

# A Study of Performance Analysis of Commodity Market Approach in India

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## ABSTRACT

India is one of the top producers of a large number of commodities, and also has a long history of trading in commodities and related derivatives. The commodities derivatives market has seen ups and downs, but seem to have finally arrived now. The market has made enormous progress in terms of technology, transparency and the trading activity. Current futures volumes are miniscule compared to underlying spot market volumes and thus have a tremendous potential in the near future.

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## 1. Introduction

A market where commodities are traded is referred to as a commodity market. These commodities include bullion (gold, silver), non-ferrous (base) metals such as copper, zinc, nickel, lead, aluminum, tin, energy (crude oil, natural gas, etc.), agricultural commodities such as soya oil, palm oil, coffee, pepper, cashew, etc. Existence of a vibrant, active, and liquid commodity market is normally considered as a healthy sign of development of a country's economy. Growth of a transparent commodity market is a sign of development of an economy. It is therefore important to have active commodity markets functioning in a country.

A Commodity futures is an agreement between two parties to buy or sell a specified and standardized quantity of a commodity at a certain time in future at a price agreed upon at the time of entering into the contract on the commodity futures exchange. The need for a futures market arises mainly due to the hedging function that it can perform. Commodity markets, like any other financial instrument, involve risk associated with frequent price volatility.

## 2. The need for commodities market in India

India is among the top-5 producers of most of the commodities, in addition to being a major consumer of bullion and energy products, which needs use of futures and derivatives as price-risk management system. Fundamentally price you pay for goods and services depend greatly on how well business handle risk. By using effectively futures and derivatives, businesses can minimize risks, thus lowering cost of doing business. Commodity players use it as a hedge mechanism as well as a means of making money. For an agricultural country like India, with plethora of mandis, trading in over 100 crops, the issues in price dissemination, standards, certification and warehousing are bound to occur. Commodity Market will serve as a suitable alternative to tackle all these problems efficiently.

## 3. Commodities market in India -- Evolution and regulation

India has a long history of futures trading in commodities. In India, trading in commodity futures has been in existence from the nineteenth century with organised trading in cotton, through the establishment of Bombay Cotton Trade Association

Ltd. in 1875. Over a period of time, other commodities were permitted to be traded in futures exchanges. Spot trading in India occurs mostly in regional mandis and unorganised markets, which are fragmented and isolated.

Over time the derivatives market developed in several other commodities in India. Following cotton, derivatives trading started in oilseeds in Bombay (1900), raw jute and jute goods in Calcutta (1912), wheat in Hapur (1913) and in Bullion in Bombay (1920). However, many feared that derivatives fuelled unnecessary speculation in essential commodities, and were detrimental to the healthy functioning of the markets for the underlying commodities, and hence to the farmers. With a view to restricting speculative activity in cotton market, the Government of Bombay prohibited options business in cotton in 1939. Later in 1943, forward trading was prohibited in oilseeds and some other commodities including food-grains, spices, vegetable oils, sugar and cloth.

After Independence, the Parliament passed Forward Contracts (Regulation) Act, 1952 which regulated forward contracts in commodities all over India. The Act applies to goods, which are defined as any movable property other than security, currency and actionable claims. The Act prohibited options trading in goods along with cash settlements of forward trades, rendering a crushing blow to the commodity derivatives market. Under the Act, only those associations/exchanges, which are granted recognition by the Government, are allowed to organize forward trading in regulated commodities. The Act envisages three-tier regulation: (i) The Exchange which organizes forward trading in commodities can regulate trading on a day-today basis; (ii) the Forward Markets Commission provides regulatory oversight under the powers delegated to it by the central Government, and (iii) the Central Government - Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution - is the ultimate regulatory authority.

The era of widespread shortages in many essential commodities resulting in inflationary pressures and the tilt towards socialist policy, in which the role of market forces for resource allocation got diminished, saw the decline of this market since the mid-1960s. This coupled with the regulatory constraints in 1960s, resulted in virtual dismantling of the commodities future markets. Liberalization of Indian economy

since 1991 recognised the role of market and private initiative for the development of the economy.

The much maligned market instruments such as the futures trading were also given due recognition. Forward trading was permitted in cotton and jute goods in 1998, followed by some oilseeds and their derivatives, such as groundnut, mustard seed, sesame, cottonseed etc. in 1999.

The year 2003 marked the real turning point in the policy framework for commodity market when the government issued notifications for withdrawing all prohibitions and opening up forward trading in all the commodities. This period also witnessed other reforms, such as, amendments to the Essential Commodities Act, Securities (Contract) Rules, which have reduced bottlenecks in the development and growth of commodity markets. Of the country's total GDP, commodities related (and dependent) industries constitute about roughly 50-60 %, which itself cannot be ignored. Responding positively to the favourable policy changes, several Nation-wide Multi-Commodity Exchanges have been set up since 2002, using modern practices such as electronic trading and clearing. The Forward Markets Commission is the regulatory authority of the Commodity Futures Market in India. The Commodity Futures Market comprises three National Commodity Exchanges and nineteen Regional Commodity Exchanges. The National exchanges operating in the Indian Commodity futures market are Multi Commodity Exchange of India (MCX), National Commodity and Derivative Exchange of India (NCDEX) and National Multi Commodity Exchange of India (NMCE).

MCX is an independent and de-mutualized multi commodity exchange has permanent recognition from Government of India for facilitating online trading, clearing and settlement operations for commodity futures markets across the country. NCDEX is a nation-level, technology driven de-mutualized on-line commodity exchange. It is committed to provide a world-class commodity exchange platform for market participants to trade in a wide spectrum of commodity derivatives driven by best global practices, professionalism and transparency.

The recent policy changes and upbeat sentiments about the economy, particularly agriculture, have created lot of interest and euphoria about the commodity markets. Even though a large number of the traditional exchanges are showing flat volume, this has not weakened excitement among new participants. Many of these exchanges have been permitted with a view to extend the culture and tradition of forward trading to new areas and commodities and also to introduce new technology and practices.

The current mindset of the people in India is that the commodity exchanges are speculative (due to non-delivery) and are not meant for actual users. One major reason being that, the awareness is lacking amongst the actual users. In India, interest rate risks, exchange rate risks are actively managed, but the same does not hold true for the commodity risks. Some additional impediments are centered on the safety, transparency and taxation issues.

#### 4. Benefits of commodity futures markets

The primary objectives of any futures exchange are authentic price discovery and an efficient price risk management. The beneficiaries include those who trade in the commodities being offered in the exchange as well as those

who have nothing to do with futures trading. It is because of price discovery and risk management through the existence of futures exchanges that a lot of businesses and services are able to function smoothly.

- **Price Discovery:-** Based on inputs regarding specific market information, the demand and supply equilibrium, weather forecasts, expert views and comments, inflation rates, Government policies, market dynamics, hopes and fears, buyers and sellers conduct trading at futures exchanges. This transforms in to continuous price discovery mechanism. The execution of trade between buyers and sellers leads to assessment of fair value of a particular commodity that is immediately disseminated on the trading terminal.
- **Price Risk Management:** - Hedging is the most common method of price risk management. It is strategy of offering price risk that is inherent in spot market by taking an equal but opposite position in the futures market. Futures markets are used as a mode by hedgers to protect their business from adverse price change. This could dent the profitability of their business. Hedging benefits who are involved in trading of commodities like farmers, processors, merchandisers, manufacturers, exporters, importers etc.
- **Import- Export competitiveness:** - The exporters can hedge their price risk and improve their competitiveness by making use of futures market. A majority of traders which are involved in physical trade internationally intend to buy forwards. The purchases made from the physical market might expose them to the risk of price risk resulting to losses. The existence of futures market would allow the exporters to hedge their proposed purchase by temporarily substituting for actual purchase till the time is ripe to buy in physical market. In the absence of futures market it will be meticulous, time consuming and costly physical transactions.
- **Predictable Pricing:** - The demand for certain commodities is highly price elastic. The manufacturers have to ensure that the prices should be stable in order to protect their market share with the free entry of imports. Futures contracts will enable predictability in domestic prices. The manufacturers can, as a result, smooth out the influence of changes in their input prices very easily. With no futures market, the manufacturer can be caught between severe short-term price movements of oils and necessity to maintain price stability, which could only be possible through sufficient financial reserves that could otherwise be utilized for making other profitable investments.
- **Benefits for farmers/Agriculturalists:** - Price instability has a direct bearing on farmers in the absence of futures market. There would be no need to have large reserves to cover against unfavorable price fluctuations. This would reduce the risk premiums associated with the marketing or processing margins enabling more returns on produce. Storing more and being more active in the markets. The price

information accessible to the farmers determines the extent to which traders/processors increase price to them. Since one of the objectives of futures exchange is to make available these prices as far as possible, it is very likely to benefit the farmers. Also, due to the time lag between planning and production, the market-determined price information disseminated by futures exchanges would be crucial for their production decisions.

- **Credit accessibility:** - The absence of proper risk management tools would attract the marketing and processing of commodities to high-risk exposure making it risky business activity to fund. Even a small movement in prices can eat up a huge proportion of capital owned by traders, at times making it virtually impossible to pay back the loan. There is a high degree of reluctance among banks to fund commodity traders, especially those who do not manage price risks. If in case they do, the interest rate is likely to be high and terms and conditions very stringent. This possesses a huge obstacle in the smooth functioning and competition of commodities market. Hedging, which is possible through futures markets, would cut down the discount rate in commodity lending.
- **Improved product quality:** - The existence of warehouses for facilitating delivery with grading facilities along with other related benefits provides a very strong reason to upgrade and enhance the quality of the commodity to grade that is acceptable by the exchange. It ensures uniform standardization of commodity trade, including the terms of quality standard: the quality certificates that are issued by the exchange-certified warehouses have the potential to become the norm for physical trade.
- **Commodities as an asset class for diversification of portfolio risk:** Commodities have historically an inverse correlation of daily returns as compared to equities. The skewness of daily returns favors commodities, thereby indicating that in a given time period commodities have a greater probability of providing positive returns as compared to equities. Another aspect to be noted is that the "Sharpe ratio" of a portfolio consisting of different asset classes is higher in the case of a portfolio consisting of commodities as well as equities. Thus, an Investor can effectively minimize the portfolio risk arising due to price fluctuations in other asset classes by including commodities in the portfolio.
- **Commodity derivatives markets are extremely transparent** in the sense that the manipulation of prices of a commodity is extremely difficult due to globalisation of economies, thereby providing for prices benchmarked across different countries and continents. For example, gold, silver, crude oil, natural gas, etc. are international commodities, whose prices in India are indicative of the global situation.
- **An option for high net worth investors:** With the rapid spread of derivatives trading in commodities, the commodities route too has become an option for high net worth and savvy investors to consider in their overall asset allocation. • Useful to the producer:

Commodity trade is useful to the producer because he can get an idea of the price likely to prevail on a future date and therefore can decide between various competing commodities, the best that suits him.

- **Useful for the consumer:** Commodity trade is useful for the consumer because he gets an idea of the price at which the commodity would be available at a future point of time. He can do proper costing/financial planning and also cover his purchases by making forward contracts. Predictable pricing and transparency is an added advantage.

## 5. Risks associated with commodities markets

No risk can be eliminated, but the same can be transferred to someone who can handle it better or to someone who has the appetite for risk. Commodity enterprises primarily face the following classes of risks, namely: the price risk, the quantity risk, the yield/output risk and the political risk. Talking about the nationwide commodity exchanges, the risk of the counter party (trading member, client, vendors etc.) not fulfilling his obligations on due date or at any time thereafter is the most common risk.

This risk is mitigated by collection of the following margins:

- Initial Margins
  - Exposure margins
  - Market to market of positions on a daily basis
  - Position Limits and Intraday price limits
  - Surveillance
- Commodity price risks include:
- Increase in purchase cost vis-a-vis commitment on sales price
  - Change in value of inventory
  - Counter party risk translating into commodity price risk

## 6. Current scenario of Indian commodity market

The growth paradigm of India's commodity markets is best reflected by the figures from the regulator's official website, which indicated that the total value of trade on the commodity futures market in the financial year 2008/09 was Rs. 52.49 lakh crore (over US\$1 trillion) as against Rs. 40.66 lakh crore in the preceding year, registering a growth of 29.09%, even under challenging economic conditions globally. The main drivers of this impressive growth in commodity futures were the national commodity exchanges. MCX, NCDEX and NMCE along with two regional exchanges – NBOT Indore and ACE, Ahmedabad – contributed to 99.61% of the total value of commodities traded during 2008/09.

So far, this year's volumes have seen a significant jump over the last year in agro commodities, as well as international commodities like gold, silver, crude oil and copper. More than 100 commodities are today available for trading in the commodity futures market and more than 50 of them are actively traded. These include bullion, metals, agricultural commodities and energy products. Most importantly, an archaic market has suddenly turned into an organised, service-oriented set-up with shooting volumes.

The unqualified success of the futures market has ensured the next step, i.e., the launch of electronic spot markets for agro-products. Being in a time-zone that falls in the gap left by the major commodity exchanges in the US, Europe and Japan has also worked in India's favour because commodity business

by its very nature is a 24/7 business. Innovation coupled with modern and successful financial market environment has ensured the beginning of a success story in commodities which will eventually see India becoming a price-setter in major commodities on the strength of its large production and consumption.

**7. Problems faced by commodities markets in India**

Institutional issues have resulted in very few deliveries so far. Currently, there are a lot of hassles such as octroi duty and logistics. If there is a broker in Mumbai and a broker in Kolkata; transportation costs, octroi duty, logistical problems prevent trading to take place. Exchanges are used only to hedge price risk on spot transactions carried out in the local markets. Also multiple restrictions exist on inter-state movement and warehousing of commodities.

**8. Future prospects**

With the gradual withdrawal of the Government from various sectors in the post liberalization era, the need has been left that various operators in the commodities market be provided with a mechanism to hedge and transfer their risk. India's obligation under WTO to open agricultural sector to

world trade require future trade in a wide variety of primary commodities and their product to enable market functionaries to cope with the price volatility prevailing in the world markets.

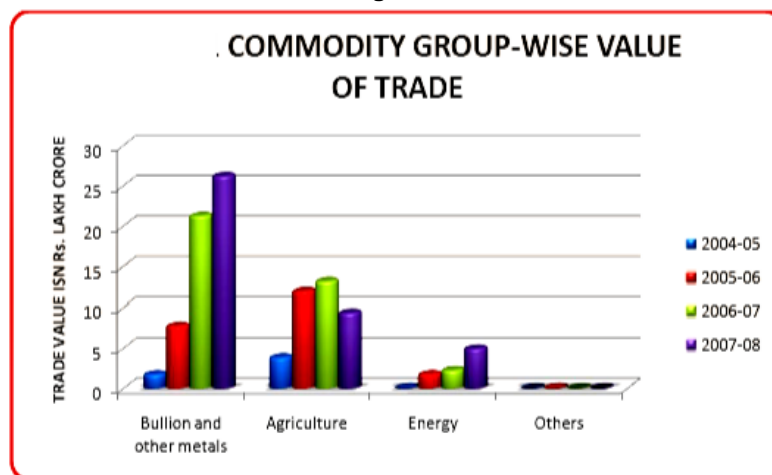
Following are some of applications, which can utilize the power of the commodity market and create a win-win situation for all the involved parties:-

- ⊗ Regulatory approval/permission to FIIs to trading in the commodity market.
- ⊗ Active Involvement of mutual fund industry of India.
- ⊗ Permission to Banks for acting as Aggregators and traders.
- ⊗ Active involvement of small Regional stock exchanges.
- ⊗ Newer Avenues for trading in Foreign Derivatives Exchanges.
- ⊗ Convergence of variance market.
- ⊗ Amendment of the commodities Act and Implementers of VAT.
- ⊗ Introduction of option contract.

**9. Performance analysis of Indian commodity market**

Commodity group-wise value of trading since 2004-05 is given in Figure 1.

**Figure 1**



The year 2003 is a watershed in the history of commodity futures market. The last group of 54 prohibited commodities was opened up for forward trading. Prohibition on forward trading was completely withdrawn, including in sensitive commodities such as wheat, rice, sugar and pulses. These markets notched up phenomenal growth in terms of number of products on offer, participants, spatial distribution and volume of trade.

Starting with trade in 7 commodities till 1999, the volume of trade has increased exponentially since 2003- 04 to reach Rs. 36.77 lakh crore in 2006-07. Almost all of this (97.2%) of this is now accounted for by the three national exchanges. The other 21 Exchanges have a miniscule share in the total volume. There are more then 3000 members registered with the exchanges.

More than 20,000 terminals spread over more than 800 towns/cities of the country provide access to trading platforms. Although agricultural commodities led the initial spurt, and constituted the largest proportion of the total value of trade till

2005-06 (55.32%), this place was taken over by bullionand metals in 2006-07. The growth in 2006-07 was almost wholly (88.7%) accounted for by bullion and metals, with agricultural commodities contributing a small fraction (10.7%). This was partly due to the stringent regulations, like margins and open interest limits, imposed on agriculture commodities and the dampening of sentiments due to suspension of trade in few commodities. Futures market growth in 2006-07 appears to have bypassed agriculture commodities.

Moreover, there has been a very significant decline in volume of futures trade in agriculture commodities during the year 2007-08, by 28.5%. The overwhelming bulk of this decline is accounted for by Chana, Maize, Mentha Oil, and Guar seed, Potato, Guar Gum, Chillies and Cardamom. Trade in these eight commodities, which accounted for 57.9% of total futures trade in agricultural commodities in 2006-07, declined by over 66.4% during 2007-08 compared to previous year. The decline in these eight commodities exceeded the decline of futures trading volumes in all agricultural commodities taken together.

Four commodities (wheat, rice, urad and tur) were de-listed for futures trading towards the end of financial year 2006-07. This de-listing has been held responsible in many circles for the recent general downturn in futures trading in agricultural commodities. But these four delisted commodities together accounted for only 6.65% of the total value of futures trading in

all agricultural commodities in 2006-07. Thus, although this may have affected market sentiments adversely, the delisting did not have any major direct contribution to the decline in trading observed during 2007-08. The combined share of other food grains (i.e. wheat, rice, maize and tur) peaked at 5.0% in 2005-06 and of sugar at only 2.2%.

Figure 2

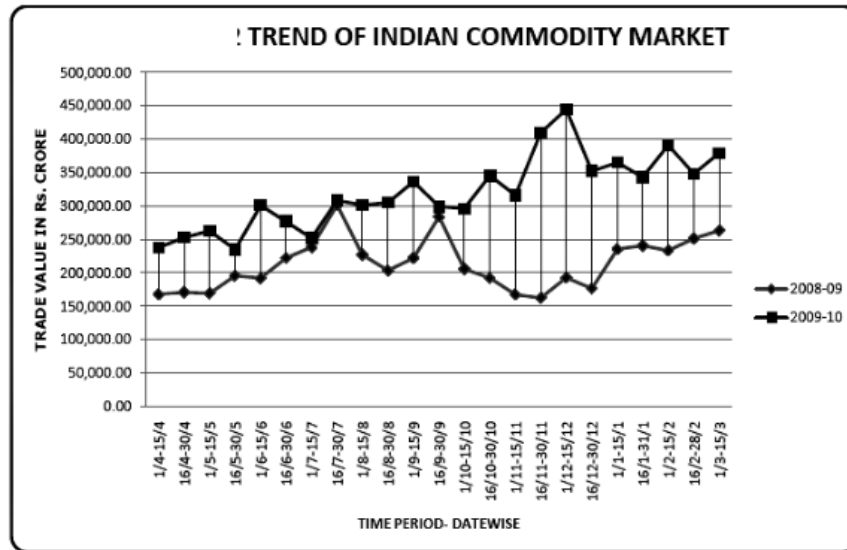


Figure 2 gives overall information of commodity market during year 2008-09 and 2009- 10. Here, for instance, during the year 2008-09 and 2009-10 from April to mid of May, the market was moving almost parallel; with fall of 2% during commence of July, and 8% peak in commence of September in 2009. Again in December 2009 there is a peak of 30% in the commodity market. This is mainly because in this tenure, gold was at its top in the commodity market. And the prices of gold touched pinnacle of 10 years of market.

**10. Conclusion**

India is one of the top producers of a large number of commodities, and also has a long history of trading in commodities and related derivatives. The commodities derivatives market has seen ups and downs, but seem to have finally arrived now. The market has made enormous progress in terms of technology, transparency and the trading activity. Interestingly, this has happened only after the Government protection was removed from a number of commodities, and market forces were allowed to play their role. This should act as a major lesson for the policy makers in developing

countries, that pricing and price risk management should be left to the market forces rather than trying to achieve these through administered price mechanisms. The management of price risk is going to assume even greater importance in future with the promotion of free trade and removal of trade barriers in the world. All this augurs well for the commodity derivatives markets.

As majority of Indian investors are not aware of organized commodity market; their perception about is of risky to very risky investment. Many of them have wrong impression about commodity market in their minds. It makes them specious towards commodity market. Concerned authorities have to take initiative to make commodity trading process easy and simple. Along with Government efforts NGOs should come forward to educate the people about commodity markets and to encourage them to invest in to it. There is no doubt that in near future commodity market will become ‘hot spot’ for Indian farmers rather than spot market. And producers, traders as well as consumers will be benefited from it. But for this to happen one has to take initiative to standardize and popularize the Commodity Market.

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