Volume 1, Issue 3 August 2015 ISSN NO: 2454 - 2326

North Asian International Research Journal Consortium

North Asian International Research Journal

Of

Multidisciplinary

Welcome to NAIRJC

ISSN NO: 2454 - 2326

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A STUDY ON COMMODITY DERIVATIVES

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Abstract

India has a long history of trading commodities and considered the pioneer in some forms of derivatives trading. The first derivative market was set up in 1875 in Mumbai, where cotton futures was traded. This was followed by establishment of futures markets in edible oilseeds complex, raw jute and jute goods and bullion. This became an active industry with volumes reported to be large. The Forward Markets Commission (FMC) is the chief regulator of commodity futures markets in India. As of July 2014, it regulated Rs 17 trillion worth of commodity trades in India. It is headquartered in Mumbai and this financial regulatory agency is overseen by the Ministry of Finance. The Commission allows commodity trading in 22 exchanges in India, of which 6 are National. Finance Minister Arun Jaitley announced its merger with SEBI in his Budget speech of 2015. The present paper highlights the trends and growth in commodity derivatives during the decade and also throws light on the ways for smooth functioning of markets and the impact of merger of FMC with SEBI.

Key words: FMC, Derivatives, Regulatory agency.

Introduction

The Indian commodity futures market has witnessed phenomenal growth in trading volumes over the past decade or so despite facing frequent setbacks. Futures volumes had picked up momentum after the operationalization of the online electronic trade platforms in 2003. Volumes increased manifold from about Rs 1.29 lakh crore in 2003–04 to a peak of Rs 181 lakh crore in 2011–12, and settled at Rs 170.5 lakh crore in 2012–13. Thereafter, volumes witnessed a precipi-tous fall to Rs 101.4 lakh crore in 2013–14, which worsened to Rs 61.7 lakh crore in 2014–15 (Table 2). Two important factors adversely affected volumes: the commodity transaction tax (CTT) on futures contracts of non-agricultural commodities, and the Rs 5,600 crore fraud case of the National Spot Exchange Ltd (NSEL). Both of which were incidentally in July 2013. The NSEL case has not only affected trade volumes but has also raised concerns over regulatory and monitoring systems of commodity markets. Commodity futures markets have been affected by frequent cases of fraudulent practices and irregularities over the past decade. The regulatory system, though evolving, has not been able to prevent such malpractices

effectively. The Forward Markets Commission (FMC)—the regulator of commodity markets has been addressing the irregularities and scams after they occur, but has not been able to prevent them with appropriate mechanisms in place. While there were some inherent constraints for the FMC being able to put in place a stronger regulatory system, the basic nature of Indian commodity markets with a highly unorganized and scattered structure makes them vulnerable to fraudulent practices and market manipulation. Following the NSEL scam, the FMC was brought under the Ministry of Finance from the Ministry of Consumer Affairs in September 2013. Further, putting an end to the long-standing debate, the finance ministry has proposed to merge the FMC with the Securities and Exchange Board of India (SEBI) during the 2015–16 budget announcements. At the outset, the move appears to be positive, with general optimism about the change. But the question is, will it lead the commodity derivative markets towards their ultimate objectives of efficient price discovery and price-risk management? In this context, an attempt is made here to study market trends and developments in commodity futures markets during the past decade, and to analyse issues related to the functioning of Indian commodity markets in view of the proposed FMC –SEBI merger.

Table: 1

LARGEST TOP COMMODITIES EXCHANGES		
Exchange	**Exchange**	**Exchange**
CME Group	USA	$268,000,000
Tokyo Commodity Exchange	Japan	--
Euronext	France, Belgium, Netherlands, Portugal, UK	--
Dalian Commodity Exchange	China	--
Multi Commodity Exchange	India	--
Intercontinental Exchange	USA, Canada, China, UK	--
Africa Mercantile Exchange	Kenya, Africa	--
Uzbek Commodity Exchange	Tashkent, Uzbekistan	--

Source: International Trade of India

Market Trends

Commodity market volumes witnessed broadly three distinct phases of growth. The first phase, from 2002–03 to 2005–06, saw phenomenal growth of more than 200% per annum. The second phase (2006–07 to 2011–12) recorded a steady and robust annual average growth rate of about 44% per annum. In the third phase (2012–13 to 2014–15) volumes fell at an average rate of 28.5% per annum.

Table: 2

Exchange-wise Traded Value in Commodity Futures (Rs lakh crore)					
Year	**MCX**	**NCDEX**	**Others**	**Total**	**Growth (%)**
2004–05	1.7 (29.0)	2.7 (46.5)	1.4 (24.5)	5.7	342
2005–06	9.5 (44.2)	10.9 (50.6)	1.1 (5.2)	21.6	273.7
2006–07	22.9 (62.4)	11.6 (31.7)	2.2 (5.9)	36.8	72.3
2007-08	31.3 (76.9)	7.7 (19.0)	1.7 (4.1)	40.7	10.6
2008–09	45.9 (87.4)	5.3 (10.2)	1.3 (2.4)	52.5	29.1
2009–10	63.9 (82.3)	9.2 (11.8)	4.5 (5.9)	77.7	47.9
2010–11	98.4 (82.4)	14.1 (11.8)	7.0 (5.8)	119.5	53.9
2011–12	156.0 (86.0)	18.1 (10.0)	7.2 (4.0)	181.3	51.7
2012–13	148.8 (87.3)	16.0 (9.4)	5.7 (3.3)	170.5	-6
2013–14	86.1 (84.9)	11.5 (11.3)	3.9 (3.8)	101.4	-40.5
2014–15	51.8 (84.0)	9.0 (14.7)	0.8 (1.3)	61.7	-39.2

As mentioned earlier, the important reasons for the precipitous fall in volumes were the levy of CTT and the impact of the NSE fraud. Although the NSEL fraud was not directly related to futures trading, it has indirectly affected broking firms which have been the volume contributors for futures trading, as a significant amount of their funds was trapped in NSEL. Further, it has also affected the general sentiments of market participants, making them skeptical about the functioning of commodity futures markets.

Trading on Exchanges

Despite the presence of a number of national and regional commodity exchanges, only two exchanges dominate commodity futures markets. The first national multi-commodity exchange to offer online trading in commodity futures was the National Multi-Commodity Exchange (NMCE), in 2002. Subsequently the Multi Commodity Exchange (MCX), and the National Com-modity and derivatives Exchange (NCDEX) were started in 2003. Apart from these, a number of regional exchanges have been offering futures trading in commodity markets. Subsequently, three more national exchanges Indian Commodities Exchange (ICEX) in 2009, Ace Derivatives and Commodity Exchange in 2010, and Universal Commodity Exchange (UCX) in 2013 were permitted to offer futures trading in commodities. However, volumes have not picked up on these exchanges, and as a result, the ICEX and UCX suspended futures trading operations in 2014. At present, there are four national multi-commodity exchanges that are actively offering commodity futures trade in the country. Of the four national

exchanges, NCDEX and MCX account for more than 95% of market volumes in commodity futures (Table 2). NCDEX gained large volumes in the initial three years from 2003–04 to 2005–06, mainly in agricultural commodities. However, the volumes on MCX, concentrating on non-agricultural commodities, rose rather steeply from 2005–06 onwards. As a result, the MCX has become the largest exchange in trade volumes in 2006–07 and has remained in first position ever since, with more than 80% market share. While the market share of NCDEX stood around 12% on average, trading on other national and regional exchanges put together accounted for less than 5% of total futures market volumes.

Trends in Commodities Traded

Commodity-wise trading volumes indicated that the share of agricultural commodities has declined steadily from more than 50% to around 12%, while the share of non-agricultural commodities has gone up significantly from around 30% to more than 80% during the past 10 years (Table 3). Nonetheless, the share of agricultural commodities has improved marginally during 2013–14 and 2014–15, following the levy of CTT on non-agricultural commodity futures trade in July 2013.

Table 3: Commodity Share in Total Volume (%)

Year	Agricommodities	Bullion	Metals	Energy	others
2004–05	68.3	31.5	NA	NA	0.4
2005–06	55.9	36.5	NA	NA	8.5
2006–07	35.8	57.9	NA	NA	6.3
2007–08	23.2	42.5	NA	NA	34.4
2008–09	12	56.7	11.8	19.6	0.1
2009–10	15.7	40.8	23.2	20.3	0
2010–11	12.2	46	22.5	19.3	0
2011–12	12.1	56.2	16	15.7	0
2 012–13	12 .7	4 6 .1	19.1	2 2 .1	0 . 0
2013–14	15.8	42.5	17.4	24.4	0
2014–15	17.2	35.5	20.7	26.7	0

Among non-agricultural commodities', the share of bullion accounted for more than half of total futures volumes till 2012–13 but declined there-after to about 35% in 2014–15. Interestingly, the share of energy products trade has increased between 2012–13 and 2014–15 in contrast to the other non-agricultural commodities after the levy of CTT. Thus, the share of agricultural com-modities has been around 12% on aver-age during the past decade except for the initial few years, while futures' trading is dominated by gold and silver with their high per unit

prices. A critical view of trade patterns of Indian commodity futures markets during the past 10 years reveals certain specific characteristics. First, the larger volumes in agricultural commodities futures in the initial few years were concentrated in com-mo d it ie such a sugar, menthol oil, lemon, and Burmese Urad, which have small market size. Second, as the market share shifted to non-agricultural commodities from 2006–07 onwards, the largest volume gainers have been gold, silver, base metals, and energy, for which price trends are guided by international markets, particularly the United States (US) and the United Kingdom (UK). Third, in recent years, the market shares of agricultural commodities like edible oils and oilseeds, for which benchmark international markets exist, have increased. However, exceptions are wheat, rubber, coffee, pepper, etc, for which international benchmark markets are available, but domestic futures trad-ing has not picked up significantly for various reasons like government intervention, quality issues, etc. The commodities for which international benchmark markets are available, price discovery is usually well informed as the factors influencing prices including demand and supply are well tracked and made available to market participants. Fourth, futures trading in commodities like precious metals, metals, energy, edible oils, cotton, etc, which have benchmark international markets, has been less prone to manipulations. Market participants are well informed about demand and supply scenarios of these commodities. Fifth, no authentic demand and sup-ply estimates are available for a number of agricultural commodities such as guar seed, guar gum, menthe oil, Jeera, Chana, Chilli, Coriander, Turmeric, etc, which have been contributing a notable share to Indian futures exchanges. Further, they do not have any benchmark international markets to track. Trading in futures with inadequate and asymmetric market information may not only lead to inefficient price discovery, but may result in irregularities. For efficient price discovery, information on demand and supply and factors affecting demand and supply are a pre-requisite. It is evident from past experience t hat a major it y of irregularities that required regulatory action from the FMC were related to these commodities (Lingareddy 2008).Thus, agricultural commodities with scattered market information are vulnerable to frequent market irregularities and fraudulent practices. Regulatory Developments Regulation of commodity futures markets has a three-tier system with a ministry (consumer affairs earlier and Finance now) at the top, the FMC at the middle, and the commodity exchanges at tertiary level. The need for a stronger and well-planned regulatory system was felt from the beginning and concerns were expressed suggesting the empowerment of the FMC and amendment of Forward Contracts (Regulation) Act, 1952. Despite widely expressed concerns, commodity futures' trading on online exchanges was allowed without taking steps to strengthen the FMC and not putting well worked-out regulatory mechanisms in place (Sahadevan 2012). As a result, the FMC with its inadequate staff and regulatory strength has been able to address problems after they occur, rather than prevent them. For instance, when the futures exchanges were allowed to function, no limits

were specified on the number of open positions a client or a member can take per contract. Similarly, there was no regulation towards the compliance of delivery of commodities. Taking advantage of it, some market participants tried to manipulate markets and as a result Mentha oil, guar and Urad futures witnessed extreme volatility within a short span of time during the last quarter of 2005 (Lingareddy 2005). The FMC has brought the delivery period concept and imposed the required regulatory measures on 3 January 2006, after persistent complaints. Similarly, limits on maximum open positions a client or member can take in a futures contract were imposed only after irregularities cropped up though it has been a common practice on international futures exchanges such as Chicago Board of Trade (CBOT) (Lingareddy 2006). It is true that any regulatory system evolves continuously as markets grow, but certain regulatory mechanisms are a prerequisite to ensure efficient functioning of markets. While the FMC has been making sincere efforts to address regulatory issues in spite of constraints, the commodity exchanges, despite being a part of futures regulatory systems, have apparently not taken any interest in exercising or delivering their regulatory responsibilities, but have only focused on raising trade volumes over the past decade. Merging FMC with SEBI. The Ministry of Finance has proposed to merge FMC with SEBI in the 2015–16 budget. The debate on the merger has been going on for over a decade, ever since the start of futures trading in 2003–04. The idea of bringing the control of derivatives markets under one regulator appears to be convenient as in the US. The merger is expected to solve the problems of inadequate manpower, research and monitoring capabilities. Further, in order to ensure efficient functioning of commodity futures markets, it is necessary to address the issues associated with underlying commodity markets, especially that of agricultural commodities.

For Efficient Futures Markets Information:

Adequate and free flow of information on demand and supply is a prerequisite for efficient price discovery, monitoring and price-risk management. Currently, a reasonable amount of information flow is seen in case of gold, silver, metals, energy, and some agricultural commodities from international agencies like the World Gold Council, US Geological Survey, US Department of Agriculture (USDA), US Energy Information Agency, etc. But no such free flow of information on demand, supply and stocks is available for the majority of agricultural commodities that are largely produced and/or consumed in India. The USDA provides demand and sup-ply estimates/forecasts for all crops and livestock products for the US as well as the other major producing countries on a monthly basis, based on which the spot and futures prices are traded. But in India the information on demand and supply of agricultural commodities is scant. The Department of Agriculture releases only output estimates but at the end of the season. For hedging purposes, such information is required well in advance. T he

system of agricultural output estimation has not changed for decades. An early release and precise estimation of agricultural output numbers using remote sensing and satellite imagery techniques may help in providing timely information and improving market efficiency. In addition, no authentic and reliable estimates on domestic consumption demand are available for agricultural commodities. Under these conditions, it becomes difficult to track the right direction of commodity price trends, and, as a result, agricultural commodity markets in India are vulnerable to market manip-ulations both in spot as well as futures markets. Thus, in order to ensure efficient functioning of commodity markets, adequate availability of market information on commodities is a prerequisite.

Centralised Warehousing:

Another important aspect that can smoothen the functioning of Indian commodity markets is a widespread network of ware-house facilities by independent agency/agencies. A well-spread network of warehouses across the country under an independent agency, either government or with public-private partnership can provide better commodity handling facilities instead of the existing warehouses attached to individual exchanges. An independent warehousing agency under the purview of a regulator may facilitate futures trading and delivery mechanisms. Apart from futures trading, establishment of a network of warehouses across the country may help increasing storage facilities in the country, warehouse receipt financing, reduc-ing wastage, maintaining quality, etc.

Conclusion

Commodity futures' trading has witnessed remarkable growth in futures volumes during the past decade. MCX alone accounts for more than 80% and NCDEX for about 12% of total futures volumes. On average, agricultural commodities account for only about 12% market share. Futures trade on domestic exchanges in commodities like gold, silver, base metals, energy, cotton and edible oils, etc, is in tune with benchmark international markets in the US and the UK. Over the past decade, a majority of irregularities noticed in futures trading were associated with agricultural commodities for which no authentic and reliable market information that facilitates price discovery is available. Adequate and timely flow of market information and unified widespread warehouse networks are prerequisites to facilitate smooth functioning of futures trading as well as overall development of commodity markets in the country both qualitatively and quantitatively. Hence, the merger may provide a stronger regulator. But the move needs to be supplemented with better information and warehouse networks to achieve the desired objectives of efficient price discovery and price-risk management in commodity futures markets.

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