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EFFECT ON COMMODITY PRICES & RISK MANAGEMENT IN INDIAN COMMODITY MARKET

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Abstract:

India is the land of plethora of commodities –thanks to its vast agricultural and plantation potential. These commodities are traded in different markets for the purpose of consumption by people throughout the length and breadth of the country. Besides the wholesale trade in the commodities, the commodity futures are traded in regional and national exchanges. The commodity future markets essentially trade in commodities such s sugar, textile, metals, energy, FMCG goods. In commodity exchange markets traders deal in futures for earning profits by taking advantages of spot and future prices. The future trading in commodities help in controlling and regulating the prices of commodities.

As future trading in shares and debt instruments started in 2001 by establishing national stock exchange of India, the future trading in commodities began first in gold in 2010 and thereafter commodities like textiles, cement, sugar and others. The commodity market is yet to gain trading stability and functional efficiency. Its elementary phase has entailed a number of upheavals on account of indiscipline and unfair practices by the trading communities . Now, the rules, regulations and system have been set up for preventing such practices.

The objective of this paper is to examine and explore the procedure and process of determining the prices of commodity-future in relation to actual wholesale prices of the commodity in the market and the methods of controlling the impending risks. It attempts to study the impact of speculation on the movements of commodity prices.

Key words:

Derivative contract, Speculators, future contracts, Price Bubble, Index fund, financialization, hedging,

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Introduction:

Commodities are the economic goods which are produced, stored, transported, bought, and sold between the traders before they are delivered to the consumers. The considerable gap betweenthe prices producers get and the prices the consumers pay has been matter of serious concern. In the supply chain of commodities there involves indeterminate risks which the intermediate holders or middlemen of commodity bear without any insurance. In order to mitigate to an extent possible they enter into future trading in particular commodity.

The dramatic price changes evident in the commodity markets have consequences for both consumers and producers. The sudden increase in major crop prices translated into higher food prices in developing countries and spawned concerns over the "silent tsunami" that was spreading over the less fortunate who could not afford adequate nutrition. While the apparent higher average prices are a benefit to producers, the corresponding volatility has imposed greater demands on price risk management for farmers and grain handlers. The two most important purposes of derivative markets are risk shifting and price discovery. However, the "unusual" commodity market volatility has created uncertainty around the accuracy of prices and in the potential loss of the major price shifting tool producers and the industry have just when they need it most. Higher volatility increases hedging costs associated with financing margin calls, and the increases have been large enough to force the closure of some small and midsized elevators. In an attempt to determine appropriate policies to deal with the consequences of the dramatic price swings to both consumers and producers, answers are being sought to the questions surrounding the causes for price movements in the commodity markets.

Investingin commodity derivatives:

Commodity derivatives, which were traditionally developed for risk management purposes, are now growing in popularity as an investment tool. Most of the trading in the commodity derivatives market is being done by people who have no need for the commodity itself. They just speculate on the direction of the price of these commodities, hoping to make money if the price

moves in their favour. The commodity derivatives market is a direct way to invest in commodities rather than investing in the companies that trade in those commodities.

For example, an investor can invest directly in a steel derivative rather than investing in the shares of Tata Steel. It is easier to forecast the price of commodities based on their demand and supply forecasts as compared to forecasting the price of the shares of a company -- which depend on many other factors than just the demand -- and supply of the products they manufacture and sell or trade in. Also, derivatives are much cheaper to trade in as only a small sum of money is required to buy a derivative contract. A buyer of a derivative contract is a person who pays an initial margin to buy the right to buy or sell a commodity at a certain price and a certain date in the future.On the other hand, the seller accepts the margin and agrees to fulfil the agreed terms of the contract by buying or selling the commodity at the agreed price on the maturity date of the contract.

At present, the option of cash settlement lies only with the seller of the contract. If the seller decides to make or take delivery upon maturity, the buyer of the contract has to fulfil his obligation by either taking or making delivery of the commodity, depending on the specifications of the contract.

The most critical function in a commodity derivatives exchange is the settlement and clearing of trades. Commodity derivatives can involve the exchange of funds and goods. The exchanges have a separate body to handle all the settlements, known as the clearing house.

In spite of the surge in the turnover of the commodity exchanges in recent years, a lot of work in terms of policy liberalization, setting up the right legal system, creating the necessary infrastructure, large-scale training programs, et cetera still needs to be done in order to catch up with the developed commodity derivative markets.

Trading in commodity options is prohibited in India. The regulators should look towards introducing new contracts in the Indian market in order to provide the investors with choice, plus provide the farmers and commodity traders with more tools to hedge their risks.

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The Role of Speculators:

Speculators have been characterized by many as both 'bad' and 'good' when market price are too low or too high. Markets are efficient if all available information is embedded into the price, which subsequently then follows a random walk.

Historical Controversy

One could argue that our current era bears a number of similarities to the last great era of globalization in the late nineteenth century.

For example, the period before independence "first harnessed the powers of global communications" Other parallels include deregulated and integrated global capital markets, expanding international trade, strong foreign direct investment flows and the search for new markets,"

Similarities between the first and present eras:

	Pre –Independence Era	Present Era
Deregulated capital market	No	Yes
Inflation	Yes	Yes
Rising Commodity Prices	No	Yes
New Regional Powers with global aspiration	No	Yes
Financially overstretched dominant power	Yes	Yes
Expansion of democracy	No	Yes
Proliferation of war	Yes	No

State sponsored terrorism	Yes	Yes

Risk Management

Besides the challenges of defending the economic role of commodities derivatives trading, market participants also face striking risk-management challenges.

The key risk-management lesson from that debacle was to establish clear-cut compliance and ethics programs, not just for the trading staff but also for senior management. Also, prospective traders entering into large-scale derivatives trading operations need to be as (or more) knowledgeable about regulatory rules and laws, as they are with sophisticated market risk-management techniques.

Review of Literature:

A review of the existing literature on the subject reveals the following. The research papers were accessed from authoritative sources.

Rahul Oberoiin "Keys to commodity trading" dwells on the nine common myths about investing in the commodity market. He admits that the commodity market has its share of speculators but sees nothing wrong with it. Along with hedgers and arbitrageurs, speculators help in the price discovery exercise. He argues that it is not difficult to understand the commodity market. All commodities are globally traded and the global demand-supply situation is widely known and available to anyone who reaches out for it. The commodity markets are nowhere as volatile as stock futures. If investors overtrade and exploit the margin to the hilt, then they cannot blame the commodity market for the unfavorable outcome, if any. Since commodity exchanges promote price transparency, he refuses to buy the story that commodity exchanges fuel inflation. On the other hand, by allowing wider participation, these exchanges discourage cartelization on the part

of local traders and associations. Even small investors can take up commodity trading. It is also wrong to assume that buyers of commodity derivatives should take delivery as well. Delivery is mandatory only in specific commodities and that too only if one keeps the position open after the delivery notice period. There is compulsory delivery in commodities such as *Chana*and gold. Nor is it true that prices are easy to manipulate in the commodity markets. This is because most commodities that are traded are produced and consumed across the globe. As such, an individual or a group of people cannot easily manipulate prices. Price manipulation is possible only when production is concentrated in one area. It does not happen with essential commodities. Regulators and governments monitor prices of essential commodities and take steps whenever there is an attempt to manipulate the markets. One cannot change a commodity's fundamentals. Commodity prices reflect the demand-supply dynamics and thus operators cannot manipulate prices. Besides, commodities are traded worldwide and hence there is minimal chance of manipulation by a handful of participants.

Nirmal Kumar, R.T and **Balaji, K** in "An Empirical Investigation on the Investors‟ Perception Towards Commodities Futures Trading In India With Special Reference ToPuducherry, India" argue that since 2004, the growth of the commodity derivative market in the country has been impressive.

With institutional players prevented from participating in the commodity futures market, the retail investors, as a group, have emerged as major players in the said market.

In well functioning capital markets, rational speculators enhance market efficiency (Grossman,1995; Stiglitz, 1980). The market efficiency role of speculators has long been recognized (Smith, 1776; Mill, 1887; Keynes 1930; Freidman; 1953). Adam Smith (1776) and John Stuart Mill (1887) indicated that speculators enhance the intertemporal allocation of resources and stabilize asset prices. Later, Keynes (1930) argued that speculators provide liquidity to the market and underwrite the risks of price volatility in the spot market. Meanwhile, Freidman (1959) suggested that profitable speculation - buying when price is low and selling when price is high - should stabilize commodity prices. However, there are critics that question the role of

speculators to enhance market efficiency and stabilize prices (Brunnermeier and Nagal, 2004).

Objectives

The objective of this study is to highlight the impact of commodity index traders on prices in commodity futures markets. It further throws light upon the following objectives:

- To understand the relationship between investment fund activity and commodity prices in the futures market.
- To study the implications of the presence of commodity index traders for the risk management and price discovery role of the futures market.
- To study the growth of commodity market in terms of traded contracts.
- To evaluate the commodity market prospects in terms of other economic factors.
- To impart a knowledge of commodity future as Risk Management tool.
- To evaluate the influence of speculators on future commodity prices.

Methodology:

The study reviews the mechanism of commodity index traders and how new financial products have resulted in the "financialisation" of commodity futures markets. The present study on the basis for the arguments made by Masters (2008) and others that the funds flowing from index fund trading created the price bubble observed in commodity markets. The movement in commodity prices was not a bubble but rather the result of demand shifts and supply shocks that pushed prices higher. Next it gives the empirical evidence on the role of speculative activity on commodity prices. The results are generally mixed although there is more support for the view that the price changes were not a speculative bubble. The paper concludes with the implications of the findings for risk management and stabilization policy.

Commodity Future:

The futures market is a commodity exchange where futures contracts for buying and selling commodities for future delivery are traded. The futures exchange offers standardized contracts on set amounts of many commodities. In the vast majority of cases, traders of agricultural commodity

futures contracts do not take physical delivery of the commodity being traded on the futures market. The primary purpose of the futures market is to establish prices for commodities for delivery at specified times in the future, and to enable commercial market participants to protect their business activities against the risk of future price fluctuations. In the futures market, the three major types of traders are:

(1) Commercial traders or hedgers who use futures to reduce the risk of future unfavorable changes in the price of commodities that they handle;

(2) Non-commercial traders or speculators who aim to benefit from future price movements; and,

(3) Arbitrageurs who attempt to profit by locking into more than one market.

Future contracts are just a step ahead the forward contract, wherein the settlement is done in standardized manner. The contracts are being cleared by clearing houses, so no question of counter party risk arise therein. In commodity derivatives, the crux of future contracts is to lock up the future price of your commodity on the day of contract and cover the risk to go down of price in case of short and rise in case of long. This is basically used to transfer the risk. For e.g. if a producer of a commodity and expect a fall in selling price in future say at the time of harvesting, can short the commodity future in future market for specified quantity and get the agreed price, no matter where the price of such commodity goes. Likewise if an industrialist knows the need of any commodity like cotton for textile over the year, he can also go for long in present and can cover the demand-supply gap which can lead the hike in prices latter on. While entering in the future contracts of agricultural products, one should keep in mind the time of sowing and harvesting besides the monsoon related factors, which lead the direct impact on the supply of that product.

An investor can transact with the approved clearing member of commodity exchange concerned. To open an account he has to fill the necessary document like KYC client form, Risk disclosure document etc accompanied by the prescribed identity proof. For opening a Léger account, the investor has to submit a cancelled cheque of the bank concerned in which he has his personal account. Before opening an account with a clearing member, he is expected to evaluate certain key factors like net worth, market credibility, credit facilities and the kind of services provided etc.

Pricing of future contracts are directly related to the spot price and expected future price of an

underlying asset, which here means a commodity. Simply stated the change in spot price will lead the change in gain or loss of future contracts in the same direction. The gain or loss in future contracts will always be linear. The emergence of commodity derivatives has reduced transaction cost as well as enabled risk free trading for producer, investor, and commodity trader and benefited both market participants and non participants.

Potential Effect of Index Funds On Commodity Markets:

Index Funds Created a Price Bubble:

The correlation between the value invested by commodity index funds (CITs) and the increase in commodity futures prices is indisputable. One group of CIT critics argues that the large inflow of funds into commodity markets by index investors caused prices to rise higher than justified by economic fundamentals. These critics contend that the new money became the driving force in the market and created a price bubble, as opposed to the traditional view in which commercial hedgers determine the volume of activity and speculators follow.

Index Funds Did Not Create a Price Bubble:

The view that the new money flowing into commodity futures markets from CITs and other investors drove prices upward is countered by a group of economists who claim there is no causal link between commodity trading activity and futures prices. The lack of a link is based on four counter arguments described i.e.

- Physical inventories are not held by index investors;
- New money or new demand for contracts are met by new supply;
- Index funds will sell rather than increase investment levels during rising prices acting to stabilize futures prices; and
- The trading by CITs is predictable rather than noise trading that could possibly influence price away from fundamentals.

The first counter argument against the view that index funds fuelled the price boom is that virtual hoarding does not exist. Futures markets trade contracts for buying and selling commodities for future delivery and rarely involve dealing with actual physical goods. In order to impact cash prices, the CITs must take delivery of the good after letting their long position contract expire and then hold these physical inventories off the market.

It is argued further that the new demand for futures contracts by CITs can be met by a new supply of contracts. Unlike the supply of the actual physical commodity, there is no limit on the number of futures contracts that can be created. The futures market is a zero-sum game so for every long (or short position), a corresponding short (or long) position is established. Consequently, if the long positions of the CITs represent a new demand, the short positions of the same contracts represent the new supply. This new supply does not require the inducement of a higher price. Since futures markets are zero-sum games, the money inflows will not directly impact prices. The passive investment strategy by CITs stabilizes the market rather than creating bubbles.

Higher prices will raise index values, and thus cause the CITs to sell some of their positions to reduce the percentage back to the desired allocation. The selling during times of high prices thereby acts to reduce prices and stabilize the market.

A final argument revolves around the predictable nature of CIT trading. The trading must be unpredictable for any group to consistently push prices away from its market equilibrium. Index funds follow the same passive investment strategy and do not attempt to hide their current positions or their next move.

Empirical Evidence:

As with the theoretical debate, the empirical evidence on the impact of index funds on futures prices is inconclusive.

Index Funds Drove Commodity Futures Prices:

Initial evidence for those purporting CITs created a speculative price bubble in commodity markets were largely based on the correlation between the level of funds flowing into these

markets and prices, the relationship between agricultural futures prices and four proxies for speculation:

(1) Volume of futures contracts,

(2) Open interest in futures contracts,

(3) Ratio of volume to open interest, and

(4) Ratio of non-commercial positions to total positions in futures contracts.

Similarly, an increase in the number of non-commercial positions, generally assumed to represent speculators, relative to commercial positions, assumed to represent hedgers of physical products, will proxy an increase in speculative activity.

Index Funds Did Not Drive Futures Prices:

While the correlation between volume of activity by index funds and the rise in commodity futures prices is given as evidence of the role of speculators, other descriptive data assessments suggests otherwise. For example, inventories of agricultural commodities declined rather than increased as should occur if speculative activity is driving the price above the equilibrium based on market fundamentals.

Similarly, commodity markets without index participation, such as fluid milk, also rose. Even for markets with index participation, there was not a consistent effect as the relative concentration of index fund positions was much higher in the livestock market compared to the crop markets but the price increases were much smaller in the former.

Conclusion & Suggestions:

The growth of commodity market is remarkable during last decade. Prices of all commodities are heading northwards due to rapid increase in demand for commodities. Developing countries like China are voraciously consuming the commodities. That's why globally commodity market is bigger than the stock market. It is the market where a wide range of products, viz., precious metals, base metals, crude oil, energy and soft commodities like palm oil, coffee etc. are being traded. It is important to develop a vibrant, active and liquid commodity market. This would help investors hedge their commodity risk, take speculative positions in commodities and exploit arbitrage opportunities in the market. Value of contracts traded in commodity market represents the demand for trading and the people awareness regarding market .The inverse relation of

commodity market with stock market shows the alterative ahead investors whenever the feel bearish trend in the same. Despite the controversies around the influence of CITs, one can conclude that the rise in futures volatility will have implications on the hedging decisions of commercials. For example, if hedgers are concerned about mark-to-market risk and basis risk, they tend to hold a smaller futures position. At the same time, higher volatility on spot commodity markets calls for a need for price risk management.

However, during the dramatic commodity futures price rise , the common price risk tool of forward contracting was not available to producers as some grain elevators refused to hedge a position associated with a guaranteed harvest price, to the farmer, in order to avoid the financial risks of large margin calls. Thus, an increase in commodity market volatility may lead to greater costs for managing risk more costly insurance premiums, higher options premiums, and greater margins for hedging.

Commodity price volatility may also have implications for the volume of international agricultural commodity trade when individual countries adopt policies that restrict imports or exports (e.g., export bans) as a method of coping with price variations. Research on the effects of commodity price volatility on international trade (e.g., on volume) is limited. A few studies suggest an increase in exchange rate volatility leads to a reduction in the volume of international trade . As higher exchange rate volatility lowers risk-adjusted expected revenue from exports, and therefore reduces the incentive to trade .

Commodity index traders are one of the reasons for the significant increase in market volatility over the last several years but not the sole cause. Volatile markets provide opportunities for arbitrageurs and speculative money will naturally flow into such a market. Restrictions on the level of such investment will reduce liquidity when markets are unstable and liquidity required. Rather than regulate markets, governments should consider enhancing the risk management skills and opportunities for commercial producers.

Thus, in India whenever the future price of a commodity increases sharply , it is usually regarded as the result of speculative activity, and authorities tend to impose several kinds of regulations. However, the commodity market has significantly improved its efficiency with the increase of

trade value during the recent period, suggesting that the future market performs the functions of price risk management & price discovery. Hence, in order to utilize the future market, the Indian government will be required to further enhance its institutional infrastructure for smooth commodity transactions in line with market development.

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