A STUDY ON "FINANCIAL DERIAVATIVES (FUTURES & OPTIONS)"

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1. ABSTRACT :-

Market evolution of derivative products, especially futures, futures and options, and the willingness of risk-averse economic participants to avoid uncertainty arising from asset price fluctuations can be tracked. Derivatives are risk management tools that extract value from underlying assets. His next three broad categories of derivatives market participants are hedgers, speculators, and arbitrage traders. Pricing in organized futures markets reflects market participants' perceptions of the future and drives prices. Potentially perceived future level. Recently, the derivatives market has received a lot of attention due to its important role in the economy. Increased investment in equities (both domestically and internationally) piqued my interest. this area. A number of studies have been conducted on the impact of futures and options listings on physical market volatility. Implemented in developed markets. The derivatives market is new in India and unknown to all investors. That SEBI (Securities & exchange board of india should take steps to raise investor awareness of the derivatives segment. Profit and Loss in the Physical Market The investor's price depends on the market price of the underlying asset. Investors can make huge profits or suffer huge losses. However, in the derivatives segment, investors enjoy significant gains with limited downsides. Derivatives are primarily used for hedging purposes.

1. KEYWORDS :-

Financial deriavatives, futures, options, Litrature review, suggestions, conclusion.

2. INTRODUCTION :-

Market evolution of derivative products, especially futures, futures, and options A return to the willingness of risk-averse economic participants to hedge against volatility-induced uncertainty in asset prices. Financial markets are naturally characterized by high volatility. Using Derivative instruments makes it possible to transfer some or all of the price risk through the pricing of assets. As a tool for risk controls, these generally do not affect price movements of the underlying asset. But snapping asset price derivative products minimize the impact of asset price fluctuations on profitability and cash flow The situation of risk-averse investors.

Derivatives are risk management tools that extract value from underlying assets. Underlying assets include bars, indices, stocks, bonds, currencies, and interest rates. Banks, Investment Firms, Corporations, and Investors for hedging take risks and use derivatives to access cheaper money and make profits.

3. LITERATURE REVIEW:-

1) Deriavatives risk & regulation
R. Dixon and R.K. Bhandari (1997)

As a result, derivative products can have a significant impact on financial institutions, individual investors, and even the economy, the study said. The use of derivatives to hedge risk introduces a new type of risk, highlighted by the failure of Brings Bank. There is an apparent demand for international harmonization and its acceptance by traders and regulators. It also calls for new international bodies to ensure that derivatives remain effective risk management tools while minimizing the risks they pose to investors, institutions, and the domestic/global economy. increase.

2) Investment property portfolio management and financial derivatives.

Patrick MCAllister, Johan R. Mansfield.

His studies on derivatives have been a developing and debatable function of economic markets since the past due 1980s. They are utilized by numerous producers and buyers for chance control. This paper analyzes the function and capability of funding asset portfolios to control the use of economic derivatives. It in brief, discusses the constraints and troubles of direct funding in industrial property and analyzes and describes the primary ideas and sorts of derivatives. Explore the capability of economic derivatives to mitigate a few of the problems related to direct funding of actual property.

3) Investigated the behaviour of volatility in cash market in futures trading.

Bandivadekar and Ghosh, Sah and Omkarnath (2003)

They also found that futures trading have led to reduction in volatility in the underlying asset market but they attributed the degree of decline in volatility in the underlying market to the trading volume in futures market. They inferred that as the trade volume in the Futures and Options segment of BSE is very low, the volatility in BSE has not significantly declined; whereas in the case of NSE (where the trade volume is at the peak), the volatility in NIFTY has reduced significantly.

4. RESEARCH METHODOLOGY

4.1 Research Problem: The research problem for this study is to evaluate the impact of financial derivatives on the stock market, and specifically, to analyze the risk-return characteristics of futures and options.

4.2 OBJECTIVES OF THE STUDY :-

- To review the existing literature on financial derivatives and their impact on the stock market.
- To analyze the risk-return characteristics of futures and options and compare them to other investment options.
- To examine the impact of derivatives trading on stock market volatility.
- To identify the factors that influence the demand for financial derivatives.
- To make recommendations for investors on the use of financial derivatives for risk management and portfolio diversification.

4.3 HYPOTHESIS :-

H1: The risk-return characteristics of financial derivatives are different from those of other investment options.

**H2:** The trading of financial derivatives has a significant impact on stock market volatility.

H3: The demand for financial derivatives is influenced by factors such as interest rates, economic growth, and market sentiment.

4.4 Research Design: Choose an appropriate research design that will enable you to collect and analyze data effectively. In this case, a combination of survey and secondary data analysis would be appropriate. You can conduct a survey of investors and traders to collect primary data on their use of financial derivatives, while also analyzing secondary data from financial reports and other relevant sources.

4.5 Data Collection: Collect data through surveys, interviews, secondary sources, or other means. For the survey, design a questionnaire that includes questions about the investors' use of financial derivatives, their investment goals, and their risk preferences. For secondary data analysis, gather data on the stock market performance, financial derivatives trading volumes, and other relevant factors.

5   DATA ANALYSIS & INTREPRETATION :-
1.   TATA MOTORS LIMITED
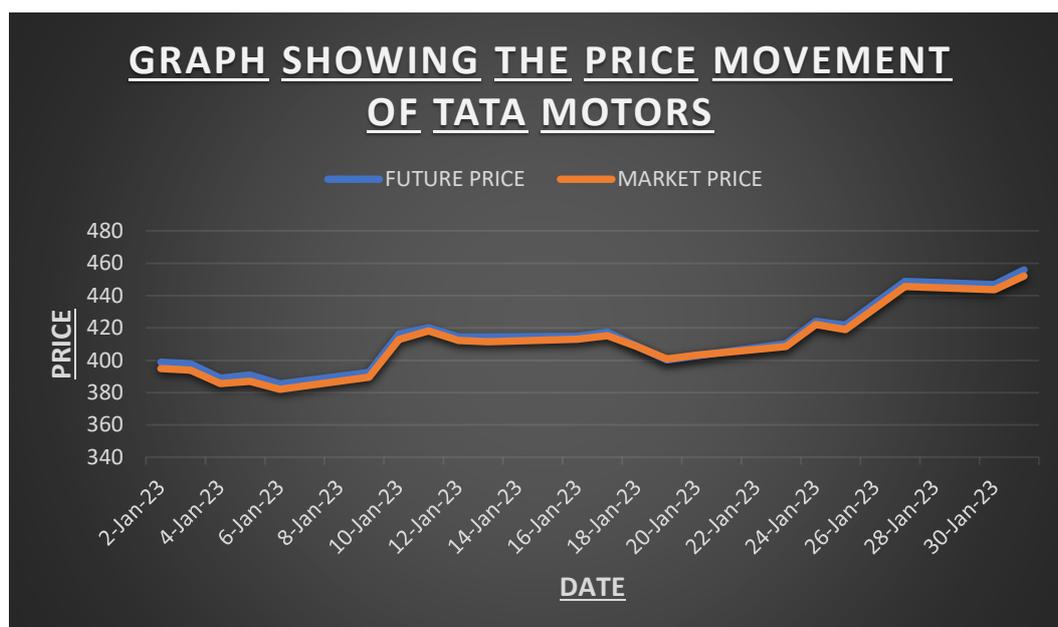
- **INTERPRETATION :-**

i. If a person **BUY** 1 lot i.e. **1425**. futures of **TATA MOTORS** on **2 JAN 2023** and **SELL** on **31 JAN 2023** then he will get a **PROFIT** of **398.75 – 455.85** = **57.10** per share. So he will get a **PROFIT** of **Rs. 57.10 * 1425 = Rs. 81367.50**

- ➢ **CALCULATION** :-
  Buy price :- 398.75
  Sell price :- 455.85
 Profit   :-   57.10
  Lot size   :-   1425.00
  Net profit :- 57.10 * 1425 = Rs. 81367.50

DATE	MARKET PRICE	FUTURE PRICE
02-Jan-2023	394.8	398.75
03-Jan-2023	393.9	397.8
04-Jan-2023	385.6	389
05-Jan-2023	386.9	390.85
06-Jan-2023	382	385.45
09-Jan-2023	389.45	392.55
10-Jan-2023	412.9	416.1
11-Jan-2023	418.2	420.05
12-Jan-2023	412.25	414.35
13-Jan-2023	411.5	414.45
16-Jan-2023	413	414.85
17-Jan-2023	415.3	417.35
18-Jan-2023	408.4	408.65
19-Jan-2023	400.75	400.25
20-Jan-2023	403.15	402.75
23-Jan-2023	408.4	410.25
24-Jan-2023	422.15	424.15
25-Jan-2023	419.05	421.8
27-Jan-2023	445.6	448.75
30-Jan-2023	443.65	446.75
31-Jan-2023	452.1	455.85

ii. If a person **SELL** 1 lot i.e. 1425. futures of **TATA MOTORS** on **2 JAN 2023** and BUY on **31 JAN 2023** then he will get a **LOSS** of **398.75 – 455.85** = **- 57.10** per share. So he will get a **LOSS** of Rs. **57.10 * 1425** = **Rs. 81367.50**

> ➤ **CALCULATION :-**
>
> Sell price :- 398.75
> Buy price :- 455.85
> Loss   :-   57.10
> Lot size   :- 1425
> Net loss :- 57.10 * 1425 = Rs. - 81367.50

iii. The closing price of MAHINDRA & MAHINDRA at the end of the contract period is 452.10 and this is considered as settlement price.

iv. The following table explained market price & premium of calls.

   a) The first column explains trading date
   b)   Second column explains the SPOT market price in cash segment on that date.
   c) The third column explains call premiums amounting at these strike prices 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460.

2. **EICHER MOTORS LIMITED:-**

| DATE	MARKET PRICE	FUTURE PRICE
02-Jan-2023	3,228.85	3,258.00
03-Jan-2023	3,213.45	3,246.75
04-Jan-2023	3,215.25	3,247.45
05-Jan-2023	3,257.70	3,287.50
06-Jan-2023	3,250.60	3,282.90
09-Jan-2023	3,262.55	3,295.10
10-Jan-2023	3,167.55	3,199.45
11-Jan-2023	3,137.25	3,165.80
12-Jan-2023	3,103.25	3,136.55
13-Jan-2023	3,162.05	3,194.00
16-Jan-2023	3,139.05	3,165.80
17-Jan-2023	3,179.95	3,207.00
18-Jan-2023	3,177.60	3,196.95
19-Jan-2023	3,166.70	3,189.70
20-Jan-2023	3,150.50	3,171.15
23-Jan-2023	3,203.35	3,226.05
24-Jan-2023	3,226.55	3,242.80
25-Jan-2023	3,213.85	3,235.35
27-Jan-2023	3,169.75	3,190.60
30-Jan-2023	3,191.45	3,209.30
31-Jan-2023	3,263.35	3,291.65
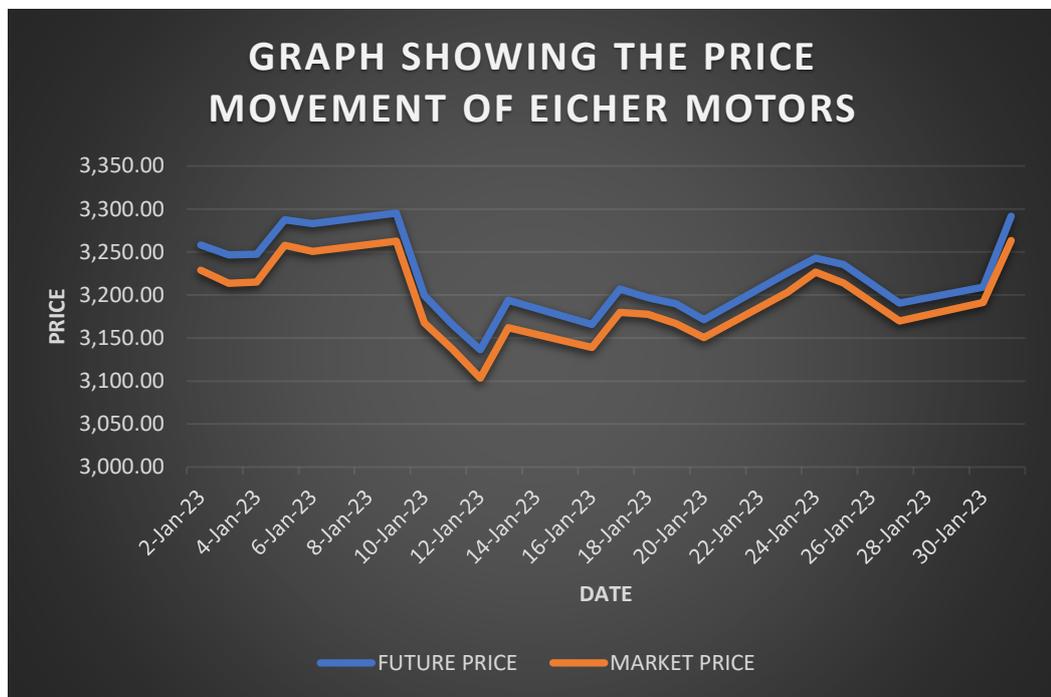
- **INTERPRETATION: -**

i. If a person **BUY** 1 lot i.e. **175**. futures of **EICHER MOTORS** on **2 JAN 2023** and **SELL** on **31 JAN 2023** then he will get a PROFIT of **3258.00 – 3291.65** = **33.65** per share. So he will get a **PROFIT** of Rs. **33.65 * 175** = **Rs. 5888.75**
    ➢ **CALCULATION :-**
    Buy price :- 3258.00
    Sell price :- 3291.65
    Profit   :- 33.65
    Lot size   :- 175.00
    Net profit :- 33.65 * 175 = Rs. 5888.75

ii. If a person **SELL** 1 lot i.e. **175**. futures of **EICHER MOTORS** on **2 JAN 2023** and **BUY** on **31 JAN 2023** then he will get a **LOSS** of **3258.00 – 3291.65** = **33.65** per share. So he will get a **LOSS** of **Rs. 33.65 * 175** = **Rs. 5888.75**
    ➢ **CALCULATION :-**
    Sell price :- 3258.00
    Buy price :- 3291.65
    Loss :- -33.65
    Lot size :- 175.00
    Net loss :- 33.65 * 175 = Rs. - 5888.75

iii. The closing price of MAHINDRA & MAHINDRA at the end of the contract period is 3263.35 and this is considered as settlement price.

iv. The following table explained market price & premium of calls.

    a) The first column explains trading date
    b) column explains the SPOT market price in cash segment on that date.
    c) The third column explains call premiums amounting at these strike prices. 3100, 3150, 3200, 3250, 3300.

3. MAHINDRA & MAHINDRA LIMITED :-

DATE	MARKET PRICE	FUTURE PRICE
02-Jan- 2023	1,262.85	1,273.00
03-Jan-2023	1,249.30	1,262.45
04-Jan-2023	1,236.20	1,249.85
05-Jan-2023	1,252.65	1,264.85
06-Jan-2023	1,264.90	1,277.65
09-Jan-2023	1,310.35	1,323.80
10-Jan-2023	1,314.90	1,323.55
11-Jan-2023	1,312.60	1,321.50
12-Jan-2023	1,319.90	1,327.60
13-Jan-2023	1,328.15	1,334.25
16-Jan-2023	1,315.60	1,321.90
17-Jan-2023	1,320.85	1,327.65
18-Jan-2023	1,322.15	1,327.25
19-Jan-2023	1,319.55	1,324.60
20-Jan-2023	1,314.75	1,323.30
23-Jan-2023	1,328.45	1,337.80
24-Jan-2023	1,323.90	1,333.05
25-Jan-2023	1,311.50	1,320.80
27-Jan-2023	1,320.20	1,324.60
30-Jan-2023	1,331.60	1,337.05
31-Jan-2023	1,378.75	1,390.35

GRAPH SHOWING THE PRICE MOVEMENT OF MAHINDRA & MAHINDRA
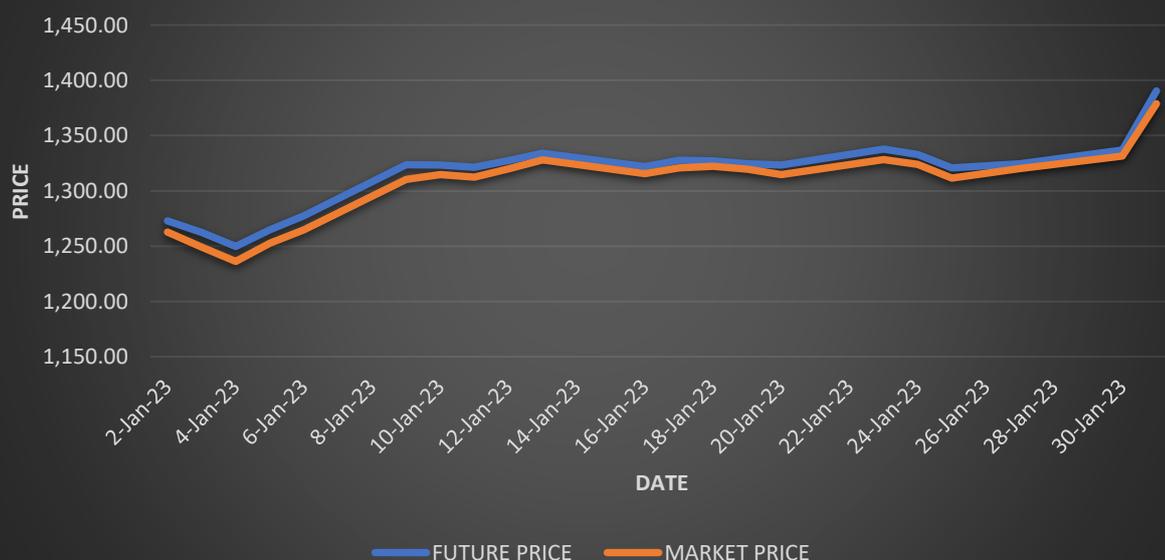
- **INTERPRETATION :-**

i. If a person **BUY 1** lot i.e. **700**. futures of **MAHINDRA & MAHINDRA** on **2 JAN 2023** and **SELL** on **31 JAN 2023** then he will get a **PROFIT** of **1273.00 – 1390.35 = 117.35** per share. So he will get a **PROFIT** of **Rs. 117.35 * 700 = Rs. 82145.00**

> **CALCULATION :-**
> Buy price :- 1273.00
> Sell price :- 1390.35
> Profit   :- 117.35
> Lot size   :- 700.00
> Net profit :- 117.25 * 700 = Rs. 82145.00.

ii. If a person **SELL** 1 lot i.e. **700**. futures of **MAHINDRA & MAHINDRA** on **2 JAN 2023** and **BUY** on **31 JAN 2023** then he will get a **LOSS** of **1273.00 – 1390.35 = 117.35** per share. So he will get a **LOSS** of **Rs. 117.35 * 700** = **Rs.- 82145.00**

> **CALCULATION :-**
> Sell price :- 1273.00
> Buy price :- 1390.35
> Loss :- -117.35
> Lot size :- 700.00
> Net loss :- 117.35 * 700 = Rs. - 82145.00

iii. The closing price of MAHINDRA & MAHINDRA at the end of the contract period is 1378.75 and this is considered as settlement price.

iv. The following table explained market price & premium of calls.

   a) The first column explains trading date
   b) Second column explains the SPOT market price in cash segment on that date.
   c) The third column explains call premiums amounting at these strike prices; 1240, 1260, 1280, 1300, 1320 and 1340, 1360, 1380, 1400.

- **SUGGESTIONS :-**

1. The derivatives 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.

2. To expand the derivatives market in India, SEBI should reform certain of its restrictions, such as contract size and FII (foreign institutional investors) involvement in the derivatives market.

3. Contract size should be minimized because small investors cannot afford this much of huge premiums.

4. SEBI has to take further steps in the risk management mechanism.

5. SEBI has to take measures to use effectively the derivatives segment as a tool of hedging.

- ## <u>CONCLUSION :-</u>

In a bull market, investors are advised to choose call options, as call option sellers will suffer more losses. Holding where put option holders struggle in a bull market.

• Investors are advised to choose call options as call option holders will suffer more losses when the market goes down. Put option sellers are advised to hold put options as they will incur more losses.

• In the above analysis, TATA MOTORS, EICHER MOTORS, MAHINDRA & MAHINDRA   market price has lower volatility, which allows call option sellers to make more profit. beneficiaries.

- ## <u>REFERENCES:-</u>

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