INDIAN COMMODITY MARKET- A PERFORMANCE REVIEW

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ABSTRACT

Indian markets have recently thrown open a new avenue for retail investors and traders to participate commodity derivatives. For those who want to diversify their portfolios beyond shares, bonds and real estate, commodities are the best option. Till some months ago, this wouldn’t have made sense. For retail investors could have done very little to actually invest in commodities such as gold and silver or oilseeds in the futures market. This was nearly impossible in commodities except for gold and silver as there was practically no retail avenue for pumping in commodities.The history of commodity derivative market in India dates back to the ancient times, but the first organized market was established in 1875. However, by mid 1960s government took a drastic step by banning derivatives trade altogether. The commodity derivative market remained virtually absent in next four decades and it made the restart only in early 2000s. Since its reintroduction it is thriving and the current trend shows strong growth potential of the market, although, the actual growth trajectory will depend upon the attitude of the policy makers and the efficiency of the regulatory mechanism.

The present study makes an overview of the Indian commodity derivatives market. The study discusses the evolution and performance of the market, its present status and the future prospect.
Keywords: commodity market, commodity exchanges, speculation, hedging

Introduction
Globally, commodity markets have occupied a very important place in the economic growth and progress of countries. The concept of organized trading in commodities evolved in the middle of the 19th century. In 2008, the world experienced a dramatic surge in the prices of commodities. The prices of traditional staples such as maize, rice and wheat increased significantly, reaching their highest levels in nearly thirty years. In October 2008, the price upswing decelerated and prices decreased sharply in the midst of the financial crisis and the wake of economic recession. Although many foodprices fell in excess of 50 percent from their peaks in June 2008, they continue to remain at a significantly higher level than that of 2005.

However, with the setting up of three multi-commodity exchanges in the country, retail investors can now trade in commodity futures without having physical stocks. Commodities actually offer immense potential to become a separate asset class for market-savvy investors, arbitrageurs and speculators. Retail investors, who claim to understand the equity markets, may find commodities an unfathomable market. But commodities are easy to understand as far as fundamentals of demand and supply are concerned. Retail should understand the risk advantages of trading in commodities futures before taking a leap. Historically, pricing in commodities futures has been less volatile compared with equity and bonds, thus providing an efficient portfolio diversification option.

Definition of Commodity:- Any product that can be used for commerce or an article of commerce which is traded on an authorized commodity exchange is known as commodity. The article should be movable of value, something which is bought or sold and which is produced or used as the subject or barter or sale. In short commodity includes all kinds of goods. Forward Contracts (Regulation) Act (FCRA), 1952 defines “goods” as “every kind of movable property other than actionable claims, money and securities”.

Need of Commodity Market & exchanges in India:- To develop active trading interest across commodities, it is necessary to have a common platform of commodity futures exchange where demand and supply forces can act together in bringing out the best price for any commodity. The
main economic purpose of futures commodity exchanges as a market place is to enable commodity Producers and processors to sell their produce in advance to protect them against possible price fall for their commodities and allow consumers, traders, processors to buy in advance to protect against possible price increase. In this way they are able to ‘hedge’ their price risk, by locking the price, which they will receive, and which they will pay respectively.

Commodities Exchanges:- In India there are 25 recognized future exchanges, of which there are three national level multi-commodity exchanges. After a gap of almost three decades, Government of India has allowed forward transactions in commodities through Online Commodity Exchanges. Most popular out of that are as:-

- National Commodity & Derivatives Exchanges Limited (NCDEX):- National Commodity & Derivatives Exchanges Limited (NCDEX) located in Mumbai is a public limited company incorporated on April 23, 2003 under the Companies Act, 1956 and had commenced its operations on December 15, 2003. It is promoted by ICICI Bank Limited, Life Insurance Corporation and National Bank for Agriculture and Rural Development (NABARD) and National Stock Exchange of India Limited (NSE).
- Multi Commodity Exchange of India Limited (MCX):- Headquartered in Mumbai Multi Commodity Exchange of India Limited (MCX), is an independent and de-metalized exchange with a permanent recognition from Government of India.
- National Multi Commodity Exchange of India (NMCE):- This exchange was originally promoted by Kailash Gupta, an Ahmedabad based trader, and Central Warehousing Corporation (CWC).

Literature Review

Not much work has been existing in literature pertaining to commodity exchanges. As such, effort has been made in this chapter to review available studies pertaining to any aspect of commodity exchanges. A brief review of some of the major studies in recent years is given below:-
Alibekov (1994) found that Commodity exchanges are envisaged as a key element. There is a need for widespread education of agricultural producers in fundamentals of business and marketing, and also essential for organization of futures trading in grain, sugar, and vegetable oils, creation of proper futures market infrastructure, introduction of clearing accounts for participants, and provision of adequate information services. Jairatt and Kamboj (2005) reported that the total commodities traded in the agricultural commodities accounted for nearly 95 per cent during 2002-03, which hovered around 92 per cent in 2004-05. He mentioned that the removal of ban, share of national commodity exchanges increased from nearly 6 per cent and that of regional exchanges declined from 94 to 27 per cent during the period. In commodity futures context, Booth and Ciner (1998) investigated the return and volatility spillovers of corn futures between the CBOT and the Tokyo Grain Exchange (TGE). They found significant return and volatility spillovers between the two markets. Booth, Brockman, and Tse studied the wheat futures traded on the Chicago Board of Trade (CBOT) of US and the Winnipeg Commodity Exchange (WCE) of Canada and found one way information spillover from CBOT to WCE. Low, Muthuswamy, and Webb examined the futures prices for storable commodities, soybeans and sugar, which are traded on the TGE and the Manila International Futures Exchange (MIFE), and found no co-integration between these two markets. Lin and Tamvakis (2003) examined the information transmission mechanism and price discovery process in crude oil and refined oil products traded on the New York Mercantile Exchange (NYMEX); and London’s International Petroleum Exchange (IPE). They found substantial spillover effects between two markets where IPE morning prices seem to be considerably affected by the closing price of the previous day on NYMEX. Kunnal and Shankarmurthy (1996) studied that the critically analyses the performance of the Karnataka State Seed Corporation (KSSC) with respect to its seed marketing activity. KSSC has adopted a mixed distribution network to sell seeds in the state. The quantity of seeds of different crops marketed by the KSSC increased during the study period. Though sales of seeds showed fluctuating trends, sales turnover showed an increasing trend. The share of cooperatives in the distribution of seeds of KSSC was not appreciable.

**Objectives of the Study**

1. To study the performance of commodity market in India from period (2006-2011)
2. To find out the share of commodity group in commodity Future market for period (2010-11 to 2011-12).

Methodology

The study is based on the data collected from Directorate General of Commercial Intelligence and Statistics, Government of India from 2002-2003 to 2007-12 of value of commodity trading. The data were collected from electronic database of Ministry of Commerce, Government of India, Commodity Trade Statistics (COMTRADE) of United Nations, Economic survey 2011-12 and Foreign Trade and Balance of payment published by Centre for Monitoring Indian Economy. Some major commodities/commodity group’s data were collected from Researcher report by published in Indian budget on Foreign Trade and Balance of Payment the analysis, based on their respective shares in Indian commodity market. They were agriculture, metals, energy, bullions and some others. The data on commodity derivative of selected commodities for India were culled from various issues of FAO Trade Yearbook, published by the statistics division of Food and Agriculture Organization (FAO), Rome.

Results

1. Growth Performance of Commodity Market

Throughout the last decade the commodity futures market has developed significantly in terms of both network and volume. At present, there is a two-tier structure for Commodity Exchanges in India: Regional and Country-Wide. Regional exchanges are permitted to have only a limited number of contracts whose membership is local. Countywide national exchanges are multi-commodity electronic exchanges with a demutualized ownership pattern. The total value of trade in the Commodity Futures Market has risen substantially in the last few years. Table 1 shows the Annual growth of commodity derivative in India for period 2006-2007 to 2010-11.

Table 1: Annual growth of commodity derivative in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Traded Volume</th>
<th>Value of Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


As a result of significant policy change, liberalization of world markets and other developments, Indian commodity markets achieved a phenomenal growth in terms of number of products on offer, participants, spatial distribution and volume of trade. The cumulative value of commodity trading in India during April to December 2010, as reported by FMC, is 82.71 lakh crore with a growth of 49.66% from the same period in the last year. The overall growth of commodity futures market in India over the last decade can be depicted through Figure 1.

**FIGURE-1**

Annual Growth of Commodity derivative in India (2006-07 to 2010-11)

<table>
<thead>
<tr>
<th>Year</th>
<th>Value of Trade (in Lakh tonnes)</th>
<th>Traded Volume (in Crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2007</td>
<td>60125</td>
<td>43 68930</td>
</tr>
<tr>
<td>2007-2008</td>
<td>58345</td>
<td>47 83820</td>
</tr>
<tr>
<td>2008-2009</td>
<td>61567</td>
<td>5223740</td>
</tr>
<tr>
<td>2009-2010</td>
<td>10943</td>
<td>7896210</td>
</tr>
<tr>
<td>2010-2011</td>
<td>94653</td>
<td>8271000</td>
</tr>
</tbody>
</table>

*Source: Market Review Report, Forward Market Commission, GoI*
The Figure 1 shows the annual growth of commodity derivative in India for period 2006-07 to 2010-11, which indicates an increasing trend in value of traded commodities although it shows a mixed trend related to the trading volume but the value of trade is increasing in every year. It was 43 68930 crore in 2006-07 which increases to 5223740 crore in 2008-09. In 2010-11 it achieves the value of 8271000 crore that consider to be a good sign for Indian commodity market. The market expected to grow in 2012-13 by 35% as compared to the previous year.

Table-2: Turnover in Commodity Futures Markets (Rs. crore)

<table>
<thead>
<tr>
<th>EXCHANGES</th>
<th>YEAR</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi Commodity Exchange of India (MCX)</td>
<td>20,25,663</td>
<td>27,30,415</td>
<td>42,84,653</td>
<td>59,56,656</td>
<td>78,95,404</td>
<td>10000000</td>
</tr>
<tr>
<td>National Commodity and Derivatives Exchange Limited (NCDEX)</td>
<td>12,43,327</td>
<td>7,74,965</td>
<td>6,28,074</td>
<td>8,05,720</td>
<td>9,73,217</td>
<td>9,41,250</td>
</tr>
<tr>
<td>National Multi Commodity Exchange of India Ltd. (NMCE)</td>
<td>1,11,462</td>
<td>25,056</td>
<td>37,272</td>
<td>1,95,907</td>
<td>1,80,738</td>
<td>1,82,746</td>
</tr>
<tr>
<td>Others</td>
<td>1,04,033</td>
<td>1,24,051</td>
<td>83,885</td>
<td>1,32,173</td>
<td>4,45,366</td>
<td>8,24,946</td>
</tr>
<tr>
<td>Total</td>
<td>34,84,485</td>
<td>36,54,487</td>
<td>50,33,884</td>
<td>70,90,456</td>
<td>94,94,725</td>
<td>11948942</td>
</tr>
</tbody>
</table>

Source: Economic Survey 2012-13
MCX recorded the highest turnover in terms of value of trade from 2006-2007 to 2011-2012 followed by NCDEX and NMCE. Total value of trading in the commodity futures market rose from Rs. 34,84,485 crore in 2006 to Rs. 36,54,487 crore during 2007 and similarly it has continuously increased to Rs. 94,94,725 crore in 2010 and now 11948942 in 2012. The average daily value of trades in the commodity exchanges improved from Rs. 15,000 crore during 2007 to Rs. 18,500 crore in 2008 and to Rs 23,200 crore in 2009. The growth could be attributed to larger participation in the market, increase in global commodity prices, the advent of new commodity exchanges and the restoration of trade in some of the suspended agricultural commodities.

**FIGURE-2**

Performance of Commodity exchanges in India: Turnover in Commodity Market

![Graph showing performance of commodity exchanges](image)

*Source: Economic Survey 2012-13*

Figure 2 shows the share of commodity group in total volume of trade in the commodity trading for period (2010-2011). At present, futures contracts are available for over 100 commodities across the country. The above figure shows that MCX continues to be the leading share holder in commodity market from the period 2006-07 to 2011-12. The share of MCX in 2006-07 was 20,25,663, which rose to 59, 56,656 in 2009-10 and crosses the level of 100 crore in 2011-12. The other commodity exchanges also scored an increase in their share but relatively less than the MCX.
2. Share of commodity group in commodity market

The total number of commodities traded on Futures Exchanges is categorized into two major groups, viz., Agricultural Commodities and Non-Agricultural Commodities. Non-agricultural commodities are further categorized into bullion/precious metals, base metals, energy and polymer products. Agricultural commodities are further categorized into cereals, oil and oilseeds, pulses, fibers’, plantations, spices and others that include guar seed, mentha oil, potato, sugar, etc. The Figure 3 shows the share of commodities group traded in the total trade volume of commodity market in India.

![Figure 3: Share of Commodity Groups in Total Trade Volume (2010-2011)](image)

Source: Market Review Report, Forward Market Commission, GoI

There has been a change in the composition of trade. Initially, agricultural commodities dominated the market, bullions occupying the second place. In 2004-05, for instance, 69% of the total volume of trade was in agricultural commodities and the rest was in bullions and metals. However, the importance of agricultural commodities has decreased sharply in recent years.
while that of bullions has increased. In 2010-11, bullions occupied the first position with 46% share followed by metals with 24% and energy with 19%. The share of agricultural commodities in futures trading has come down to the level of 12%.

- **Currency derivative:** The movement of the exchange rate in 2011-12 indicates that the average monthly exchange rate of rupee against the US dollar depreciated by 10.6 per cent from 44.97 per US dollar in March 2011 to 50.32 per US dollar in March 2012. Similarly, on point-to-point basis, the average exchange rate of rupee (average of buying and selling rate of FEDAI) depreciated by 12.7 per cent from 44.65 per US dollar on 31 March 2011 to 51.16 per US dollar on March 30, 2012. The annual average exchange rate of rupee was 45.56 per US dollar in 2010-11 that depreciated by 4.9 per cent to 47.92 per US dollar in 2011-12. Table-3 shows the different trend in currency derivatives for period (2006-07 to 2011-12)

**Table-3 performance of currency derivative in India**

<table>
<thead>
<tr>
<th>Year</th>
<th>Average exchange rate per US $</th>
<th>Average appreciation/ depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-2007</td>
<td>45.285</td>
<td>(-) 2.34</td>
</tr>
<tr>
<td>2007-2008</td>
<td>40.261</td>
<td>8.62</td>
</tr>
<tr>
<td>2008-2009</td>
<td>45.993</td>
<td>(-) 7.45</td>
</tr>
<tr>
<td>2009-2010</td>
<td>47.417</td>
<td>(-) 2.02</td>
</tr>
<tr>
<td>2010-2011</td>
<td>45.577</td>
<td>3.24</td>
</tr>
<tr>
<td>2011-2012</td>
<td>47.919</td>
<td>(-) 4.9</td>
</tr>
</tbody>
</table>

*Source: Reserve Bank of India.*

The sharp fall in value of rupee can be explained by the supply-demand imbalance in the domestic foreign exchange market on account of slowdown in FII inflows, strengthening of US dollar in the international market. Apart from the global factors, there were several domestic factors that have added to the weakening trend of the rupee, which include increasing current account deficit, high inflation. These trends in currency derivatives can be easily understood with help of Figure-4.
which shows the average exchange rate of rupees with US $ and their relative average appreciation or depreciation rate.

Figure 4

Trends in currency Derivatives from (2006-07 to 2011-12)

![Graph showing trends in currency derivatives from 2006-07 to 2011-12]

*Source: Reserve Bank of India*

Table-4 Trade Value and Volume of Major commodity Derivative for period 2010-11 to 2011-12.

<table>
<thead>
<tr>
<th>Commodities</th>
<th>Volume</th>
<th>Value</th>
<th>% Value</th>
<th>Quantity</th>
<th>Value</th>
<th>% Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>4168</td>
<td>1456390</td>
<td>12.2</td>
<td>4942</td>
<td>2196150</td>
<td>12.12</td>
</tr>
<tr>
<td>Bullion</td>
<td>7.38</td>
<td>5493892</td>
<td>46</td>
<td>10.27</td>
<td>10181957</td>
<td>56.17</td>
</tr>
<tr>
<td>Metals</td>
<td>1410</td>
<td>2687673</td>
<td>22.5</td>
<td>1388</td>
<td>2896721</td>
<td>15.98</td>
</tr>
<tr>
<td>Energy</td>
<td>7220</td>
<td>2310959</td>
<td>19.3</td>
<td>7686</td>
<td>2851270</td>
<td>15.73</td>
</tr>
<tr>
<td>Others</td>
<td>29.04</td>
<td></td>
<td></td>
<td></td>
<td>6.45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td><strong>12806</strong></td>
<td><strong>11948942</strong></td>
<td>100</td>
<td><strong>14026</strong></td>
<td><strong>18126104</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Source- Department of Consumer Affairs.*

The table 4 shows the volume of trade along with the value of trade and their relative value of percentage in the total commodity derivative. It can be seen that the agriculture, bullion, metal and energy shows an increasing trend in 2011-12 as compared to 2010-11 in the value of trade. Metals show a decreasing trend in volume of trade by 2.89 lakh in 2011-12 from 2010-11, but...
other commodities show an increasing trend in volume of trade as well. Whereas agriculture commodity shows an unchanged trend with respect to percentage value in total commodity in 2011-12, it remains same as 12.2% in 2010-11 and 2011-12.

The Figure 5 shows the comparative value of trade of different commodities derivative for the period 2010-11 to 2011-12. It shows an increasing trend in the value of trade for all the commodities as compared to previous year, which consider to be a positive sign for the growth of Indian Commodity market. These trends can easily be understood by Figure 5.

Figure 5

Comparative Value of Trade of commodities derivative for period 2010-11 to 2011-12

Source - Department of Consumer Affairs
It can be understood from the above figure that commodity derivatives are showing an increasing trend in terms of value of trade traded in the commodity market as compared to previous year. Although other commodity group except agriculture, bullion, metals and energy showing a decreasing trend from 29.04 crore in 2010-11 to 6.45 crore in 2011-12 i.e. by 22.59 crore.

The Figure 6 shows the comparative Percentage value of commodities traded in the commodity market for the period 2010-11 to 2011-12. It indicates different trend in different commodities i.e. agricultural commodities showing an unchanged trend (12.2 %), bullion shows an increasing trend by 10.17 % and metals showing a decreasing trend in 2011-12 by 6.52% & energy also showing a decreasing trend in 2011-12 by 3.52 %. These trends can be understood well with help of Figure 6.

Figure 6

Comparative Value of percentage of Trade of commodities derivative for period 2010-11 to 2011-12
It can be understood from the above figure that commodity derivatives are showing an increasing trend in terms of percentage value of trade traded in the commodity market as compared to previous year. Although agriculture commodity does not show any change in its value, but bullion, metals and energy showing an increasing trend from 46% in 2010-11 to 56.17% i.e. 10.17% and metals & energy also showing an increasing trend in the year 2011-2 as compared to previous year.

**Conclusion**

In its long history of trading in commodities and related derivatives, Indian commodity market has seen several developments between two extreme scenarios: protection of the essential commodity market through government intervention and the opening up of the sector and getting the necessary protection through market based instruments like commodity futures contract. After a long period of suspension commodity derivative market was reintroduced in India in early 2000s. Since its resumption, however, the market has been growing at a very high pace. The growth is evident in the spread of market network as well as in volume of trade. Almost 100 commodities (agricultural and non-agricultural) are traded in different exchanges. The volume of trade has increased from Rs. 34,84,485 crore in 2006 to Rs. 11948942 crore in 2011. It indicates a positive growth in the commodity market sector in India.
The different commodities (agriculture, metals, bullions, energy and others) show a positive trend in their volume and value of trade. The percentage share of agriculture commodity in total commodity market has been declined in the year 2010-11 but bullion shows an increasing trend along with metals and energy. It all shows that the market has strong growth potential. In liberalized regime we should welcome it and treat the commodity derivative market as an integral part of the economy.

References

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