

“AN EXPLORATORY STUDY ON HEDGING/SUPPORTING STRATEGIES USING COMMODITIES IN MCX AND NCDEX”

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ABSTRACT

The greatest challenge faced by Investment Manager (Advisor) is to analyze the risk and return associated with the commodity market. This project is undertaken to study various strategies used in Indian Commodities Forward market

The most important target of such investigation is to know the instrument of platform by breaking down the feasible supporting methodologies holed by financial specialists. This investigation is restricted to Bullion advertise i.e.; just Gold and Silver are considered for supporting reason, since every one of the commodities can't be supported in forward market.

Anyway there is dependably a counterparty risk related in the item forward market.

For the examination on "Supporting systems utilizing commodities", optional information is gathered as the information is identifying with offer costs of Gold and Silver for the year 2018-2019. Information is gathered from the period from August 2018 to January 2019. The information is gathered from different sites. Instruments utilized are basic moving normal strategy, beta count, connection and forward market supporting.

Result from the examination on supporting systems of gold and silver demonstrate that this will help in forceful speculators, hedgers and arbitragers to design their methodology for productivity.

INTRODUCTION ABOUT TOPIC:

A commodity is the item which has business esteem. It can be delivered, purchased, sold and devoured, for example, valuable metals, ferrous and non ferrous metals, coal, petroleum gas and regular items like flavors, estate crops, heartbeats, sugar and other delicate products.

In India, there are 4 broadly perceived trades. They are:

Multi Commodity Exchange of India Ltd. (MCX)

The National Commodity and Derivatives Exchange of India Ltd. (NCDEX)

The National Multi Commodity Exchange of India Ltd. (NMCE)

The Indian Commodity Exchange (ICEX)

Moreover, there are 22 regional commodity exchanges

Winding Up:

Gold is admired in India as a **reserve funds and venture vehicle** and is the second favored investment behind bank deposits. India is the world's biggest customer of gold in decoration. The accumulating tendency is very much permeate in Indian culture, not least since legacy laws amidst the twentieth century lend an incredible attractive quality to obscurity. Indian individuals are famous for putting something aside for the future and the money related investment funds proportion is solid, with a proportion of monetary. Our country is the leading buyer of coins and slab for speculation. The examination is done by utilizing a previous month's data.

Review of Literature

Many authors have done the investigation on "commodity Market" to advise the financial specialists to put resources into commodity market and a significant number of them have given important recommendations and ends on commodity market to limit the hazard and boost the benefit on products. Likewise there are examines on supporting of products in forward marketing with the goal that the hazard related in supporting utilizing commodities can be decreased.

Author Name – Mihaljek and Packer

Title – Study about Growth of Derivatives in Emerging Markets

Article Publication- in the year 2010. The authors recognized the examination of that the Asian sub-continent has few of the biggest derivatives markets of the world with incredible development potential. Moreover, with reference to "half of the derivatives turnover in developing markets happens over the counter, contrasted with 33% in cutting edge economies". This stands as an essential element of the developing economies derivatives markets.

1. **Author Name** - Fratzscher.

Title – Study on the Status of Commodity Markets in India

Article Publication- in the year 2006. Some of the world's quickest developing exchanges are situated in India. The derivatives trade in Thailand. The exchanging of derivative items has made the development in Asian market increasingly forceful and has given different formative advantages to the Asian economies.

2. **Author Name/ Publisher-** Press Trust of India.

Title – Status of Commodities Market in India

Article Publication- in the year 2011, the market has observed an exponential development since its initiation and stands as a focal point of attraction for media, academicians and specialists. The commodity trades in India have made their place in best ten commodity markets in the world.

3. **Author Name-** Basu and Mukhopadhyay

Title – Study on Asian Derivative Market contributions

Article Publication- in the year 2011, in their investigation remarked that Asian derivative markets add to "33% of the worldwide outside trade and over 40% of value derivative exchanging". Korea is home to the biggest derivative trades in the world, while the quickest developing trade on the planet is situated in India. The presentation of derivatives in Asian economy has made the Asian capital markets increasingly more aggressive.

4. **Author Name-** Gupta

Title - Study on Commodity Market in India

Article Publication- in the year 2011, remarked that the commodities market in India has huge development potential. The derivative instruments were reintroduced in Indian market in mid 2000s after an extensive stretch of suspension. From that point forward the Indian commodity Market has seen exponential development. The Indian Capital Market is presently limited to regional exchanges as well as home to national commodity exchanges.

5. **Author Name-** Mishra

Title – Research in Trade Volumes and Turnover in Indian Commodities Market

Article Publication - in the year 2008, The investigation additionally featured that the commodity futures are viable instruments for portfolio broadening as a result of their less than perfect (or on the other hand negative, on account of MCX Agri) relationship with comes back from the Sensex. Thus, the stakes are higher than at any other time. According to his examination, the interest in commodity future is going about as an observable option to traditional investments in securities exchanges.

RESEARCH DESIGN:

TOPIC CHOSEN TO STUDY

“AN EXPLORATORY STUDY ON HEDGING/SUPPORTING STRATEGIES USING COMMODITIES IN MCX AND NCDEX”

NEED FOR THE STUDY

- The present examination gives the profound data about the products stage
- Consider discloses the different approaches to limit the misfortune and expand the benefit.

- *Imagine about gives the data about various elements that reason changes in the stock promote.*
- *Contemplate or this study explains the job of products exchange Indian market.*

OBJECTIVES OF THE STUDY

- *To decide the conceivable supporting procedure*
- *To decide the hazard related in supporting utilizing commodities.*
- *To recommend the possible supporting product sooner rather than later.*

RESEARCH METHODOLOGY

BASIS OF DATA

For the above project data is gathered by both primary and secondary resources.

A. Primary source:

Individual discourse was made with the Branch administrator and communication with other staff in the association for this reason. The company is having a special department of Research and Development (R&D) which provide information. There is no formal structure of poll utilized in the examination.

B. Secondary source:

A large portion of the data of securities exchange and co factors is gathered from different sites. Some of them are:

- *NSE PORTAL*
- *INVESTING PORTAL*
- *MCX PORTAL*
- *The other data are collected from various books and journals.*

LIMITATIONS OF THE STUDY:

- *The items advances advertise are illiquid.*
- *The study is kept to just Gold and Silver.*
- *There is dependably a counterparty chance related in the ware advance advertise.*
- *In products showcase, expansion can't dispose of precise hazard.*

DATA ANALYSIS AND INTERPRETATION:

It is an Analytical study based on secondary data

Objective of Analysis is:

- ❖ H_0 - There is no significant relationship between market index and the movement of the commodity.
- ❖ H_1 - There is a significant relationship between market index and the movement of commodity.

Research Outcome- advice investors to when to invest and sell to book a known profit.

Value of Beta Interpretation:

| BETA VALUE | EXPLANATION | ILLUSTRATE |
|-----------------------|--|--|
| $B \leq 0;$ | It indicates that the value of that particular commodity moves in reverse direction with compared to market index. | It shows an opposite exchange or Sales position. |
| $B = 0;$ | It indicates that there is No- Correlation or Zero correlation between the index and that particular commodity. | A fixed asset growth cannot be compared with the movement of stock prices. |
| $1 \geq \beta \geq 0$ | It shows that the both the index and market are move in the same direction. But commodity movement is comparatively Less than market index. | It does not influence by daily activities of market. |
| $\beta = 1$ | It define that market data and commodity prices are move in the same direction at same rate. | It exhibits the market data itself. |
| $\beta \geq 1$ | It shows that the commodity movement is move in the same direction as index but compare to market the commodity movement is higher . | It majorly affected by day to day activities of the market information. |

CALCULATION OF BETA:

$$\beta = \frac{n \sum XY - \sum X \cdot \sum Y}{n \sum X^2 - (\sum X)^2}$$

CALCULATION OF ALPHA:

$$\alpha = \bar{Y} - \beta \bar{X}$$

$$\bar{Y} = \frac{\sum Y}{Y} = \frac{-405}{22} = -18.409$$

$$\bar{X} = \frac{\sum X}{X} = \frac{633}{22} = 28.77$$

CALCULATION OF REGRESSION:

$$r = \frac{n \sum XY - \sum X \cdot \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$\sqrt{n \sum X^2 - (\sum X)^2} \cdot \sqrt{n \sum Y^2 - (\sum Y)^2}$$

SIMPLE MOVING AVERAGE = Total Closing price of commodity/ Number of days

CALCULATION OF FORWARD MARKET HEDGING:

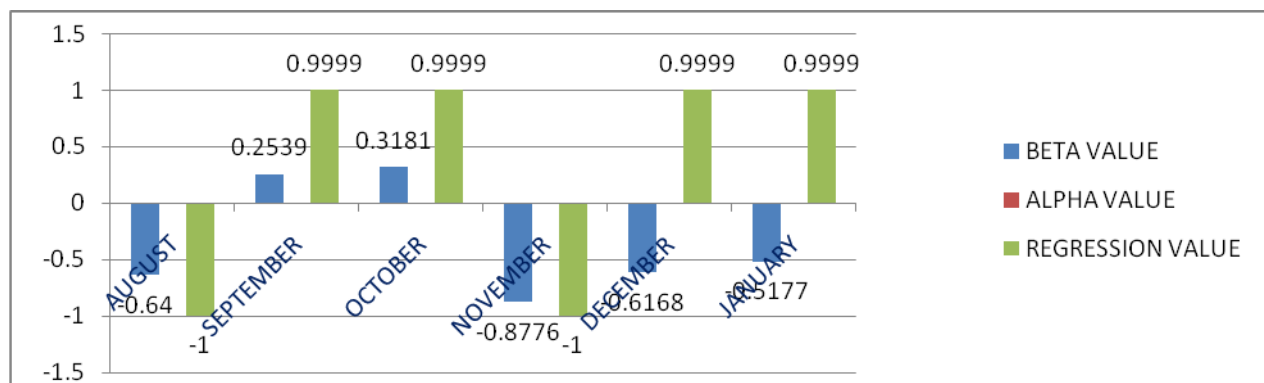
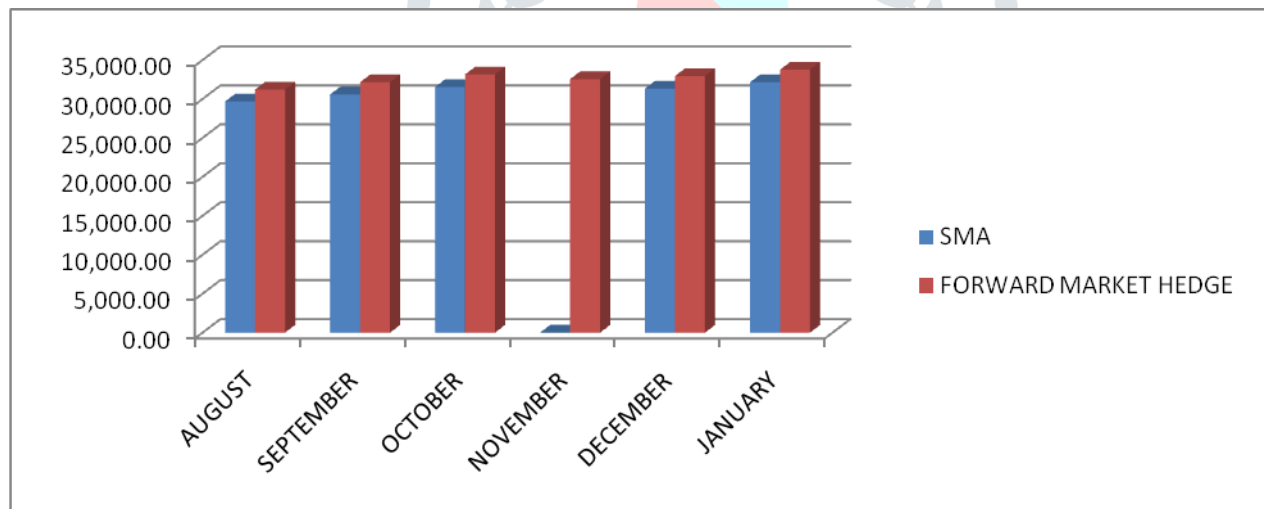
$$F = Soe^{rt}$$

where, it stand for

So = Spot Price. *e* = Constant Value, *r* = Rate of Return, *t*= Time Periods.

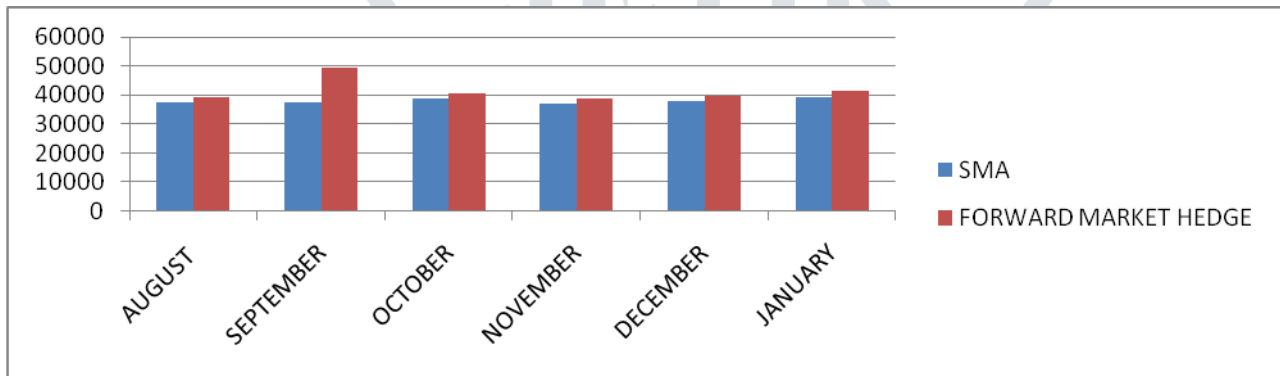
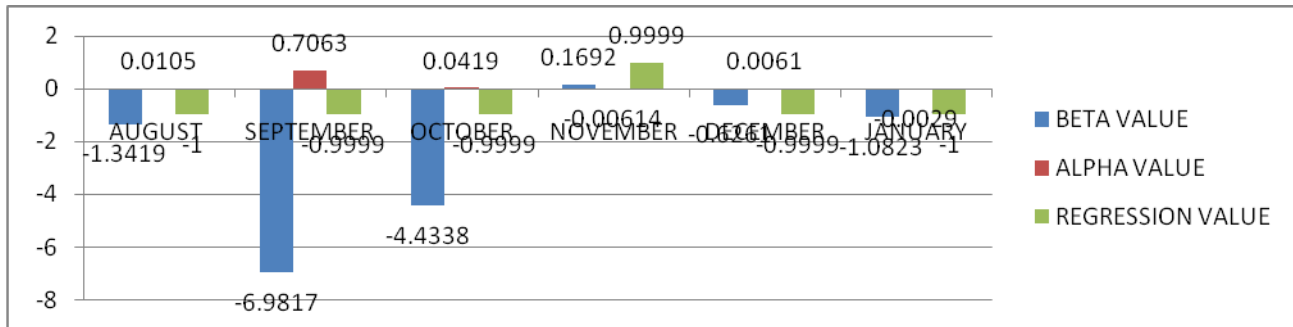
GOLD DATA ANALYSIS:

| MONTHS | BETA VALUE | ALPHA VALUE | REGRESSION VALUE | SMA | FORWARD MARKET HEDGE |
|-----------|------------|-------------|------------------|-----------|----------------------|
| AUGUST | -0.64 | 0.0038 | -1 | 29,682.73 | 31,204.610 |
| SEPTEMBER | 0.2539 | -0.000485 | 0.9999 | 30,579.45 | 32,147.30 |
| OCTOBER | 0.3181 | -0.00283 | 0.9999 | 31,533.32 | 33,150 |
| NOVEMBER | -0.8776 | 0.00064 | -1 | 30956.68 | 32,543.16 |
| DECEMBER | -0.6168 | 0.0008 | 0.9999 | 31,340.50 | 32,947.37 |
| JANUARY | -0.5177 | 0.00269 | 0.9999 | 32,144.39 | 33,760.94 |



SILVER DATA

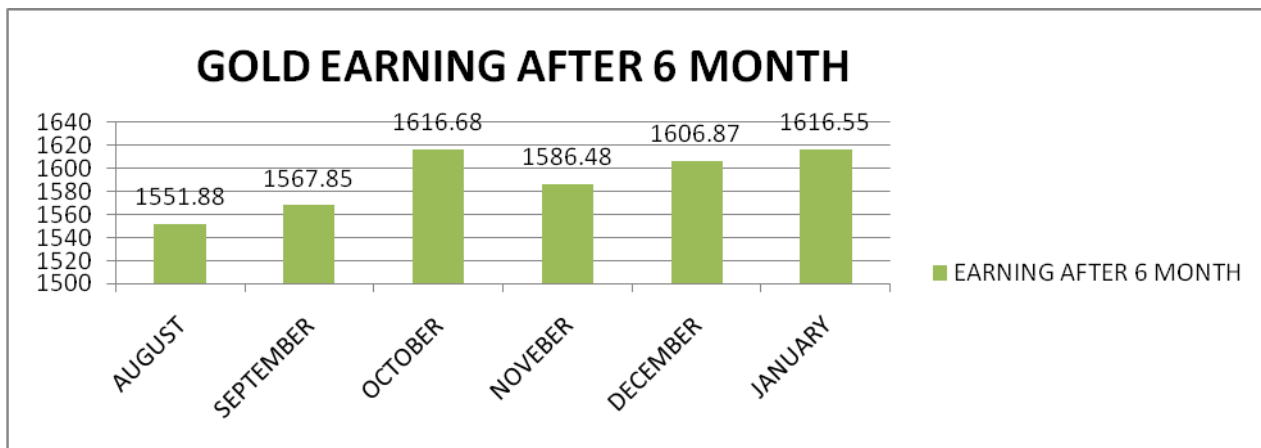
| MONTHS | BETA VALUE | ALPHA VALUE | REGRESSION VALUE | SMA | FORWARD MARKET HEDGE |
|-----------|------------|-------------|------------------|----------|----------------------|
| AUGUST | -1.3419 | 0.0105 | -1 | 37397.91 | 39315.35 |
| SEPTEMBER | -6.9817 | 0.7063 | -0.9999 | 37498.8 | 49417.21 |
| OCTOBER | -4.4338 | 0.0419 | -0.9999 | 38722 | 40759.89 |
| NOVEMBER | 0.1692 | -0.00614 | 0.9999 | 37082.82 | 38984.11 |
| DECEMBER | -0.6261 | 0.0061 | -0.9999 | 37978.65 | 39925.87 |
| JANUARY | -1.0823 | -0.0029 | -1 | 39467.7 | 41491.26 |



FINDINGS AND SUGGESTION:

GOLD PRICE ANALYSIS FOR THE INVESTORS:

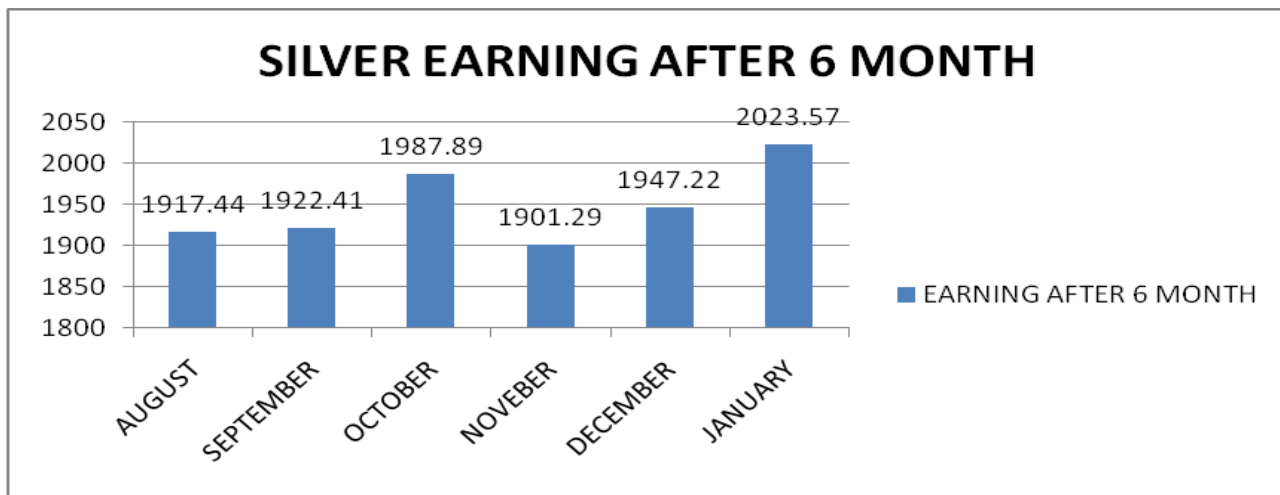
| MONTH | FORWARD MARKET HEDGING PRICE | SMA PRICE OF COMMODITY | EARNING AFTER 6 MONTH (RETURN) |
|-----------|------------------------------|------------------------|--------------------------------|
| AUGUST | 31204.61 | 29652.73 | 1551.88 |
| SEPTEMBER | 32147.30 | 30579.45 | 1567.85 |
| OCTOBER | 33150.00 | 31533.32 | 1616.68 |
| NOVEBER | 32543.16 | 30956.68 | 1586.48 |
| DECEMBER | 32947.37 | 31340.5 | 1606.87 |
| JANUARY | 33760.94 | 32144.39 | 1616.55 |



- ❖ *In the month of August if the investors invest on Gold at the beginning of the month the investor can get profit of 1551.88 after 6 month.*
- ❖ *In the month of September if the investor invest on Gold at the beginning of the month the investor can get profit of 1567.85*
- ❖ *In the month of October if the investor invest on Gold at the beginning of the month the investor can get return of 1616.68*
- ❖ *In the month of November if the investor invest on Gold at the beginning of the month the investor can get return of 1586.48*
- ❖ *In the month of December if the investor invest on Gold at the beginning of the month the investor can get return of 1606.87*
- ❖ *In the month of January if the investor invest on Gold at the beginning of the month the investor can get return of 1616.55*

SILVER PRICE ANALYSIS FOR INVESTORS:

| MONTH | FORWARD MARKET HEDGING PRICE | SMA PRICE OF COMMODITY | EARNING AFTER 6 MONTH (RETURN) |
|--------------|-------------------------------------|-------------------------------|---------------------------------------|
| AUGUST | 39315.35 | 37397.91 | 1917.44 |
| SEPTEMBER | 39417.21 | 37494.8 | 1922.41 |
| OCTOBER | 40759.89 | 38772 | 1987.89 |
| NOVEMBER | 38984.11 | 37082.82 | 1901.29 |
| DECEMBER | 39925.87 | 37978.65 | 1947.22 |
| JANUARY | 41491.26 | 39467.69 | 2023.57 |



- ❖ *If the investor invests on the Silver in the month of August they can get a profit of Rs. 1917.44 at the end of 6 month.*
- ❖ *The investor invests in the month of September they can get a profit of Rs.1922.41 at the end of six month.*
- ❖ *If the investors invest on Silver in the month of October they can get a profit of Rs.1987.89 at the end of six month.*
- ❖ *The investor invests on Silver in the month of November; they can get a profit of Rs. 1901.29 at the end of six month.*
- ❖ *In the month of December if the investor invest on Silver, they can get a return of Rs. 1947.22*
- ❖ *If the investor invest on Silver in the month of January, they will get a return of 2023.57*

ADVICE / SUGGESTIONS FOR THE INVESTORS:

- *The investor who wants to invest on Gold they can buy a contract of October month and they can earn a highest return after the six month (i.e. on march 2019) of rupees 1616.68*
- *At the same time investor can also select the month of January to get a high return on investing in gold and able to get a return of rupees 1616. 55 after the period of six month from January.*
- *When it comes to Silver the investors are advisable to purchase on January to get a highest return of rupees 2023.57 after the period of six month.*

CONCLUSION:

Capital market is as of now developed and came to at high state, each speculator interested to put money however not in commodity forward Market because of absence of proper information and guidance.

However there is a more extensive degree for supporting in commodity market for the financial specialists as it gives a superior come back with a given hazard.

Since both the commodities are decidedly related financial specialist can screen their hazard by contributing.

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