attracted my interest in this area. Numerous studies on the effects of futures and options listing on the underlying cash market volatility have been done in the developed markets. 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 cash market the profit/loss of the investor depends on the market price of the underlying asset. The investor may incur huge profit or he may incur huge loss. But in derivatives segment the investor enjoys huge profits with limited downside. Derivatives are mostly used for hedging purpose. 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. In a nutshell the study throws a light on the derivatives market.

ARTICLE 2

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

AUTHOR: S. T. P. Raghavan.

JOURNAL*:* Journal of Advances and Scholarly Researches in Allied Education, Volume:15/ Issue:7, Sep 2018.

ABSTRACT:

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.

ARTICLE 3

TITLE: The Dodd-Frank Act and OTC Derivatives: The Impact of Mandatory Central Clearing on the Global OTC Derivatives Market.

AUTHOR: Paul M. McBride.

JOURNAL: The International Lawyer vol.44, No. 4(WINTER 2010).

ABSTRACT:

The enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act represents a turning point in the regulation of the OTC derivatives markets. By subjecting OTC derivatives and the global markets in which they are traded to a variety of new requirements, the Act represents the first major attempt to regulate one of the most important components of the international financial system. The rules that regulatory agencies must implement in order to effectuate the intent of the Act, however, will inevitably have consequences on the market's future development and utility that reach far beyond the United

States. This article considers how the implementation of just one aspect of the Dodd-Frank Act, mandatory central clearing, may impact commercial end-users who routinely manage risk in the OTC derivatives market. Ultimately, through an analysis of OTC derivatives, risk management, and central clearing, this article warns that the potential negative unintended consequences associated with mandatory central clearing are likely to outweigh the possible benefits.

ARTICLE 4

TITLE: An analysis of futures and options use by life insurers.

AUTHOR: L. lee Colquitt and Robert E. Hoyt.

JOURNAL: journal of insurance issues vol.19. No.2(FALL 1996), pp.149-162(14 pages), Published byWestern Risk and Insurance Association.

ABSTRACT: The new found interest in the investment of insurance company assets in derivatives is perhaps the most challenging concern facing insurance company executives and regulators. this paper review the economic motivation for why insurer hedge economic risk and explain possible applications of derivatives by insurer. The paper then review the regulatory environment of derivatives use by insurers and the constraints of this regulation. Finally, by analyzing futures and options use of 571 life and health insurers, the paper describes the actual use of derivatives by these insurers and evaluates the characteristics of firm using futures and options.

ARTICLE 5

TITLE: Exact Solutions for Futures and European Futures Options on Pure Discount Bonds.

AUTHOR: Ren-Raw Chen.

JOURNAL: The Journal of Financial and Quantitative Analysis
Vol. 27, No. 1 (Mar., 1992), pp. 97-107 (11 pages),
Published by Cambridge University Press.

ABSTRACT:this paper provides closed form solutions for future and European futures options on the pure discount bonds under the Ornstein-uhlenbeck(normal) process. A significant difference between black‟s model (1976) and the model in this paper for futures options is discussed.

X. DATA ANALYSIS AND INTERPRETATION Data Analysis TABLE 4.1 BHEL FUTURE PRICE OF 1ST APR 2022 TO 30TH APR 2022

DATE	FUTURE
1-Apr-22	182.1
6-Apr-22	184.2
7-Apr-22	181.75
8-Apr-22	207.75
9-Apr-22	207.85
10-Apr-22	182.75

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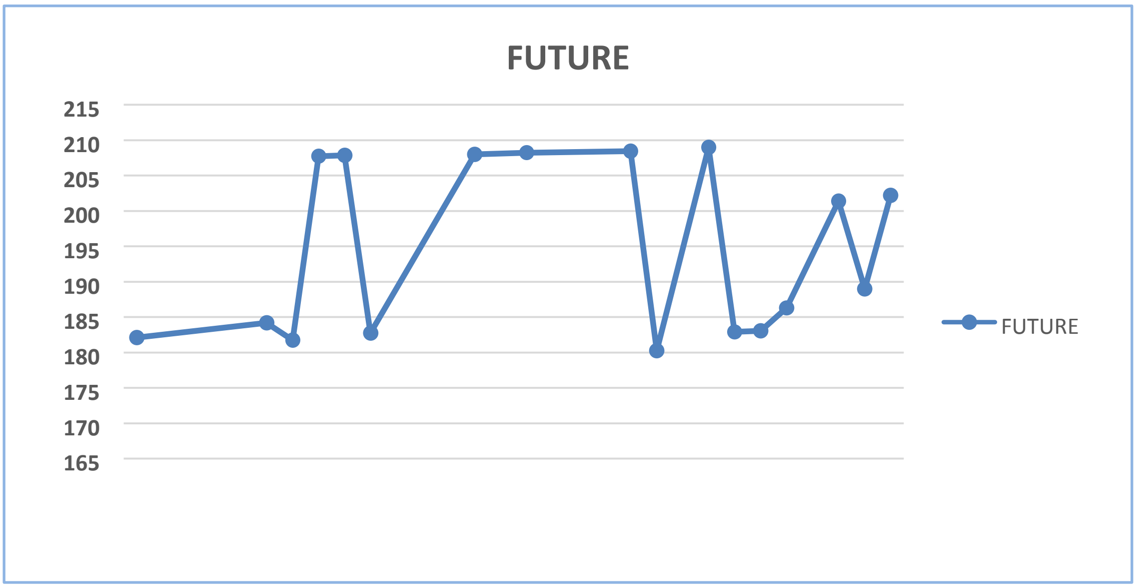
14-Apr-22	208
16-Apr-22	208.25
20-Apr-22	208.45
21-Apr-22	180.25
23-Apr-22	209
24-Apr-22	182.9
25-Apr-22	183.05
26-Apr-22	186.3
28-Apr-22	201.4
29-Apr-22	189
30-Apr-22	202.20

GRAPH 4.1 GRAPH SHOWS MOVEMENT OF FUTURE PRICES



INTERPRETATION: -

In the above graph the future price curve shows a continuously fluctuating trend and at the end of the month future prices closed at the price of Rs.202.20with a Profit of Rs.20.1 (Rs.202.20-182.10).to the buyer(long)and the seller(short)will incurr a loss of Rs.20.1.

FUTURE MARKET: -

	BUYER	SELLER		
01/04/2022 (BUYING)	182.1			182.1
30/04/2022 (CLOSING PERIOD)	202.20			202.20
PROFIT	20.1		LOSS	20.1

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PROFIT 20.1*1000= 20100/- **LOSS 20.1*1000=20100/-**

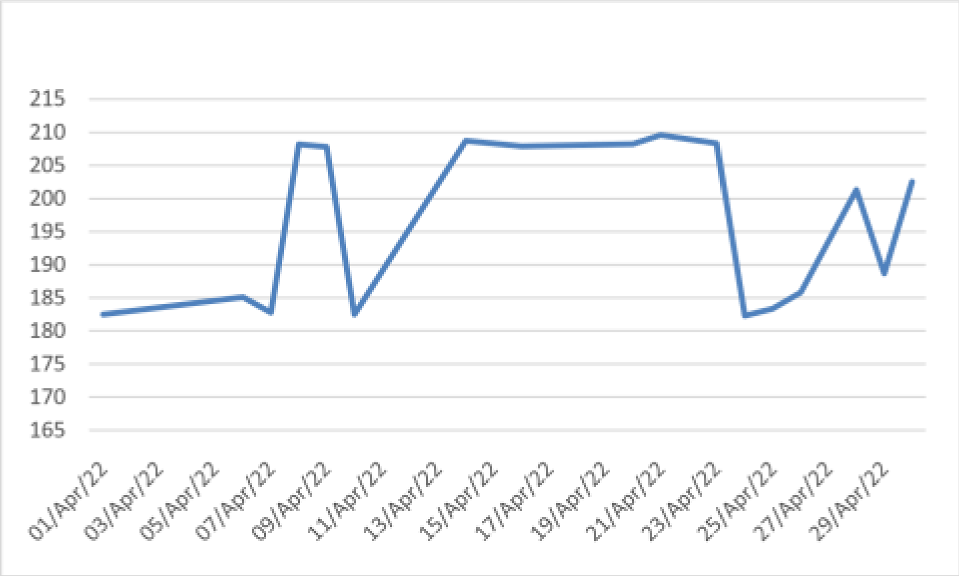
Because buyers Future Price increases so profits also increase. Seller future Price increases so he will get loss. In case seller future price will decrease he will get profit.

The closing price of BHEL at the end of the contract period is202.20and this is considered as settlement price.

TABLE 4.2 BHEL SPOT PRICE 1ST APR 2022 TO 30TH APR 2022

DATE	SPOT
1-Apr-22	182.5
6-Apr-22	185.1
7-Apr-22	182.8
8-Apr-22	208.20
9-Apr-22	207.8
10-Apr-22	182.5
14-Apr-22	208.75
16-Apr-22	207.9
20-Apr-22	208.25
21-Apr-22	209.6
23-Apr-22	208.35
24-Apr-22	182.3
25-Apr-22	183.35
26-Apr-22	185.85
28-Apr-22	201.35
29-Apr-22	188.7
30-Apr-22	202.55

GRAPH4.2 GRAPH SHOWS MOVEMENT OF SPOT PRICES



INTERPRETATION:-

In the above graph the spot price curve shows an increasing trend and at the end of the month Spot prices settled at the price of Rs.202.55 and buyer made a profit of Rs.20.05.

SPOT MARKET: -

	BUYER		SELLER
01/04/2022 (BUYING)	182.5		182.5
30/04/2022(CLOSING PERIOD)	202.55		202.55
PROFIT	20.05	LOSS	20.05

PROFIT20.05*1000= 20050/- LOSS20.05*1000=20050/-

4.3 The following table explains the DATE and MARKET PRICES.

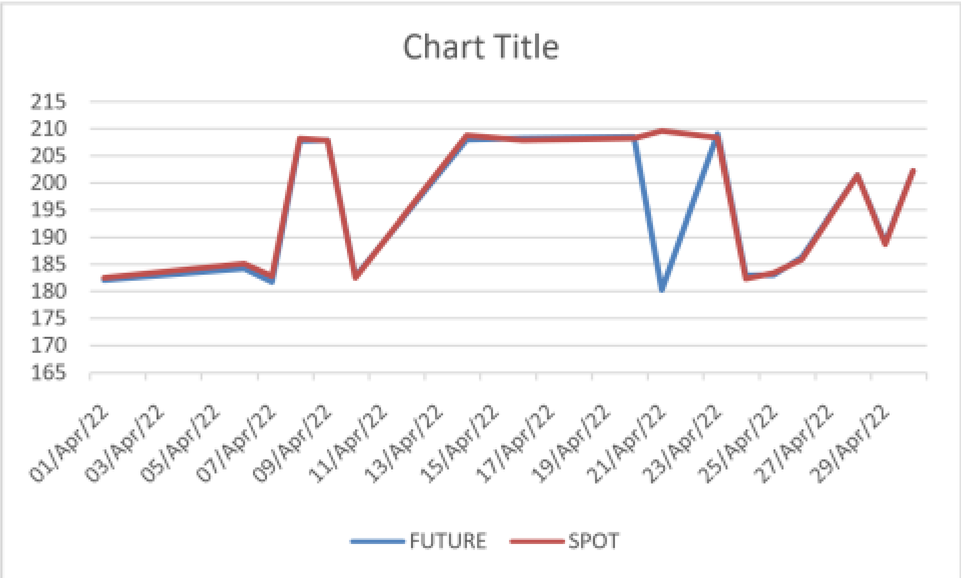
The first column explains TRADING DATE. Second column explains the FUTURE PRICE in cash segment on that date. Third column explains the MARKET PRICES OF BHEL FUTURE PRICE & SPOT PRICE COMPARISION

TABLE 4.3

DATE	FUTURE	SPOT
1-Apr-22	182.1	182.5
6-Apr-22	184.2	185.1
7-Apr-22	181.75	182.8
8-Apr-22	207.75	208.20
9-Apr-22	207.85	207.8
10-Apr-22	182.75	182.5

14-Apr-22	208	208.75
16-Apr-22	208.25	207.9
20-Apr-22	208.45	208.25
21-Apr-22	180.25	209.6
23-Apr-22	209	208.35
24-Apr-22	182.9	182.3
25-Apr-22	183.05	183.35
26-Apr-22	186.3	185.85
28-Apr-22	201.4	201.35
29-Apr-22	189	188.7
30-Apr-22	202.20	202.20

GRAPH 4.3 GRAPH SHOWS MOVEMENT OF FUTURE PRICE & SPOT PRICES



INTERPRETATION:-

The above graph shows the price movements of futures and spot prices. The future prices moves along with the spot prices as per the trend i.e., the opening prices of futures is Rs.182.1 and the spot price is Rs.182.5 and at the end of the month last Thursday the future price closed or settled at the price or Rs.202.20and the spot price settled at the price of Rs. 202.55 with a profit of Rs.20.1 and Rs.20.05 respectively on 30th APR 2022.

BHEL CALL PRICE FOR 180,185,200,205,200.

TABLE 4.4

	PRICE		PREMIUM				
DATE	**FUTURE**	**SPOT**	**180**	**185**	**200**	**205**	**200**
1-Apr-22	182.1	182.5	8.1	5.75	4	2.8	1.95

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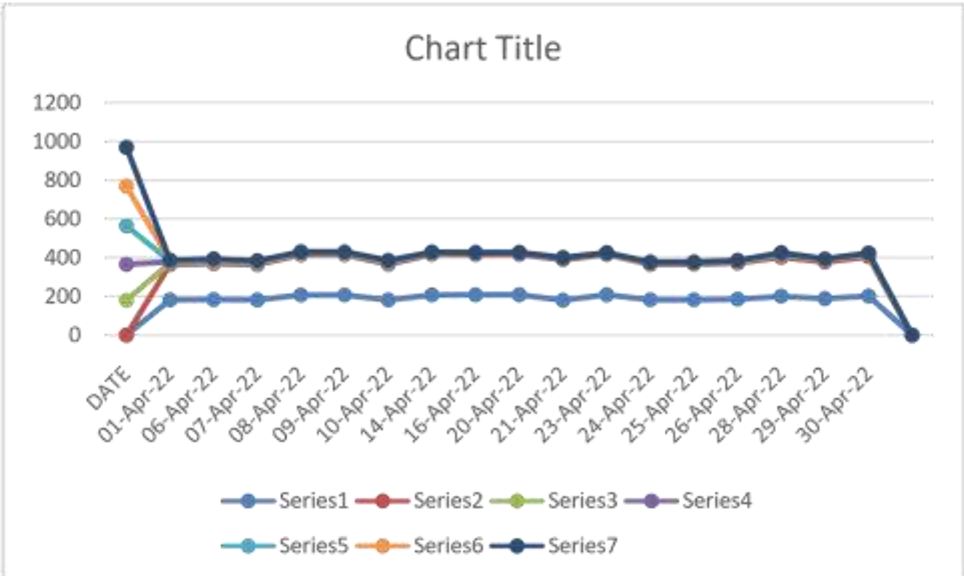
6-Apr-22	184.2	185.1	8.9	6.25	4.3	3	2
7-Apr-22	181.75	182.8	7.25	5.20	3.5	2.1	1.65
8-Apr-22	207.75	208.20	5.55	3.8	2.5	1.65	1.20
9-Apr-22	207.85	207.8	5.5	3.45	2.45	1.55	1.1
10-Apr-22	182.75	182.5	7.65	5.2	3.55	2.20	1.4
14-Apr-22	208	208.75	4.8	3.05	1.95	1.2	0.8
16-Apr-22	208.25	207.9	4.6	2.9	1.8	1.05	0.75
20-Apr-22	208.45	208.25	4.3	2.55	1.55	0.9	0.6
21-Apr-22	180.25	209.6	4.75	2.8	1.65	0.95	0.6
23-Apr-22	209	208.35	3.9	2.25	1.25	0.7	0.4
24-Apr-22	182.9	182.3	5.7	3.2	1.75	0.85	0.55
25-Apr-22	183.05	183.35	5.35	2.85	1.45	0.65	0.45
26-Apr-22	186.3	185.85	7.25	3.9	1.75	0.8	0.4
28-Apr-22	201.4	201.35	11.35	6.5	3.2	1.2	0.45
29-Apr-22	189	188.7	9.2	4.3	1.4	0.35	0.20
30-Apr-22	202.20	202.55	11	5.75	1.9	0.20	0.05

GRAPH 4.4

GRAPH SHOWS MOVEMENT AT PREMIUM OF 180,185,200,205,200.



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BUYERS PAY OFF:

He bought 1(1000) lot of BHEL at the strike price of 180 with a premium of Rs: 8.1 per share.Settlement price is 202.55.

	Strike price	**180**
Add:	Premium	8.1
	BEP	188.10
Less	Spot price	202.55
	PROFITS	14.45/-

PROFITS 14.45*1000= 14450/-

Because it is positive so buyer gets profit. In case decrease in market price the buyer of the call will get loss.

SELLERS PAY OFF:

As it is in the money for seller: hence his loss.

LOSS 14.45*1000=14450/-

Because it is negative, and the price in market continuously up so the seller will get loss

BHEL PUT PRICE FOR 205,200,165,160,205.

TABLE 4.5

	PRICE		**PREMIUM**				
DATE	**FUTURE**	**SPOT**	**205**	**200**	**165**	**160**	**205**
1-Apr-22	182.1	182.5	3.7	2.5	1.45	0.85	0.35
6-Apr-22	184.2	185.1	3	1.9	1.1	0.85	0.35
7-Apr-22	181.75	182.8	4	2.25	0.85	0.75	0.35
8-Apr-22	207.75	208.20	5.2	3.35	2.2	1.25	0.35
9-Apr-22	207.85	207.8	5.20	3.4	1.85	1.25	0.35
10-Apr-22	182.75	182.5	3.1	1.95	1.20	0.7	0.35
14-Apr-22	208	208.75	4.3	2.65	1.65	1.05	0.35
16-Apr-22	208.25	207.9	4	2.3	1.7	0.7	0.35
20-Apr-22	208.45	208.25	3.4	1.95	1.05	0.75	0.35
21-Apr-22	180.25	209.6	2.5	1.4	0.75	0.55	0.35
23-Apr-22	209	208.35	2.8	1.5	0.7	0.65	0.35

24-Apr-22	182.9	182.3	1.5	0.8	0.3	0.25	0.35
25-Apr-22	183.05	183.35	1.1	0.6	0.2	0.25	0.35
26-Apr-22	186.3	185.85	0.55	0.3	0.2	0.1	0.35
28-Apr-22	201.4	201.35	0.2	0.20	0.1	0.05	0.35
29-Apr-22	189	188.7	0.20	0.1	0.05	0.05	0.35
30-Apr-22	202.20	202.55	0.05	0.05	0.05	0.05	0.35

XI. FINDINGS

- The future price of BHEL, ONGC is moving along with the market price.
- If the buying price of the future is less than the settlement price, than the buyer of a future gets profit.
- If the selling price of the future is less than the settlement price, than the seller incurs losses.
- As per above observation BHEL, ONGC are increasing trend.
- Cost of carry model is used as a tool to find out standard future price and also useful for comparing standard with actual future price.
- BHEL future prices shows a continuously fluctuating trend and at the end of the month future prices closed at the price of Rs.202.20with a Profit of Rs.20.1 (Rs.202.20-182.10).to the buyer(long)and the seller(short)will incurr a loss of Rs.20.1.
- BHEL spot price shows an increasing trend and at the end of the month, Spot prices settled at the price of Rs.202.55 and buyer made a profit of Rs.20.05.
- Market prices of BHEL & ONGC future price & spot price comparison future prices moves along with the spot prices as per the trend.
- ONGC the future price curve shows an continuous fluctuations and at the end of the month future prices is closed at the price of Rs.326.35 with a profit of Rs.16.4(309.95-326.35).
- ONGC the spot price curve shows an increasing trend and at the end of the month Spot prices settled at the price of Rs.326.5 with a profit of Rs.17.6 (308.9-326.5).

XII. SUGGESTIONS

- The derivative market is not a newly started in India and but most of the investors are not aware of the usage of it, so SEBI has to take steps to create awareness among the investors about the derivative segment.
- Derivatives segment as a tool of hedging, but it requires proper knowledge to use effective
- During the study it is found that Spot and Future market goes hand in hand, so it is suggested to the investors to enhance their knowledge in fundamental and technical analysis so that they can trade effectively.
- Futures and Option trading requires huge investments to full fill its premium requirement.

- It is suggested to ONGC & BHEL company that they should reduce their lot sizes so that more investors can get into trading.
- CE & PE is a risky job, if the selling price of the future is less than the settlement price, than the seller incur losses.

XII. CONCLUSION

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, whereas 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 BHEL, ONGC is having high volatility, so the call option writer enjoys more losses to holders.

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