

# A STUDY ON RISK MANAGEMENT THROUGH FUTURES ON HEDGING RATIO

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## ABSTRACT

The emergence of the market for derivative 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. Derivatives are risk management instruments, which driven their value from an underlying value.

By their very nature, the financial market share 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. 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.

Derivative products initially emerged as hedging devices against fluctuations in commodity prices, and commodity-linked derivatives remained the sole form of such products for almost three hundred years. Financial derivatives came into spotlight in the post-1970 period due to growing instability in the financial markets..

In recent years, the market for financial derivatives has grown

tremendously in terms of variety of instruments available, their complexity and also turnover. In the class of equity derivatives the world over, futures and options on stock indices have gained more popularity than on individual stocks, especially among institutional investors, who are major users of index-linked derivatives.

This project deals mainly with futures and hedging ratio the terminologies involved, difference between them, and their eligibility criteria, how are they traded, how futures are used for hedging, settlement process state

## 1. INTRODUCTION:

A derivative is a financial instrument, whose value depends on other, more basic, underlying variables. Derivative is a product/contract which does not have any value on its own i.e. it derives its value from some underlying. The variables underlying could be prices of traded securities and stock, prices of gold or copper, prices of oranges to even the amount of snow that falls on a ski resort. Derivatives have become increasingly important in the field of finance. Options and futures are traded actively on many exchanges. Forward contracts, swaps, and different types of options are regularly traded outside exchanges by financial Institutions, banks and their corporate clients in what are termed as

over-the-Counter markets-in other words; there is no single market place or an organized Exchange. The problem is either investing in futures is profitable or in options.

The real motivation to use derivatives is that they are very useful in reallocating Risk either across time or across individuals with different risk bearing Preferences.

Derivative instruments are basically of two types- traded on the floor of an exchange and OTC or over the counter. Trading instruments on the floor of an exchange entails little counter party risks. 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 faster rate in future.

#### NEED FOR THE STUDY

- To help in transferring risks from risk averse

#### OBJECTIVES OF THE STUDY

- To study about the risk management with the help of derivatives.
- To study about the derivatives with futures contract.
- To get informed with various terminologies in the derivative market.
- To understand Payoff patterns of Derivatives Contracts in real market conditions
- To Understand the hedging concepts with respect to Future contracts.

people to risk oriented people

- To help in the discovery of future as well as current prices
- To increase the volume traded in markets because of participation of risk averse people in greater numbers

#### SCOPE OF THE STUDY

The study is limited to derivatives with reference to five companies selected for the study and the study is restricted to only futures of the selected companies as sample. The companies taken for the study are Bajaj Finance, South Bank, Tata Consultancy Services(TCS), Bharat Heavy Electricals Limited(BHEL), and Jindal Steel. The study cannot be said as totally perfect, any alteration may come. The study has made a humble attempt at evaluation of derivatives market only in the INDIAN context.

#### 2. LITERATURE SURVEY

Derivative is a product whose value is derived from the value of one or more basic variables, called bases (underlying asset, index, or reference rate), in a contractual manner. The underlying asset can be equity, forex, commodity or any other asset. For example, wheat farmers may wish to sell their harvest at a future date to eliminate the risk of a change in prices by that date. Such a transaction is an example of a derivative. The price of this derivative is driven by the spot price of wheat which is the "underlying".

In the Indian context the Securities Contracts (Regulation) Act, 1956 (SC(R) A) defines "derivative" to include-

1. A security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security.

2. A contract which derives its value from the prices, or index of prices, of underlying securities. Derivatives are securities under the SC(R) A and hence the trading of derivatives is governed by the regulatory framework under the SC(R)

and options is studied. The scripts taken for the study for both futures and options are GMR Infrastructure Ltd, Hindustan Unilever Ltd, Ranbaxy Laboratories Ltd, Reliance Communications Ltd and Tata Motors Ltd.

### DATA COLLECTION

The mode of data collection is secondary. The data is collected from the business newspapers and internet.

## 3. RESEARCH METHODOLOGY

### RESEARCH METHODOLOGY

#### SELECTION OF THE SCRIPS

The scrip's are selected on a random basis and from five different sectors. The profitability position of the futures

### LIMITATIONS OF THE STUDY

- The study is limited to selected five companies.
- The data is of three months and the analysis is done on weekly basis.
- The data collected is from 02-10-2019 to 28-12-2019, which is the expiry date of the selected samples.

## 4. FINDINGS OF THE STUDY

The present project work has been under taken to study the process of calculations hedging ratio of Futures Contracts. During this study the following facts have been identified.

- Bajaj finance has a highest Settle price 1979.4 and highest spot price 1953.15.

### ANALYSIS

The analysis consist of the tabulation of the data assessing the profitability positions of the futures on hedging ratio holders and sellers, representing the data with graphs and making the interpretation using data.

- It has Futures standard deviation 12.8806 and Stock standard deviation 12.8918
- Correlation coefficient between these two is 0.9990 and its Hedging ratio is 0.9998
- South Bank has a highest Settle price 33.05 and highest spot price 32.85.
- It has Futures standard deviation 12.9759 and Stock standard deviation 12.9859
- Correlation coefficient between these two is 0.9991 and its Hedging ratio is 0.9998
- TCS has a highest Settle price 2772.6 and highest spot price 2758.95.
- It has Futures standard deviation 12.8534 and Stock standard deviation 12.8594
- Correlation coefficient between these two is 0.9994 and its Hedging ratio is 0.9999

- BHEL has a highest Settle price 100.25 and highest spot price 100.
- It has Futures standard deviation 12.9612 and Stock standard deviation 12.9631
- Correlation coefficient between these two is 0.9997 and its Hedging ratio is 0.9998
- Jindal Steel has a highest Settle price 202.45 and highest spot price 202.45.
- It has Futures standard deviation 13.0974 and Stock standard deviation 13.0989
- Correlation coefficient between these two is 0.9997 and its Hedging ratio is 0.9998

## 5. SUGGESTIONS

- The study reveals the effectiveness of risk reduction using hedging strategies. It has found out that risk cannot be avoided. But can only be minimized. It has been found that, all the strategies applied on historical data of the period of the study were able to reduce the loss that rose from price risk substantially.
- A knowledge need to be spread concerning the risk and return of the

## 6. CONCLUSION

Derivative 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 segment is presently the available scrip's in futures and options segment. In cash market the profit/loss of the investor depends on the market price of the underlying asset. The investors may incur huge profits or he may incur huge losses. But in derivatives segment the investor enjoys huge profits with limited downside. In cash market the investor has to pay the total money, but in derivatives the

derivative market from RBI and SEBI for retail investors.

- If an investor wants to hedge with portfolios, it must consist of scrip's from different industries, since they are convenient and represent true nature of the securities market as a whole.
- The hedging tool to reduce the losses that may arise from the market risk. Its primary objective is loss minimization, not profit maximization. The profit from futures or shares will be offset from the losses from futures or shares, as the case may be. As a result, a hedger will earn a lower return compared to that of an un hedger. But the UN hedger faces a high risk than a hedger.
- The hedger will have to be a strategic thinker and also one who think positively. He should be able to comprehend market trends and fluctuations. Otherwise, the strategies adopted by him earn him losses.
- The hedging tool is suitable in the short term period. They can be specifically adopted by the investor, who are facing high risks and has sufficient liquid cash with them. Long term investor should beware from the market, because of the volatile nature of the market.

investor has to pay premium or margins, which are some percentage of total money. Derivatives are mostly used for hedging purpose. In the derivatives segment the profit/loss of the option holder/option writer is purely depended on the fluctuations of the underlying asset

## REFERENCES

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