



A STUDY ON FINANCIAL DERIVATIVES WITH REFERENCE TO TATA MOTORS LIMITED, CHITTOOR DISTRICT OF AP, INDIA

Dr. S. Gautami

Associate Professor Department of Management Studies Sri Venkateswara College of Engineering Karakambadi Road, Tirupati-517507

Dr. Nalla Bala Kalyan

Assistant Professor Department of Management Studies Sri Venkateswara College of Engineering Karakambadi Road, Tirupati-517507

ABSTRACT

As part of financial market reforms, new instruments and financial reengineering have been introduced in India since 1991. One area where the growth and innovation is slow is in the introduction of derivatives. In India, the appearance and enlargement of derivatives market is moderately a recent phenomenon. Since its beginning in June 2000, derivatives market has exhibited exponential enlargement both in terms of volume and number of traded contracts. The term derivatives, refers to a broad class of financial instruments which mainly include options and futures. These instruments derive their value from the price and other related variables of the underlying asset. They do not have worth of their own and derive their value from the claim they give to their owners to own some other financial assets or security. The present study is deliberate to examine the financial derivatives with reference to Tata Motors Limited.

KEYWORDS : Derivatives, Features, Options, Tata Motors Limited

1. INTRODUCTION

Finance is the life blood of any business organization. Just as Circulation of blood is necessary in the human body to maintain life so is finance very essential to the business organization for smooth running of the business. Financial management involves Managerial activities concerned with the acquisition of fund for the business purpose. The Finance Function does with procurement of money taking into consideration of today as well as future need and finance is required to purchase need and finance is required to purchase a machinery and raw materials, to pay salaries and wages and also for day to day expenses. In finance, a derivative is an agreement based on an underlying asset. Instead of exchanging the actual asset, agreements are made to exchange cash or other assets for the underlying asset within a specified timeframe. As the value of the underlying asset changes, so does the value of the derivative.

1.1 Futures

Futures markets were designed to solve the problems that exist in forward markets. 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. But unlike forward contract, the futures contracts are standardized and exchange traded. To facilitate liquidity in the futures contract, the exchange specifies certain standard underlying instrument, a standard quantity and quality of the underlying instrument that can be delivered, (or which can be used for reference purpose in settlement) and a standard timing of such settlement. A futures contract should be offset prior to maturity by entering into an equal and opposite transaction. More than 90% of futures transactions are offset this way. A future 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.

The standardized items in a futures contract are:

- Quantity of the underlying
- Quality of the underlying
- The date and the month of delivery
- The units of price quotation and minimum price change
- Location of settlement

1.2 Options

Options are fundamentally different from forward and futures contracts. An option gives the holder of the option the right to do something. The holder does not have to exercise this right. In contrast, in a forward or futures contract, the two parties have

committed themselves to doing something. Whereas it costs nothing (except margin requirement) to enter into a futures contracts, the purchase of an option requires as up-front payment. Option is a type of contract between two persons where one grants the other the right to buy a specific asset at a specific price within a specific time period. Alternatively the contract gives the other person the right to sell a specific asset at a specific price within a specific time period, in order to have this right. The option buyer has to pay the seller of the option premium. The assets on which option can be derived are stocks, commodities, indexes etc. If the underlying asset is the financial asset, then the option are financial option like stock options, currency options, index options etc., and if options like commodity option.

2. RESEARCH METHODOLOGY

2.1 NEED FOR THE STUDY

Derivatives help to reduce the risk (or) transfer the risk. It also helps to the investors to get more returns with less risk. Therefore the present study has been undertaken to understand the derivatives market with special reference to Tata Motors Ltd., for a period of 45 days.

2.2 SCOPE OF THE STUDY

The Study is limited to "Derivatives" with special reference to Futures and Options of Tata Motors Ltd., in the Indian context and the Inter-Connected Stock Exchange has been taken as a representative sample for the study. The study is limited to financial derivatives with special reference to futures options in the India Info line Limited has been taken as representative sample for the study.

2.3 OBJECTIVES OF THE STUDY

1. To analyze the operations of futures and options with reference to Tata Motors Ltd.,
2. To find the profit/loss position of futures buyer and also the option writer and option holder
3. To suggest measures about futures and options
4. To understand the concept of the financial derivatives such as futures & options.

2.4 DATABASE

The primary data is collected directly with the concerned professional trade members and online transaction on the day from NSE India. The secondary data is the data which is gathered from books, records, Journals, Magazines, Reports and Newspapers. This analysis is based on sample data taken from Tata Motors Limited.

The lot size of Tata Motors is 2000, the time period in which this analysis done is from 02-06-2017 to 27-06-2017.

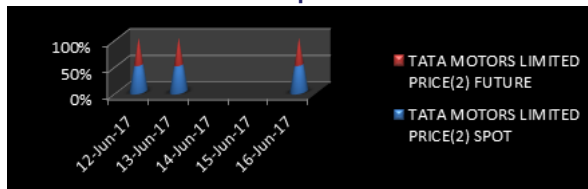
3. DATA ANALYSIS & INTERPRETATION

The Objective of this analysis is to evaluate the profit/loss position of futures and options. This analysis is based on sample data taken from **Tata Motors Limited**. The lot size of Tata Motors is **2000**, the time period in which this analysis done is from **02-06-2017** to **27-06-2017**.

Table 1 Spot and Future Prices from 02nd Juneto07th June 2017

TATA MOTORS LIMITED		
DATE(1)	PRICE(2)	
	SPOT	FUTURE
2-June-17	276.80	280.00
3-June-17	281.25	283.20
7-June-17	278.55	280.06

Graph 1



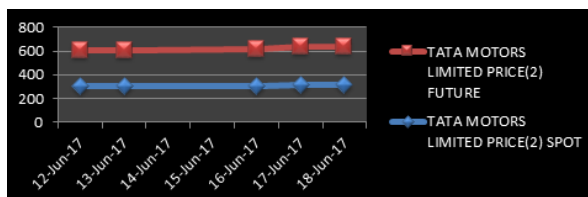
Interpretation

- The above table shows that opening and closing prices of **Tata Motors Ltd** during the three days (from 02nd June to 07th June).
- The spot market of **Tata Motors Ltd** opened its price with Rs.276.80 and it increased to Rs.281.25 and finally it closed at Rs.278.55.
- The future market of **Tata Motors Ltd** opened its price with Rs.280.00 and it increased to Rs.283.20 and finally it closed at Rs.280.05.
- During this week **Tata Motors Ltd** showed positive sign in the market.

Table 2 Spot and Future Prices from 05th Juneto11th June 2017

TATA MOTORS LIMITED		
DATE(1)	PRICE(2)	
	SPOT	FUTURE
05-June-17	275.6	276.65
06-June-17	283.75	285.25
09-June-17	283.05	283.65
10-June-17	286.20	286.95
11-June-17	289.30	290.75

Graph 2



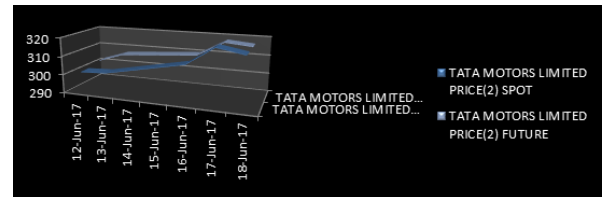
Interpretation

- The above table shows that opening and closing prices of **Tata Motors Ltd** during the week (from 05th June to 11th June).
- The spot market of **Tata Motors Ltd** opened its price with Rs.275.60 and it increased to Rs.289.30 and finally it closed at Rs.289.30.
- The future market of **Tata Motors Ltd** opened its price with Rs.276.65 and it increased to Rs.290.75 and finally it closed at Rs.290.75.
- During this week **Tata Motors Ltd** showed positive sign in the market.

Table3 Spot and Future Prices from 12th Juneto18th June 2017

TATA MOTORS LIMITED		
DATE(1)	PRICE(2)	
	SPOT	FUTURE
12-June-17	300.70	302.50
13-June-17	301.35	307.00
16-June-17	309.75	310.10
17-June-17	319.25	318.00
18-June-17	316.65	316.70

Graph 3



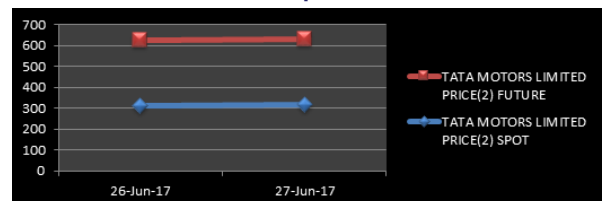
Interpretation

- The above table shows that opening and closing prices of **Tata Motors Ltd** during the week (from 12th June to 18th June).
- The spot market of **Tata Motors Ltd** opened its price with Rs.300.70 and it increased to Rs.319.25 and finally it closed at Rs.316.65.
- The future market of **Tata Motors Ltd** opened its price with Rs.302.50 and it increased to Rs.318.00 and finally it closed at Rs.316.70.
- During this week **Tata Motors Ltd** showed positive sign in the market.

Table 4 Spot and Future Prices from 19th Juneto25th June 2017

TATA MOTORS LIMITED		
DATE(1)	PRICE(2)	
	SPOT	FUTURE
19-June-17	309.75	310.95
20-June-17	311.85	312.35
23-June-17	313.95	313.05
27-June-17	312.10	310.95
25-June-17	312.65	310.25

Graph 4



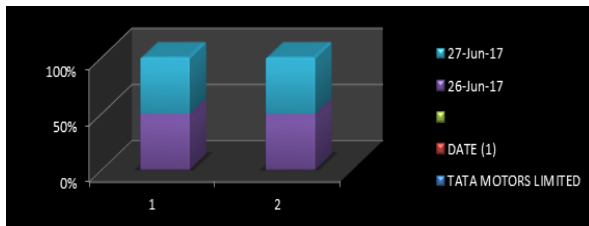
Interpretation

- The above table shows that opening and closing prices of **Tata Motors Ltd** during the week (from 19th June to 25th June).
- The spot market of **Tata Motors Ltd** opened its price with Rs.309.75 and it increased to Rs.313.95 and finally it closed at Rs.312.65.
- The future market of **Tata Motors Ltd** opened its price with Rs.310.95 and it increased to Rs.313.05 and finally it closed at Rs.310.25.
- During this week **Tata Motors Ltd** showed positive sign in the market.

Table 5 Spot and Future Prices from 26th June to 27th June 2017

TATA MOTORS LIMITED		
DATE(1)	PRICE(2)	
	SPOT	FUTURE
26-June-17	313.10	312.75
27-June-17	316.55	317.15

Graph 5



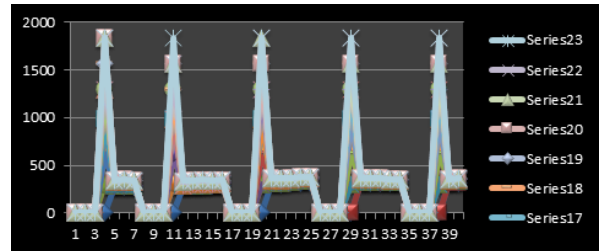
Interpretation

- The above table shows that opening and closing prices of **Tata Motors Ltd** during the two days of last week. (from 26th June to 27th June)
- The spot market of **Tata Motors Ltd** opened its price with Rs.313.10 and it increased to Rs.316.55 and finally it closed at Rs.316.55.
- The future market of **Tata Motors Ltd** opened its price with Rs.312.75 and it increased to Rs.317.15 and finally it closed at Rs.317.15.
- During this week **Tata Motors Ltd** showed positive sign in the market.

Table 6

Tata Motors Limited (Options) Call Option and Put Option Prices from 02 nd June to 07 th June 2017						
Spot Price(1)	Call Option(2)			Put Option (3)		
	300	320	370	300	280	260
276.80	8.65	5.30	2.60	28.00	16.15	7.90
281.25	9.30	6.05	2.95	25.15	17.15	6.70
278.55	8.10	5.00	2.35	26.3	17.65	7.25
Tata Motors Limited (Options) Call Option And Put Option Prices From 05 th June To 11 th June 2017						
Spot Price(1)	Call Option(2)			Put Option(3)		
	300	320	370	300	280	260
275.60	6.75	2.80	1.5	27.55	15.2	8.30
283.75	9.70	7.25	2.60	22.95	13.70	5.55
283.05	9.05	7.90	2.15	22.80	17.35	6.50
286.20	9.85	5.30	2.30	20.60	11.10	7.05
289.30	12.55	7.60	2.75	18.50	10.50	7.05
Tata Motors Limited (Options) Call Option And Put Option Prices From 12 th June To 18 th June 2017						
Spot Price (1)	Call Option(2)			Put Option(3)		
	300	320	370	300	280	260
300.70	17.50	9.25	7.35	17.90	7.15	3.10
301.35	17.10	8.70	7.00	17.15	6.60	2.55
309.75	20.65	10.60	5.15	10.70	7.85	2.00
319.25	26.00	13.80	6.70	8.05	3.50	1.35
316.65	27.75	12.90	6.20	7.65	3.10	1.25
Tata Motors Limited (Options) Call Option And Put Option Prices From 19 th June To 25 th June 2017						
Spot Price(1)	Call Option(2)			Put Option(3)		
	300	320	370	300	280	260
309.75	20.00	10.35	7.65	9.15	3.85	1.50
311.85	20.75	10.20	7.70	3.20	8.35	1.30
313.95	21.05	10.5	7.30	7.70	2.95	1.00
312.10	18.05	8.35	3.20	7.65	2.50	1.05
312.65	17.55	7.70	2.80	7.50	2.60	0.85
Tata Motors Limited (Options) Call Option And Put Option Prices From 26 th June To 27 th June 2017						
Spot Price(1)	Call Option(2)			Put Option(3)		
	300	320	370	300	280	260
313.10	19.85	8.70	3.20	6.90	2.30	0.85
316.55	22.15	9.95	3.70	5.25	1.75	0.60

Graph 6



INTERPRETATION

- The above table shows that call option and put option on spot price of Tata Motors Ltd, during the three days. That is from 02nd June to 07th June. The above call option explains that a majority of investors are interested to buy the stock where strike price is greater than current market price. e.g: at 300 strike price premium is decreased from Rs.8.65 to Rs.8.10 similarly at 320 and 370 strike prices premiums also decreased. The above put option shows that a majority of investors are interested to sell the stock where strike price is greater than current market price. e.g: at 300 strike price premium is decreased from Rs.28.00 to 26.3 similarly at 280 and 260 strike prices premiums also decreased.
- The above table shows that call option and put option on spot price of Tata Motors Ltd, during the week. That is from 05th June to 11th June. The above call option explains that a majority of investors are interested to buy the stock where strike price is greater than current market price. e.g: at 300 strike price premium is increased from Rs.6.75 to Rs.12.55, similarly at 320 and 370 strike prices also increased. The above put option shows that a majority of investors are interested to sell the stock where strike price is greater than current market price. e.g: at 300 strike price premium is decreased from Rs.27.55 to 18.50 similarly at 280 and 260 strike prices premiums also decreased.
- The above table shows that call option and put option on spot price of Tata Motors Ltd, during the week. That is from 12th June to 18th June. The above call option explains that a majority of investors are interested to buy the stock where strike price is less than current market price also. e.g: at 300 strike price premium is increased from Rs.17.50 to Rs.27.75, similarly at 320 and 370 strike prices also increased. The above put option shows that a majority of investors are interested to sell the stock where strike price is less than current market price. e.g: at 300 strike price premium is decreased from Rs.17.90 to 7.65 similarly at 280 and 260 strike prices premiums also decreased.
- The above table shows that call option and put option on spot price of Tata Motors Ltd, during the week i.e from 19th June to 25th June. The above call option explains that a majority of investors are interested to sell the stock where strike price is less than current market price also. e.g: at 300 strike price premium is decreased from Rs.20.00 to Rs.17.55, similarly at 320 and 370 strike prices also decreased, because settlement date happened in this week. The above put option shows that a majority of investors are interested to sell the stock where strike price is less than current market price. e.g: at 300 strike price premium is decreased from Rs.9.15 to 7.50 similarly at 280 and 260 strike prices premiums also decreased.
- The above table shows that call option and put option on spot price of Tata Motors Ltd, during the week i.e from 26th June to 27th June. The above call option explains that a majority of investors are interested to buy the stock where strike price is less than current market price also. e.g: at 300 strike price premium is increased from Rs.19.85 to Rs.22.15, similarly at 320 and 370 strike prices also increased. The above put option shows that a majority of investors are interested to sell the stock where strike price is less than current market price. e.g: at 300 strike price premium is decreased from Rs.6.90 to 5.25 similarly at 280 and 260 strike prices premiums also decreased.

4. SUGGESTIONS

- In the stock market when compared with, equity derivatives are more profitable with less risk.
- In the equity market for the buying of shares, the investor has to pay full amount but in the futures and options just he will pay margins and premiums.
- If the investors short their shares in equity market, he has to buyback on the day itself but in the futures and options there is a period of 1 month to 3 months contract.
- If the stock is going down, the investor will go for put option and gets profits on that and similarly if stock is going up, he will go for call option and gets profits on that.

5. CONCLUSION

Options, like futures, are also derivatives. An option is a legal contract, which gives the holder the right to buy or sell the underlying asset, at a specified price, on a specified date. Although it gives the holder the right to buy or sell the underlying asset, he is not obligated to do so. This is the basic difference between option and futures. Derivatives Market has a significant role to play in the economic expansion of a country. The objective of the study is to examine the impact of financial derivatives (futures and options) on the underlying market volatility. From the above findings it is concluded that the Tata Motors Ltd. stock performance in spot market and futures market is increased. The call options are increased and put options are decreased over a period of one month i.e. from 02nd June to 27th June 2017. It shows a positive sign in the market. Now days, the investors know about the derivatives market so they are attentive. As derivatives market offers more return, with the prevarication of interest rate risk and swap over rate risk with maximum profits and minimum loss. It has been noticed that there has been attentiveness about derivatives trading amongst the investors in India since last a few years.

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