A STUDY ON COMMODITY ANALYSIS

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ABSTRACT

The commodities' markets are one of the fastest growing areas in the investment world. A commodity market is an exchange for buying and selling of commodities for future delivery. Commodity trading in India started much before it started in many other countries. However, years of foreign rule, draughts and periods of scarcity and government policies, caused the commodity trading in India to diminish. Commodity trading was however restarted in India recently, but a lot more developments and initiatives needs to be taken in this avenue. Investing in commodities offers protection against risk, diversified portfolio, trading on lower margin and safety. The study focuses on understanding the concepts and mechanism of commodity trading with special reference to crude Oil. It also aims to analyze the factors that influence the prices of oil and analyze the crude Oil trend in the commodity market.

1.INTRODUCTION

A commodity market: commodities is a market that exchanges the essential monetary segment as opposed to fabricated items, for example, cocoa, foods grown from the ground. Hard commodities are mined, for example, gold and oil.

Investors access around 50 significant commodity markets worldwide with absolute money related exchanges progressively dwarfing physical exchanges in which merchandise is conveyed. Fates contracts are the most seasoned method for putting resources into commodities. Fates are made sure about by physical assets.

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Commodity markets can incorporate physical exchanging and subordinates exchanging utilizing spot costs, advances, prospects, and alternatives on fates. Ranchers have utilized a basic type of subordinate exchanging the commodity showcase for quite a long time for value risk management.

A money related subordinate is a monetary instrument whose worth is gotten from a commodity named an underlie.

Derivatives are either trade exchanged or over-the-counter (OTC). An expanding number of subordinates are exchanged using clearing houses some with focal counterparty clearing, which gives clearing and settlement benefits on a fates trade, just as off-trade in the OTC market. Subsidiaries, for example, fates contracts, Swaps, Exchange-exchanged Commodities (ETC) forward contracts have become the essential exchanging instruments commodity markets. Fates are exchanged on controlled commodities trades. Over-the-counter (OTC) contracts are "secretly arranged respective contracts went into between the contracting parties directly".

Trade exchanged assets (ETFs) started to include commodities in 2003. Gold ETFs depend on "electronic gold" that doesn't involve the responsibility for bullion, with its additional expenses of protection and capacity in stores, for example, the London bullion advertisement. As per the World Gold Council, ETFs permit financial specialists to be presented to the gold market without the risk of value instability related to gold as a physical commodity

Aluminum is genuinely simple to distinguish as it is shimmering white shading and is exceptionally light and bendable. It doesn't stain or rust so consistently remains its silverwhite shading. It is usually and broadly utilized, yet isn't solid. It's been utilized on toys, pins and numerous inexpensive things It is moths hardness is 2.5-3 (about equivalent to gold) and it isn't attractive.

The proportion of copper to zinc is clinically more significant than the grouping of both of these follow metals. There are 2-4 grams of Zn conveyed all through the human body. Most zinc is in the mind, muscle, bones, kidney, and liver, with the most noteworthy focuses in the prostate and parts of the eye. It is the second most plentiful progress metal in life forms after iron and it is the main metal that shows up in all chemical classes.

NEED FOR THE STUDY

The commodity market plays a vital role in the economy and it is unlikely we would have as much economic growth in the last 100 years without the commodity exchanges. The purpose of the commodity market is to provide a centralized marketplace where commodity manufacturers can sell their commodities to those who wish to use them. This process increases business survival among manufacturers and the exchanges always make sure there is a buyer for every seller, provided their prices meet. Retail investors, who claim to understand the equity markets, may find commodities a bottomless market. But commodities are easy to understand as far as fundamentals of demand and supply are concerned.

SCOPE OF THE STUDY

The study examines the Indian commodity market, its history and the latest developments in the country. The study also keeps a birds-eye view of the global commodity market and its development. The study vastly covered the aspects of commodity trading, clearing and settlement mechanism in Indian commodity exchanges.

The HDFC securities ltd has been privileged for millions of customers by providing services over a variety of mediums viz online. The study stands as a reference for future investment options for investors and also it provides various options available in the market. The investor analyzes those options and make risk free and for proof investment in the future.

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OBJECTIVES OF THE STUDY

- To study the theoretical concept of the commodities market
- To find out the risk associated with selected commodities
- To analysis the risk and return of selected commodities
- To provide suggestions if any

RESEARCH METHODOLOGY

This study mainly depends on secondary data.

Commodities used:

- Copper
- Zinc

Tools adopted:

- Return=(closing price-opening price)/opening price*100
- Standard deviation= = $\sqrt{\sum} D^2/(n-1)$

Where,

D=difference n

=number of days

LIMITATIONS OF THE STUDY

1. The data collected for this study is confined to 1 year for selected commodities in the economy.
2. This study is based on the secondary data hence the data so collected is not much qualitative that means the data may not be accurate.
3. We cannot provide exact future price movements about the selected commodities.

2.REVIEW OF LITERATURE

Despite the significance of mechanical metals, both from a modern and a money related point of view, moderately little has been composed seeing their conduct as a (potential) resource class. Likewise with different commodities might bear some significance with speculators for resource distribution and broadening benefits. Be that as it may, the inquiry whether commodities, in general, are an advantage class is still under discussion. We speculation that to be considered as a different resource class non-ferrous metals ought to exhibit an elevated level of coordination, and react to the normal stuns along these lines. To this degree, the arrival and instability transmission over those business sectors ought to show comparable examples, For the most part, the implicit supposition that will be that base or non-ferrous metals can be viewed as a benefit class. The motivation behind this note is to analyze, from one lot of points of view, that of whether this is in truth warranted. Within existing examination on non-ferrous metals inquire about the greater part of the investigation has concentrated on fates markets. analyzed liquidity in commodity prospects markets utilizing information from vitality, mechanical and valuable metals, just as domesticated animals commodities, and found no proof of a predictable connection among stock and commodity liquidity.) dissected the group conduct in commodities fates markets, including vitality, domesticated animals, grains and metals, found no critical impact of the securities exchange on crowd conduct in the commodity prospects showcase dismissing the commodity theory. has inspected long memory and has indicated their value in portfolio arrangement. Moreover, the investigation has been likewise been led to non-ferrous metals. Brokedown, whether fates prices are precise and impartial indicators of resulting prices, and exhibited that base metals, are poor indicators. utilized determining trials to foresee future lead and zinc prices featuring the challenges of the price estimate. broke down instability determination and asymmetry in non-ferrous metals showcases in India.

This examination examines the example of data streams over the two nations, for example, Indian and the U.S. "Crude Oil" Futures showcase. For the examination, "Crude Oil" Futures contract exchanged on NYMEX for the U.S and MCX for India is considered because "Crude Oil" Futures contracts are exceptionally exchanged contracts on both MCX and NYMEX.

3.1 INDUSTRY PROFILE

While commodity markets in general and commodity derivatives market have existed in India for over 100 years, the official exchange traded mechanism for commodities began as late as 2003. There have been issues of liquidity and issues of multiple regulatory jurisdictions but at least there is a platform for forming a view and trading on commodities. There are some very important functions that commodity markets can perform in the Indian context

Achieve food security through commodity markets

How does the government of India achieve food security through the commodity markets? We recently saw a report about grains worth over Rs.800 crore that were destroyed in Punjab due to bad warehousing. Currently, this is the risk that the farmer is forced to take. These farmers can use the futures market more effectively by selling futures on their grains and locking in a price. This will ensure that farmers are not susceptible to the fluctuations in the prices. Currently, farmers are being hit by weak pulses prices due to oversupply in the Indian market. This can be overcome by selling futures on these pulses at a price that is remunerative for the farmer. In many Western markets, farmers actively use the futures market to hedge their price fluctuation in case of agricultural products.

Greater investment in the agricultural ecosystem

Today one of the big challenges for the agricultural sector is that there is virtual absence of post-harvest infrastructure. As a result, a substantial amount of food grains are lost in the transmission process which worsens the price situation for the end customer without benefiting the farmer. A viable commodity market mechanism will be profitable for the farmer, broker, middleman and the consumer and this will spur greater investments in the agricultural ecosystem in the form of better warehousing systems and improvement transport facilities. Here again a viable commodity market can play a key role in catalyzing the development of this ecosystem.

A mechanism for aggregation and financing

The big challenge in Indian agriculture is that farmers are too small and hence too dispersed. The need of the hour is of an aggregator. Currently, the middlemen play the role of aggregators but then it is not exactly a transparent mechanism. An organized commodity market can play the role of an aggregator of agricultural products more efficiently and more effectively. The market provides an organized and guaranteed mechanism for aggregating and selling agricultural products and small and dispersed farmers can make the best of it. Financing is the second aspect of commodity markets. The commodity markets have an organized and institutional mechanism to raise financing against warehouse receipts. Hence the agriculture sector does not have to depend on unorganized financing.

3.2 COMPANY PROFILE

About HDFC securities

An Institution's institution - HDFC securities Limited subsidiary of HDFC Bank, is one of India's premier broking houses offering Retail and Institutional broking businesses. Rated AAA by Crisil and A1+ by ICRA (Highest Rating), HDFC securities has been voted the Largest E-brokerage house (2011) by BSE (IPF)-Dun & Bradstreet. It has also received the Best e-brokerage house award (runner-up) 2010 from Outlook Money. A top online Broking portal (www.hdfcsec.com) blending Web 2.0 and customer centric technologies, with ability for clients to Personalise, Manage, Customize and Share.

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We are one of the leading stock broking companies in India and a subsidiary of HDFC Bank- a renowned private sector bank.

As a stock broking company, we have completed 15 years of operation serving a diverse customer base of retail and institutional investors.

There are millions of reasons why you can choose our services and here are a few of them:

4.DATA ANALYSIS AND INTERPRETATION

CALCULATION OF RISK AND RETURN OF COPPER FROM 01-01-22 TO 31-03-22

DATE	COMMODITY	TOTAL VALUE(lacs)	RETURNS	AVERAGE	DIFFERENCE	D*D
01-Jan-22	COPPER	23170.25				
02-Jan-22	COPPER	227948.66	840.64	15.83368	824.806408	680305.6108
03-Jan-22	COPPER	201318.93	-3.04188	15.83368	-18.875557	356.2866493
04-Jan-22	COPPER	230111.43	8.892956	15.83368	-6.9407237	48.17364613
07-Jan-22	COPPER	168609.10	-26.7272	15.83368	-42.560875	1811.428058
08-Jan-22	COPPER	173317.97	2.792773	15.83368	-13.040907	170.0652464
09-Jan-22	COPPER	226379.98	13.30622	15.83368	-2.5274948	6.388230177
10-Jan-22	COPPER	159035.39	-22.0165	15.83368	-34.850175	1224.53473
11-Jan-22	COPPER	144850.66	-8.92023	15.83368	-24.752909	612.7064845
14-Jan-22	COPPER	132423.49	-8.5793	15.83368	-24.412978	595.9935024
15-Jan-22	COPPER	129473.90	-2.22739	15.83368	-18.061072	326.2023157
16-Jan-22	COPPER	152248.98	17.43601	15.83368	1.60232834	2.567456104
17-Jan-22	COPPER	155501.55	2.270696	15.83368	-13.562984	183.9545369
18-Jan-22	COPPER	201226.58	29.38558	15.83368	13.5518985	183.6539522
22-Jan-22	COPPER	141295.96	-29.7722	15.83368	-45.605866	2279.895013
22-Jan-22	COPPER	138871.43	-1.71592	15.83368	-17.549603	307.9885685
23-Jan-22	COPPER	136635.58	-1.61001	15.83368	-17.443694	304.2824738
24-Jan-22	COPPER	153158.68	12.09282	15.83368	-3.7408562	13.99400477
25-Jan-22	COPPER	226680.87	41.47476	15.83368	25.6410768	657.4648179

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28-Jan-22	COPPER	153935.11	-28.9577	15.83368	-44.791363	2006.266222
29-Jan-22	COPPER	154124.08	0.12276	15.83368	-15.71092	246.8330224
30-Jan-22	COPPER	175759.37	14.03758	15.83368	-1.7961007	3.225977609
31-Jan-22	COPPER	142792.34	-18.7569	15.83368	-34.590592	1226.509041
01-Feb-22	COPPER	133422.46	-6.56399	15.83368	-22.397674	501.6557808
04-Feb-22	COPPER	152274.86	14.13242	15.83368	-1.7012588	2.894281632
05-Feb-22	COPPER	141386.49	-7.15047	15.83368	-22.984151	528.2712261
06-Feb-22	COPPER	166446.14	17.72422	15.83368	1.89053822	3.574134705
07-Feb-22	COPPER	170939.38	2.699516	15.83368	-13.134164	172.5062668
08-Feb-22	COPPER	145779.51	-14.7186	15.83368	-30.552272	933.4413276
11-Feb-22	COPPER	126686.67	-13.0971	15.83368	-28.930747	836.9881181
12-Feb-22	COPPER	137835.39	8.800231	15.83368	-7.0334487	49.46940046
13-Feb-22	COPPER	113352.25	-17.7626	15.83368	-33.596273	1128.709592
14-Feb-22	COPPER	159892.36	41.05795	15.83368	25.2242699	636.2637913
15-Feb-22	COPPER	167142.05	4.534107	15.83368	-11.299573	127.6803597
18-Feb-22	COPPER	138923.52	-16.883	15.83368	-32.716643	1070.378711
22-Feb-22	COPPER	184065.54	32.49415	15.83368	16.6604722	277.5713332
22-Feb-22	COPPER	180798.30	-1.77504	15.83368	-17.608722	310.0670782
22-Feb-22	COPPER	153476.22	-15.1122	15.83368	-30.945609	957.6306914
22-Feb-22	COPPER	224877.45	33.49136	15.83368	17.6576778	311.7935869
25-Feb-22	COPPER	202995.81	-0.91842	15.83368	-16.752002	280.6329284
26-Feb-22	COPPER	174743.05	-13.9179	15.83368	-29.751583	885.1566931
27-Feb-22	COPPER	224316.85	16.92416	15.83368	1.09048379	1.189154904
28-Feb-22	COPPER	224170.93	9.717299	15.83368	-6.1163806	37.41011188
01-Mar-22	COPPER	180736.44	-22.3756	15.83368	-35.229292	1239.694255
04-Mar-22	COPPER	88503.26	-51.0322	15.83368	-66.865547	4471.001399
05-Mar-22	COPPER	140467.15	58.7141	15.83368	42.8804171	1838.730169
06-Mar-22	COPPER	151608.60	7.931712	15.83368	-7.9022679	62.44109594
07-Mar-22	COPPER	150003.72	-1.05857	15.83368	-16.892248	285.3480397
08-Mar-22	COPPER	149986.75	-0.01131	15.83368	-15.844993	251.0638048
11-Mar-22	COPPER	127807.87	-14.7872	15.83368	-30.622906	937.6398968
12-Mar-22	COPPER	174404.83	36.4586	15.83368	22.6249229	425.387322
13-Mar-22	COPPER	145138.59	-16.7806	15.83368	-32.614316	1063.69362
14-Mar-22	COPPER	189266.51	30.40399	15.83368	14.5703084	202.2938855
15-Mar-22	COPPER	228292.98	10.05274	15.83368	-5.7809401	33.42026824
18-Mar-22	COPPER	152201.43	-26.934	15.83368	-42.767641	1829.071117
22-Mar-22	COPPER	186853.13	22.77507	15.83368	6.9413869	48.18285201
22-Mar-22	COPPER	129752.85	-30.5589	15.83368	-46.39259	2252.272415
22-Mar-22	COPPER	106392.85	-18.0035	15.83368	-33.837138	1144.952016
22-Mar-22	COPPER	201322.24	89.22441	15.83368	73.3907275	5386.228878
25-Mar-22	COPPER	142903.29	-29.0173	15.83368	-44.850961	2011.608706
26-Mar-22	COPPER	140122.64	-1.94653	15.83368	-17.780226	316.135733
27-Mar-22	COPPER	158803.52	13.33262	15.83368	-2.5010641	6.255322825
28-Mar-22	COPPER	156349.42	-1.54537	15.83368	-17.379049	302.0313361

29-Mar-22	COPPER	227749.41	32.87508	15.83368	17.0413956	290.4091634
			15.83368			725995.1394
					VARIANCE	11523.73237

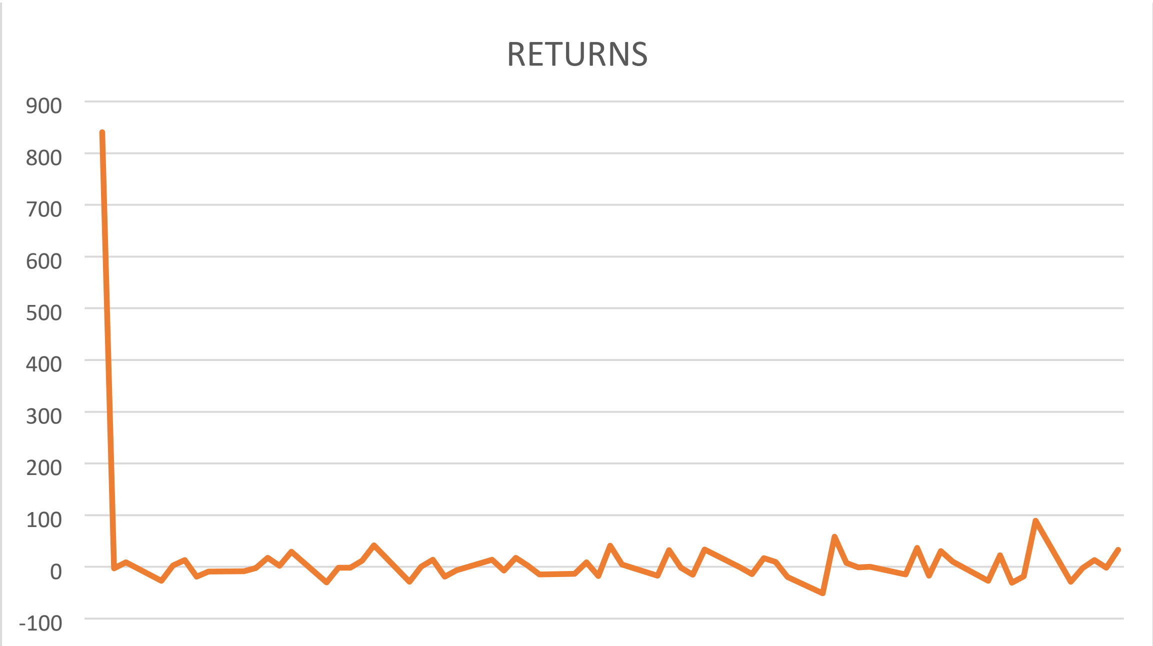
Returns = 15.83368

Risk(σ) = $\sqrt{\sum D^2/(n-1)}$

= $\sqrt{11523.73237}$

= 107.3486487

GRAPHICAL REPRESENTATION



INTERPRETATION

The above analysis and graphical representation have been interpreted as:

1. The above graph represents the risk and returns of copper for 3 months i.e., from 0101-22 to 31-03-22.
2. The average returns of the commodity zinc are 15.83368 and the risk is 107.3486487
3. The returns are at the highest point in the beginning of January later the returns are disturbed and resulted in very low returns thereafter.
4. In February the returns are moderate and it continued till the end of the month.
5. In March there is a significant increase and a decrease in returns. The returns are increased slightly during the second half of the march.

5.1FINDINGS

- The average returns of copper for 3 months i.e., from 01-01-22 to 31-03-22 is 15.83368 and the risk is 107.3486487
- The average returns of copper for 3 months i.e., from 01-04-22 to 30-06-22 is 3.345681 and the risk is 24.17297733
- The average returns of copper for 3 months i.e., from 01-07-22 to 30-09-22 is 7.988252 and the risk is 51.42523
- The average returns of copper or a period of 3 months i.e., from 01-10-22 to 31-1222 is 12.58899 and the risk is 75.12015147
- The average returns of copper for 3 months i.e., from 01-01-22 to 31-03-22 is 10.75504 and the risk is 68.79577249
- The average returns of copper for 3 months i.e., from 01-04-22 to 30-06-22 is 1.6034 and the risk is 23.08293
- The average returns of zinc for 3 months i.e., from 01-01-22 to 31-03-22 is 15.83244 and the risk is 108.6412
- The average returns of zinc for 3 months i.e., from 01-04-22 to 30-06-22 is 4.250911 and the risk is 32.26763
- The average returns of zinc for 3 months i.e., from 01-07-22 to 30-09-22 is 3.223138 and the risk is 31.2896
- The average returns of zinc for 3 months i.e., from 01-10-22 to 31-12-22 is 4.359758 and the risk 66.1752
- The average returns of zinc mini for 3 months i.e., from 01-01-22 to 31-03-22 is 14.74 and the risk is 94.47201
- The average returns of zinc mini for 3 months i.e., from 01-04-22 to 30-06-22 is 5.723584 and the risk is 40.09902
- The average returns of zinc mini for 3 months i.e., from 01-07-22 to 30-09-22 is2.578424 and the risk is 27.59242
- The average returns of zinc mini for 3 months i.e., from 01-10-22 to 31-012-22 is 10.52241 and the risk is 53.3863.

5.2 SUGGESTIONS

- From the analysis, it can be suggested that the copper market has high risk and returns. The investment made in the copper commodity market will posses high risk and cannot guarantee the returns would be high as always.
- Along with the copper, zinc mini also generates high returns when compared to other selected commodities.
- It is suggested that the investor should invest in the selected commodities during January to march so that he can earn more returns.
- The copperm generated fewer returns from April to June compared to other commodities so it is suggested that the investor should choose other selected commodities during that particular period instead of copperm.
- An investor must consider all the factors that affect the prices of commodities in the market so that he can take proper decisions regarding investment.

CONCLUSION

The knowledge of the share market is more among the people when compared to the commodity market as it is a growing market in the economy. The overall analysis and study conclude that the investment made in different commodities by an investor results in returns by risk.

The commodity exchanges came into existence to safeguard the interest of investors who are not in a position to invest in stock exchanges with heavy investment in the economy. These exchanges help investors in yielding better returns with moderate risk.

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