Futures & Options of Derivatives Market at NSE in India - A Study on Religare Securities Limited, Srikakulam

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Abstract: 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, are 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. The Aim of this article is to have an in-depth knowledge of the derivative markets in India and in this report entitled 'A Study on Derivatives (Future & Option) in NSE (With reference to Religare Securities Limited, Srikakulam), we have tried my level best to make it simple and understandable. It will be useful for prevent commodity risk.

Keywords: ITES Sector, Job Security, Business Challenges, Employee Retention.

Introduction:

A Derivative is a financial instrument whose value depends on other, more basic, underlying variables. The variables underlying could be prices of traded securities and stock, prices of gold or copper. Derivatives have become increasingly important in the field of finance, Options and Futures are traded actively on many exchanges, Forward contracts, Swap and different types of options are regularly traded outside exchanges by financial intuitions, banks and their corporate clients in what are termed as over-the-counter markets – in other words, there is no single market place or organized exchange

Objectives of the Study

- To evaluate products of derivatives i.e. Forwards, Futures, Swaps and Options
- To prevent foreign currency risk
- To prevent commodity price risk
- To understand the advantages of holding futures& options.
- To understand the risk management in futures &options.

Research Methodology

Defines research as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program which is considered research for other purposes. For example, some demonstration and service programs may include research activities"

The type of research adopted is descriptive in nature and the data collected for this study is the secondary data i.e. from Religare Securities Limited, Newspapers, Magazines and Internet.

Company Profile:

Religare Securities Limited (RSL), a 100% subsidiary of Religare Enterprises Limited is a leading equity and securities firm in India.

Frame work of the Religare Securities Limited:

- RSL is a member of the National Stock Exchange of India, Bombay Stock Exchange of India, Depository Participant with National Securities Depository Limited and Central Depository Services (I) Limited.
- Religare has been constantly innovating in terms of product and services and to offer such incisive services to specific user segments it has also started the NRI, FII, HNI and Corporate Servicing groups. These groups take all the portfolio investment decisions depending upon a client's risk / return parameter.
- Religare has a very credible Research and Analysis division, which not only caters to the need of our Institutional clientele, but also gives their valuable inputs to investment dealers.

Theoretical background of the Study

A **derivative** is a type of securities or financial instrument which *derives* its value from the value of another underlying entity such as an asset, index, or interest rate—it has no intrinsic value in itself. Derivative transactions include a variety of financial contracts including futures, forwards, swaps, options, and variations of these such as caps, floors, collars, and credit default swaps. Most derivatives are marketed through over-the-counter (off-exchange) or through an exchange, while most insurance contracts have developed into a separate industry.

Types of Derivatives

Most commonly used derivative contracts are:

Forwards: A forward contract is a customized contract between two entities where settlement takes place on a specific date in the futures at today's pre-agreed price. Forward contracts offer tremendous flexibility to the party's to design the contract in terms of the price, quantity, quality, delivery, time and place. Liquidity and default risk are very high.

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

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 pre-arranged formula. They can be regarded as portfolios of forward contracts. The two commonly used swaps are: -

a) **Interest rare swaps:** These entail swapping only the interest related cash flows between the parties in the same currency.

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

Importance of Derivatives

Derivatives are becoming increasingly important in world markets as a tool for risk management. Derivatives instruments can be used to minimize risk. Derivatives are used to separate risks and transfer them to parties willing to bear these risks. The kind of hedging that can be obtained by using derivatives is cheaper and more convenient than what could be obtained by using cash instruments. It is so because, when we use derivatives for hedging, actual delivery of the underlying asset is not at all essential for settlement purposes.

Risks involved in Derivatives

Derivatives are used to separate risks from traditional instruments and transfer these risks to parties willing to bear these risks. The fundamental risks involved in derivative business includes

A. **Credit Risk:** This is the risk of failure of a counterpart to perform its obligation as per the contract. Also known as default or counterpart risk, it differs with different instruments.

B. **Market Risk:** Market risk is a risk of financial loss as result of adverse movements of prices of the underlying asset/instrument.

C. **Liquidity Risk:** The inability of a firm to arrange a transaction at prevailing market prices is termed as liquidity risk. A firm faces two types of liquidity risks:

- Related to liquidity of separate products.
- Related to the funding of activities of the firm including derivatives.

Legal Risk: Derivatives cut across judicial boundaries; therefore the legal aspects associated with the deal should be looked into carefully.

Literature Review

Bose, Suchismita conducted research on (2006) found that 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. These functions of derivatives help in efficient capital allocation in the economy. At the same time their misuse also poses threat to the stability of the financial sector and the overall economy.

Routledge, Bryan and Zin, Stanley E of Carnegie Mellon University conducted research on “Model Uncertainty and Liquidity” in year 2001. Extreme market outcomes are often followed by a lack of liquidity and a lack of trade. This market collapse seems particularly acute for markets where traders

rely heavily on a specific empirical model such as in derivative markets.

All the existing studies found that the Equity return has a significant and positive impact on the FII (Agarwal, 1997; Chakrabarti, 2001; and Trivedi & Nair, 2003). But given the huge volume of investments, foreign investors could play a role of market makers and book their profits i.e., they can buy financial assets when the prices are declining thereby jacking-up the asset prices and sell when the asset prices are increasing (Gordon & Gupta, 2003). Hence, there is a possibility of bi-directional relationship between FII and the equity returns.

Masih AM, Masih R, (2007), had studied "Global Stock Futures: A Diagstinoc Analysis of a Selected Emerging and Developed Markets with Special Reference to India", by using tools correlation coefficients , granger's causality test, augmented Dicky Fuller test (ADF), Elliott, Rothenberg and Stock point optimal test. The Authors, through this paper, have tried to find out what kind of relationship exists between emerging and developed futures markets of selected countries.

Srivastava, S., Yadav, S. S., Jain, P. K. (2008), had conducted a survey of brokers in the recently introduced derivatives markets in India to examine the brokers' assessment of market activity and their perception of benefits and costs of derivative 50 trading. The need for such a study was felt as previous studies relating to the impact of derivatives securities on Indian Stock market do not cover the perception of market participants who form an integral part of the functioning of derivatives markets. The issues covered in the survey included: perception of brokers about the attractiveness of different derivative securities for clients; profile of clients dealing in derivative securities; popularity of a particular derivative security out of the total set; different purposes for which the clients are using these securities in order of preference; issues concerning derivatives trading; reasons for non usage of derivatives by some investors. The investors are using derivative securities for different purposes after its penetration into the Indian Capital market. They use these securities not only for risk management and profit enhancement but also for speculation and arbitrage. High net worth individuals and proprietary traders account for a large proportion of broker turnover. Interestingly, some retail participation was also witnessed despite the fact that these securities are beyond the reach of retail investors (because of complexity and high initial cost).

Analysis of the Study

Futures

Profit/Loss for a Future contract holder

Example:

On 7th Jan 2013 REL is trading at 2100 and REL January 2012 Contract is trading @ 2120. We expect the share price to rise significantly and want to make a profit from the increase.

Lot size of REL is 550

Span Margin for REL Future is 42.93% on the contract value

If an Investor bought 1 REL Future @ 2120 on 7th January 2013 and the closing price of REL Future on 16th Jan 2013 is 2600. To make profit from this transaction the buyer of the contract can sell the Future and book profit.

Span Margin Payable for buying REL Contract = 2120x550x42.93%=500563

Capital Invested on this contract is Rs.500563/-

On 16th Jan 2013 REL January Contract is trading @2600, If the investor sold the contract then he would have gained profit of Rs.264000/-

Profit = (2600-2120) x 550 = Rs.264000/-

On 23rd Jan 2013 REL Jan Future closed @ 1600; if the investor holds the future till date. His Mark to Market loss is as fallows

Mark to Market Loss = (1600-2120) x 550 = Rs.286000/-

Investor has to pay/receive the margin with respect to the yesterday's closing price and to the today's closing price.

Mark to Market margin payable/receivable = (Today's Closing price – Yesterdays Closing Price) x Lot Size

Basic Option Strategies

Buyer of the Call Option

Market View	**Bullish**
Action	Buy a call option
Profit Potential	Unlimited
Loss Potential	Limited

To make a profit from an expected increase in the price of an underlying share during option's life:

Case 1: On 30th Nov 2012, IOC is quoting at Rs.538. and the December Rs.560 (strike price) Call costs Rs.32 (premium). We expect the share price to rise significantly and want to make a profit from the increase.

Lot Size of IOC is 600

(i) IOC Dec 2012 CA 560 is trading @ 32 (Buying Out of Money Call Option):

Buy 1 IOC call at Rs.32, Market lot for IOC is 600. So, Net outlay is Rs.19200 (32x600). If IOC shares go up, we can close the position either by selling the option back to the market or exercising the right to buy the underlying shares at the exercise price

On Expiry (27th Dec 2012) Market Price of IOC is Rs. 713/

DATE	**Share price (Cash market)**	**Strike Price**	**Call Premium**	**CALL OPTION VALUE**
30th Nov	Rs.538	560	32	Buy 1 Dec 560 Call @ Rs.32 Cost = 19200

27th Dec	Rs. 713	560	153	1. Sell 1 Dec contract (expiry) Net gain Rs.153 (713--560)x600 = Rs.91800
Analysis	Rises by Rs.175. Return 32.5%	560		Gain: Option sale = Rs.91800 Premium Paid = Rs.19200. Net Profit = Rs.72600.

Possible Outcome of IOC If the Spot price is not @ 713 on Expiry:

Share price Rs.713	Option worth Rs.91800. Closing the position now will produce a net profit of Rs.72600
Spot price < 560	Option expires worthless. The loss is Rs.19200 (premium paid)
Share price >= 592	Net profit = Intrinsic value of (Break even = 560+32) option i.e. by whatever amount the share price exceeds Rs.592.

To establish a maximum cost at which to purchase shares at a lesser date if funds are not available immediately:

(ii) IOC Dec 2007 CA 520 is trading @ 47 (Buying In the Money Call Option):

Buy 1 Dec 2012 IOC 520 call option at Rs.47 for total outlay of Rs.28200 on 30th Nov.

On Expiry 27th Dec 2012 Price of IOC is Rs.713.

DATE	**Share price (Cash market)**	**Strike Price**	**Call Premium**	**CALL OPTION VALUE**
30th Nov	Rs.538	520	47	Buy 1 Dec 520 Call @ Rs.47 Cost = 28200
27th Dec	Rs. 713	520	193	1. Sell 1 Dec contract (expiry)Net gain Rs.193 (713-520)x600 = Rs.115800

Analysis	Rises by Rs.175. Return 32.5%	520		Gain: Option sale = Rs.115800 Premium Paid = Rs.28200. Net Profit = Rs.87600.

(Strike price means spot price or current price)

Share price Rs.713	Option worth Rs.115800. Closing the position now will produce a net profit of Rs.87600
Spot price < 520	Option expires worthless. The loss is Rs.28200 (premium paid)
Share price >= 567	Net profit = Intrinsic value of (Break even = 520+47) option i.e. by whatever amount the share price exceeds Rs.567.

Possible outcome at Expiry

Writing CALL option:

To earn additional income from a static shareholding, over and above any dividend earnings, in terms of premium received on writing the option (covered short call)

Market view : **Bearish / Neutral**
Action : Sell call against an existing shareholding
Profit Potential : Limited
Loss Potential : Limited

Note: 5000 shares, share value on 30th November @ 245/- on December 5th share value @ 260/-

30th NOV	Rs. 245/-	Sell 5th Dec 260 calls @ Rs.15/- Income = Rs.75000/- (15 x 5000)
27th Dec	Rs.248/-	Option expires worthless

Analysis	No change in shareholding	Profit = Rs.75000/- (option premium received)

Possible outcome at expiry

Share > Rs.260/-	The holder will exercise his option. The investor as a writer will sell shares originally purchased for Rs.245/- at Rs.275/- (260+15)
Share price < 260/-	The option expires worthless.
Share Price = 260/-	Option won't be exercised as there is no price difference.

Buyer of a put option:

Market View	**Bearish**
Action	Buy a Put Option
Profit Potential	Unlimited
Loss Potential	Limited

To make profit, from a fall in value of share price:

Situation: Current price of NTPC is @ Rs.280/- on 14th Nov 2012. An investor thinks that NTPC is overvalued and may fall substantially. He therefore decides to buy put option to gain exposure to its anticipated fall.

Action: Buy 1 NTPC, on NOV. Rs.270/- Put at Rs.10/- for a total consideration of Rs.16250/-

Date	Share Price (cash market)	Option market
14th Nov	Rs.280/-	Buy 1 NTPC NOV put at Rs.10/- (280-270) Total outlay = Rs.16250 (10x1625)

29th NOV	Rs.235/-	Sell 1st July contract (270-235) Net gain = Rs.56875 (270-235=35x1625)
Analysis	Fall of share price Rs.45/-	Option purchase =Rs.16250/- Option sale = Rs.56875/- Net profit = Rs.40625/-

Possible outcome at Expiry:

Share price = Rs.235/-	The put will be trading at Rs.35/- which gives a profit of Rs.25/- (35-10) x 1625, if the position is closed out.
Share price is Rs.260/-	Recover intrinsic value premium.
Share price is between Rs.260/- to Rs.270/-	Loss of premium varies from 1625 to 16250/-
Share price >270/-	Loss of premium paid

Writing a put option:

Market View	*Bullish / neutral*
Action	*Sell Put Option*
Profit Potential	*Limited*
Loss Potential	*Unlimited*

To generate earnings on portfolio of shares:

Situation: An investor owns 5500 shares of REL and also has cash holding of around Rs.10000000/- in early April he feels that the share price of REL will either remain constant or slightly rise.

Action: the investor decides to generate some additional income on his portfolio writes 10 REL Rs.1800/- puts at Rs. Thus he received a premium of Rs.220000 (40 x5500)

Possible Outcome at Expiry:

Share price > (or) = Rs.1800/-	The investor's expectation is correct and the put will expire unexercised. Profit = Rs.220000 (premium received)
Share price < Rs.1800/-	The put option will be exercised and the stock will have to be purchased for Rs.7700000 (9900000-220000)

Suggestions

The investor scan minimizes risk by investing in derivatives. The use of derivative equips the investor to face the risk, which is uncertain. Though the use of derivatives does not completely eliminate the risk, but it certainly lessens the risk.

It is advisable to the investor to invest in the derivatives market because of the greater amount of liquidity offered by the financial derivatives and the lower transactions costs associated with the trading of financial derivatives.

The derivatives products give the investor an option or choice whether to exercise the contract or not. Options give the choice to the investor to either exercise his right or not. If an expiry date the investor finds that the underlying asset in the option contract is traded at a less price in the stock market then, he has the full liberty to get out of the option contract and go ahead and buy the asset from the stock market. So in case of high uncertainty the investor can go for options.

However, these instruments act as a powerful instrument for knowledgeable traders to expose them to the properly calculated and well understood risks in pursuit of reward i.e. profit.

Conclusion:

Derivatives have existed and evolved over a long time, with roots in commodities market. In the recent years advances in financial markets and the technology have made derivatives easy for the investors. Derivatives market in India is growing rapidly unlike equity markets. Trading in derivatives require more than average understanding of finance. Being new to markets maximum number of investors have not yet understood the full implications of the trading in derivatives. SEBI should take actions to create awareness in investors about the derivative market. Introduction of derivatives implies better risk management. These markets can give greater depth, stability and liquidity to Indian capital markets. Successful risk management with derivatives requires a through understanding of principles that govern the pricing of financial derivatives.

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