

Performance Analysis of Indian Agricultural Commodity Market

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Abstract--This study analyses the Indian Agricultural Commodity Markets. In an agricultural country like India, the price of agricultural commodities, especially of food grains hold a key position in the price structure of the country. The commodity market in India has witnessed a phenomenal growth. The futures trading have ecosystem linkages which results in employment generation process. Commodity markets have a crucial role in developing agriculture dominated economies. A review of the institutional and policy constraints facing this market demands more focused and pragmatic approach from government, regulators and exchanges for making it a vibrant segment for agriculture supply chain. Commodity markets have a significant role in the price risk management process especially in case of India being an agricultural dominated economy. Traditionally agricultural commodities in India are in the domain of federal states and each states has its own tax and relief package for the commodities. Agricultural marketing has also been in the domain of federal States. India is one of the top producers of commodities, 5th largest in the world, engages 57% of the world population and contributes 22% to the GDP of the country. Indian agriculture has registered impressive growth over last few decades. It is also the largest consumers having a large population base and hence India should take a leadership role at international level. The developments in the Indian commodity market in the past decade has led the Indian commodity exchanges to be at par with the world markets with setting up of national exchanges and institutions in term of warehousing facilities and clearing have led to reduction in price distortions. The present study is an investigation into the commodity markets in agricultural commodities in India.

Keyword- Commodity Futures Market, Commodity Derivatives Market, Commodity Exchange, Agricultural commodities, Forward Markets Commission.

INTRODUCTION

India is a commodity based economy where two-third of the total population depend on agricultural commodities, startlingly has an under developed commodity market and futures market trades are merely used as risk management mechanism. Agricultural commodity futures are market-based instruments for managing risks and they help in orderly establishment of efficient agricultural markets. Instability of commodity prices has always been a major concern of the producers as well as the consumers in an agriculture dominated country like India. Indian commodity future market was relatively popular till early 70s but its growth was fraught due to diverse restrictions and regulations introduced by Government of India. In 2003 these restrictions have been relaxed leading to the spontaneous growth of commodity market in the country. Commodity trading or futures trading is organized in such commodities as are permissible by the Government. The association, company or any other body corporate which organize the future trading in commodities through futures contract is known as commodity exchange. Commodity markets play vital role in the economies like India where agricultural production constitutes a major part of GDP. India being agricultural dominated economy is one of the top producers of agricultural products, where farmers have to face yield risk along with price risk. Commodity market performs two significant economic functions of price discovery and price risk management. A futures trading in commodities is beneficial for all sectors of the economy including farmers and consumers. It provides

advance price signals to sellers (farmers/producers) and assists buyers (consumers) of agricultural commodities for financing commodities from one season to another. The commodity markets in India has achieved substantial development in term of transparency, technology and trading activities. The production, supply and distribution of many agricultural commodities are still governed by the state. Free trade in many agricultural commodities items is restricted under the Essential Commodities Act (ECA), 1955 and Agriculture Produce Marketing Committees (APMC) Acts of various State Governments. The forward and futures contracts were, till April 2003, limited to only a few commodity items under the Forward Contracts (Regulation) Act (FCRA), 1952. The Forward Markets Commission (FMC), established under the Forward Contracts (Regulation) Act, 1952 is the agency which regulates commodity derivatives trading in India in the same way as SEBI does for securities markets.

Commodity derivatives trading or futures trading in India is regulated through a three tier regulatory structure, viz, the Central Government, Forward Markets Commission and the Recognized Commodity exchanges/Associations. There are 6 National and 16 regional commodity specific exchanges, which regulates forward trading in 113 commodities approves by the Forward Markets Commission under the Forward Contracts (Regulation) Act, 1952. However, futures trade was prohibited in most of the commodities thereafter. A number of committees have been constituted to inspect, control, and standardize this market at numerous occasions at the behest of

government of India, namely, A.D. Shroff Committee (1950), M. L. Dantwala Committee (1966), A.M. Khusro Committee (1979), K.N. Kabra Committee (1993), Shankarlal Guru Committee (2001), Habibullah Committee (2003), and lastly Sen Committee (2008). More or less, those committees recommendations, inevitably, stand out few indicatives with respect to measuring the efficiency of Indian commodity futures markets, contentions at the back of low extent of participation or on the contrary, unwarranted speculation, and inference behind impositions of ban on several commodities telling to their economic fundamentals and trade-policies. However, in 2002-03, GOI removed all restrictions on commodities, which could be traded on commodity exchanges. Currently, there are 6 national exchanges, The National Multi Commodity Exchange Ltd. (NMCE), Ahmedabad; was the first exchange to be granted permanent recognition by the Government. The Multi Commodity Exchange of India Ltd. (MCX), Mumbai; the National Commodity and Derivatives Exchange Limited (NCDEX), Mumbai; Indian Commodity Exchange Limited (ICEX), Mumbai, as nation-wide multi-commodity exchanges; Ace Derivatives and Commodity Exchange Ltd. (ACE), Ahmedabad; and Universal Commodity Exchange Limited (UCX), Mumbai. The commodity exchanges are regulated by the Forward Markets Commission (FMC), which was established in 1953. Today, futures trading are permissible in 113 commodities in India. This paper presents a review of the limited literature and key findings on agricultural commodity market in India. The paper is divided in three different sections. In Section 1, developments and performance of agricultural commodity market in India has been discussed. Section 2, describes the literature in terms of agricultural commodities futures and price risk management. Section 3, concludes the paper by identifying problems of agricultural commodity market.

OBJECTIVES OF THE STUDY

The objectives of this study are as follows:

1. To study the development of agricultural commodity market in India.
2. To study the performance of agricultural commodity market in India from period (2009-10 to 2013-2014).
3. To find out the share of agricultural commodities in commodity futures market for period (2009-10 to 2013-14).

REVIEW OF LITERATURE

Sanjay Sehgal, Dr. Namita Rajput and Rajeev Kumar Dua (2012) in his study titled “Price Discovery in Indian Agricultural Commodity Markets” conclude that Indian commodities market is still not perfectly competitive for

some commodities. Find that spot and futures prices of all sample commodities and indices are non stationary, and in fact integrated to order one except one commodity Turmeric in which null hypothesis is accepted and there is no co integration revealed in this market. **Mrs. Isha Chhajer and Mr. Sameer Mehta (2013)** in his research paper “Market Behavior and Price Discovery in Indian Agriculture Commodity Market” examined the price discovery mechanism is quite effective for most commodities, but may not be very effective for some commodities. They found several natural processes such as seasonal cycles based on harvests, monsoons, depressions, and other weather events would also be expected to have an impact on price discovery in commodity markets; this is another area that needs to be studied. **Harvinder Pal Kaur and Dr. Bimal Anjum (2013)** in his research paper “Agricultural Commodity Futures In India- A Literature Review” Indian economy has witnessed mini resolution in commodity Future market since 2003 as a result of the revival of commodity futures in a big way. They found there is no integration between the commodity futures markets and spot market. **Neeti Agarwal and Gurbandini Kaur (2013)** in his study titled “Agricultural Commodity Future Trading and its Implications – An Overview” the discussion based on various parameters of the commodity market as a whole show that the researchers have a mixed view. There is no defined viewpoint on any of the variables selected. This clearly shows the uncertainty prevailing in the market which forms the basis of the research. **Shamim Ahmad and Mohammed Jamshed (2014)** in his study titled “Nurturing an Agriculture Friendly Commodity Derivatives Marketing in India” examined the analysis and discussion leads to the creation of a new ‘institutional design’ exclusively for governing, monitoring and regulating the spot, futures and derivatives markets in agricultural commodities. Central Government may pass an “Inter-State Agriculture Produce Trade and Commerce Regulation Act” under entry 42 “Inter-State Trade and Commerce” of agriculture produce at national level. They found the Government of India should empower spot exchanges to function on pan-India basis through integrated single window. **Nilanjana Kumari (2014)** in his research paper “India’s Foreign Trade with China with Special Reference to Agricultural Commodities” investigated the Sino-Indian bilateral trade relationship took an impressive turn during the last decade as China gradually ascended to become the largest trading partner of India since 2008. It can be observed from the study above that the liberalization of trade in Indian economy has positively affected our relation with the Chinese government. **M. Thirumagal vijaya and D. Suganya (2015)** in his study titled “Marketing of Agricultural Products in India” Selling on any agricultural products depends on some couple of factors like the demand of the

product at that time, availability of storage etc. The task of distribution system is to match the supply with the existing demand by whole selling and retailing in various points of different markets like primary, secondary or terminal markets. Most of the agricultural products in India are sold by farmers in the private sector to moneylenders or to village traders.

RESEARCH METHODOLOGY

The present study is conducted on agricultural commodity market in India. The study is descriptive in nature. The literature and data are mainly based on secondary a source, which has been collected from commodity market and their various publications, books related topics, magazines, reputed journals, research paper, news paper & various internet sources like www.mcxindia.com, www.ncdexindias.com, www.nmceindia.com, www.fmce.gov.in commodity market bulletins, annual reports of Forward Market Commission (FMC) and other publications. The various reports and records issues and maintained by the Government of India (GOI) are also used in the study. There is no tool applied to values and volumes fluctuations of agricultural commodity market.

DEVELOPMENT OF AGRICULTURAL COMMODITY MARKET IN INDIA

The Indian experience in commodity futures market can be traced back to thousands of years, with references to such markets in India also appearing in *Kautilya's Arthashastra*. The words, *Teji*, *Mandi*, *Gali* and *Pathak*, have been common parlance in Indian commodity markets for centuries. Organized futures market evolved in India by the setting up of “Bombay Cotton Trade Association Ltd.” in 1875. In 1893, following widespread discontent amongst leading cotton mill owners and merchants over the functioning of the Bombay Cotton Trade Association, a separate association by the name “Bombay Cotton Exchange Ltd.”. The Gujrati Vyapari Mandali came into existence in 1900 which has undertaken futures trade in oilseeds first time in the country. The Calcutta Hessian Exchange Ltd and East India Jute Association Ltd were set up in 1919 and 1927 respectively for futures trade in raw jute. These two associations amalgamated in 1945 to form the present East India Jute & Hessian Ltd., to conduct organized trading in both Raw Jute and Jute goods. In case of wheat, futures markets were in existence at several centres at Punjab and U.P. The most notable amongst them was the Chamber of Commerce at Hapur, which was established in 1913. Other markets were located at Amritsar, Monga, Ludhiana, Jalandhar, Fazilka, Dhuri, Barnala and Bhatinda Punjab and Muzaffarnagar, Chandausi, Meerut, Saharanpur, Hathras, Gaziabad,

Sikendrabad and Bareilly in U.P. In 1921, futures in cotton were organized in Mumbai under the auspices of East India Cotton Association (EICA). Many exchanges were set up in major agricultural centres in north India before the Second World War broke out and they were mostly engaged in wheat futures until it was prohibited. The existing exchanges in Hapur, Muzaffarnagar, Meerut, Bhatinda, etc were established during this period. Between the 1920s and 1940s, futures’ trading was conducted in a number of commodities such as cotton, groundnut, groundnut oil, raw jute, jute goods, castor seed, wheat, rice, sugar, gold and silver. In 1939, the government banned futures trading in several commodities because of the outbreak of the Second World War.

Due to the importance of commodity production and consumption in India, it was necessary to develop the commodity market with proper regulatory mechanism for efficiency and optimal resource allocation. Thus, after independence, the parliament passed Forward Contracts (Regulation) Act, 1952, on the basis of the recommendations of the Shroff Committee providing legal framework for organized forward trading. The regulator for the commodities trading is the Forward Markets Commission (FMC), situated at Mumbai, which comes under the Ministry of Finance. Forward Markets Commission is statutory institution set up in 1953 under Forward Contracts (Regulation) Act, 1952. Commission consists of minimum two and maximum four members appointed by Central Government. Forward Contracts (Regulation) Rules were notified by the Central Government in July 1954. 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-to-day 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 Economic Affairs, Ministry of Finance – is the ultimate regulatory authority. The production, supply and distribution of many agricultural commodities are still governed by the state and forwards and futures trading are selectively introduced with stringent controls. While free trade in many commodity items is restricted under the Essential Commodities Act (ECA), 1955, forward and futures contracts are limited to certain commodity items under the Forward Contracts (Regulation) Act (FCRA), 1952. The first organized future trading was by India

Pepper and Spices Trade Association (IPSTA) in Cochin in 1957. Trading was again banned in the 1960s except for pepper, turmeric, castor seed and linseed. Later, futures trade was altogether banned by the government in 1966 in order to have control on the movement of prices of many agricultural and essential commodities. Futures trading in castor seed and linseed were suspended in 1977. However, futures trade was prohibited in most of the commodities thereafter. Since then both the Dantawala Committee (1966) and the Khusro Committee (1980) have recommended the revival of futures trading in agricultural commodities.

After the 1991 reforms, the government set up a Committee in 1993 headed by Dr.K N Kabra to examine the role of futures. The committee recommended that futures trading in 17 commodities (excluding wheat, pulses, non-basmati rice, tea, coffee, dry chilli, maize, vanaspati and sugar) be permitted. There were a number of other expert committees, including the Shroff Committee, Dantwalla Committee and the Khusro Committee, which laid the foundation for the revival of futures trading. Many reports, notably a UNCTAD and World Bank joint mission report (1996) highlighted the role of futures markets as market based instruments for managing risks. The report suggested strengthening the institutional capacity of the regulator and commodity exchanges for efficient performance. The report also noted that government intervention is pervasive in some sensitive agricultural commodities like wheat, rice and sugar and was of the view that futures markets in these commodities were unlikely to be viable because of its sensitive role in economy.

After the Securities Laws (Amendment) Bill was passed in 1999, the Central Government lifted the prohibition on forward trading in securities on 1 March, 2000. Further, National Agricultural Policy (2000) and the expert committee on strengthening and developing Agricultural Marketing (2001, **Guru Committee**) supported commodity futures trading. In February 2003, the government revoked the ban and accepted most of these recommendations allowing futures trading in 54 commodities in bullion and agricultural sectors. Responding positively to the favourable policy changes, National Multi-Commodity Exchanges Ltd. (NMCE), Ahmedabad, were up since 2002, using modern practices such as electronic trading and clearing. Multi Commodity Exchange Ltd. (MCX), Mumbai commenced in November 2003; National Commodity and Derivatives Exchange Ltd. (NCDEX), Mumbai commenced in December 2003; Indian Commodity Exchange Limited

(ICEX) as nation-wide multi-commodity exchanges, which commencement in 2009. ACE Derivatives and Commodity Exchange Ltd., was set up in 2010. Universal Commodity Exchange Limited (UCX), Mumbai, was set up in 2012. The Forward Markets Commission (FMC) regulates these exchanges. The Commission functioned under the administrative control of the Ministry of Consumer Affairs, Food & Public Distribution, Department of Consumer Affairs, Government of India (GOI) till 5th September. Thereafter the Commission has been functioning under the Ministry of Finance, Department of Economic Affairs, Government of India (GOI). At present, there are 22 exchanges operating in India and carrying out futures trading activities in as many as 146 commodity items. As per the recommendation of the FMC, the Government of India recognized the National and regional exchanges. Apart from these, there are about 22 recognized futures exchanges in India with more than 5098 registered members. Trading platforms can be accessed through 20000 terminals spread across 800 towns/cities across the country. Forward Markets Commission (FMC) under the Ministry of Finance is the chief regulator of derivatives and futures trading in India.

AGRICULTURAL COMMODITIES IN INDIA

Indian economy has witnessed mini resolution in commodity Future market since 2003 as a result of the revival of commodity futures in a big way. Farmers in rural areas are not able to patronize the benefits of commodity futures market. There are various reasons responsible that are accountable for the ineffective growth of commodity futures market in India. The efficient and modern infrastructural facilities are the major bottleneck in growth of agricultural commodity futures market in India.

Accordingly, ‘Agricultural commodity’ means wheat, cotton, flax, corn, dry beans, oats, barley, rye, tobacco, rice, peanuts, soybeans, sugar beets, sugar cane, tomatoes, grain sorghum, sunflowers, raisins, oranges, sweet corn, dry peas, freezing and canning peas, forage, apples, grapes, potatoes, timber and forests, nursery crops, citrus, and other fruits and vegetables, nuts, tame hay, native grass, aqua cultural species (including, but not limited to, any species of finfish, mollusk, crustacean, or other aquatic invertebrate, amphibian, reptile, or aquatic plant propagated or reared in a controlled or selected environment), or any other agricultural commodity, excluding stored grain.

Table: 1 List of Agricultural Commodities Trading in India

Group of Agri-Commodities	Particular of Agricultural Commodities
Oil & Oil Seeds	Celery seed, Copra Oil/Coconut Oil, Copra Oilcake / Coconut Oilcake, Copra/ Coconut, Copra oil cake/Coconut Oil, Cottonseed Oil, Cottonseed Oilcake, CPO Refined, Crude Palm Oil, Crude Palm Olive,

	Groundnut, Groundnut Oil, Groundnut Oilcake, Linseed, Linseed oil, Linseed Oilcake, Rapeseed Oil/Mustard Oil, Rapeseed Oilcake/Mustard seed Oilcake, Rapeseed/Mustard seed, RBD Palmolein, Rice Bran, Rice Bran Oil, Rice Bran Oilcake, Safflower, Safflower Oil, Safflower Oilcake, Sesame (Til or Jiljilli), Sesame Oil, Sesame Oilcake, Soy meal, Soy Oil, Soybean, Sunflower Oil, Sunflower Oil cake, Sunflower Seed, Castor Oil, Castor Seeds, Cotton Seed, Kapasia Khalli
Spices	Cardamom, Jeera, Pepper, Chillies, Turmeric, Nutmegs, Methi, Ginger, Cloves, Cinnamon, Betel nuts, Aniseed
Pulses	Chana, Masur, Yellow Peas, Tur Dal (Arhar Dal), Tur(Arhar), Urad (Mash), Urad dal, Gram Dal, Mung Dal
Cereals(Food Grains)	Maize, Wheat, Arhar Chuni, Bajra, Barley, Gram, Guar, Jowar, Kulthi, Lakh (Khesari), Moth, Mung, Mung Chuni, Peas, Ragi, Rice or Paddy, Small Millets (Kodan Kulti, Kodra, Korra, Vargu, Sawan, Rala, Kakun, Samai, Vari & Banti)
Plantations	Areca nut, Cashew Kernel, Coffee (Robusta), Rubber
Fibers and Manufactures	Art Silk Yarn, Cotton Cloth, Cotton pods, Cotton Yarn, Indian Cotton (Full pressed, half pressed or loose), Jute goods (Hessian and Sackings and cloth and /or bags, twines and/or yarns manufactured by any of the mills and/or any other manufacturers of whatever nature made from jute), Kapas, Raw Jute Including Mesta, Staple Fibre Yarn
Others	Mentha Oil, Potato (Agra), Potato (Tarkeshwar), Sugar M-30, Sugar S-30

Source: FMC, (www.fmc.gov.in)

Table: 2 Food Items and non Food Items

Food Items (Grains, Pulses, Spices and Oils)	Non Food Items
Chana/Gram, Soya bean/seed, Crude Palm Oil, Mentha Oil, Coriander/Dhaniya, Pepper, Jeera (Cumin seed), Chillies (Red Chilli), Turmeric, Cardamom, Nutmegs, Rape/Mustard Seed, Wheat, Rice, Maize Feed, Barley, Bajra, Jowar, Potato, Sugar, Gur, Coffee Rep Bulk, Copra, Coconut oil, Pulses -Tur Dal (Arhar Dal), Tur (Arhar), Urad (Mash), Urad dal	Guar seed, Mentha Oil, Castor seed, Guar Gum, Kapas, Rubber, Raw jute, Sacking, Isabgul Seed, Cotton, Jute Goods, Cotton seed Oilcake / Kapasia Khali

AGRICULTURAL COMMODITIES TRADING IN INDIA

Broadly speaking agricultural commodities can be divided in two categories: Soft and Hard. Soft commodities are typically grown. Corn, wheat, soybean, Soybean oil, sugar are all examples of "soft" commodities. The Hard commodities are typically mined from the ground or taken from other natural resources: gold, oil, aluminum.

Agriculture provides the principal means of livelihood for over 70% of India's population. It contributes approximately one-fifth of total gross domestic product (GDP). Agriculture accounts for about 10 per cent of the total export earnings and provides raw material to a large number of industries. Being the third largest land mass in world it is number top producer of many agriculture commodities. And yet Indian agriculture has one of the lowest yields in most commodities, nearly 55.7% of area sown is dependent on rainfall. Clearly while there are challenges there are huge potentials as well. Agricultural commodities as follows: Edible Oil, Grains, Spices, and Others.

I. Edible Oil Complex:

Edible oil complex include actively traded commodities like soy beans, refined soy oil, soy meal, Mustard seed and Crude palm oil. These commodities contribute to

more than 50% of the exchange volume. Out of the various Agri- commodities traded at the domestic bourses Edible oil complex have global appeal and therefore their prices move in tandem with the international markets.

Soya bean Trading in India

Soybeans, also called as Golden beans are one of the largest traded agricultural commodities in world. Major portion of the global and domestic crop is solvent-extracted with hexane to yield soy oil and obtain Soy meal, which is widely used in the animal feed industry. It is estimated that more than 75% of the global Soybean output is crushed worldwide. In India refined soy oil is the second largest edible oil consumed with a market share of around 15 - 18%. Palm oil consumption by Indian consumer is the most at 46% of the total edible oil consumption. India imports 55-60% of the total edible oil requirement. Soybean in India has experienced a phenomenal increase both in area and production during the last two decades. The rapid growth in soybean cultivation has placed India on the world map of soybean. India ranks fifth in the world in area and production after USA, Brazil, China and Argentina. In India, soybean ranks third in oilseeds after groundnut and rapeseed/mustard. Soybean is considered to be a most economical and valuable agricultural commodity as, it has good adaptability towards a wide range of soil and climate. On an average dry matter basis, Soybean

contains about 40% protein and 20% oil. Soyabean is very nutritious - the protein and oil components in soyabean are not only in high quantity but also in high quality. Soya oil contains high proportion of unsaturated fatty acids, so it is healthy oil.

In India Madhya Pradesh (M.P.) is the leading state in producing soyabean followed by Maharashtra, Rajasthan and Uttar Pradesh. On average, Madhya Pradesh produces 74 percent of India's total soyabean crop; Maharashtra, 13 percent; and Rajasthan, 10 percent. Soyabean has attained a vital status in agriculture and oil economy of India. The country presently produces about 6 million tonnes of soyabean per annum. Out of this, 5% is used for food and feed, 10% for seed and 5% for oil extraction.

Soyabean meal

Soyabean meal is considered a premium product because of its high digestibility, high energy content and consistency. Properly processed de-hulled soya bean meal is an excellent source of protein and is used extensively in feed for swine, beef and dairy cattle, poultry, and aquaculture. Madhya Pradesh, Maharashtra, Rajasthan and Andhra Pradesh are the major cultivators of this important oilseed, with their respective contributions usually around 60%, 25%, 6-7% and 1-2%. The states of MP, Maharashtra and Rajasthan contribute 95% of the total soybean produced in India.

Mustard seed Trading in India

India is the fourth largest producers of Mustard in the world. India produces 5.5 million MT to 7 million MT annually. India is the largest edible oil consumer in the world. This makes Mustard prices very vulnerable to changes in Indian demand and supply. Efforts are being made both by the Government of India and the industry associations to increase production of this vital source of edible oil and meal. Mustard futures contract was launched on NCDEX platform on February 2004 and has witnessed considerable volatility since its launch.

Crude Palm Oil Trading in India

Palm oil is one of the few vegetable oils known to be rather high in saturated fats, and it comes close to soybean oil as one of the most widely-produced vegetable oils in the world. Together, Malaysia and Indonesia account for over 80% of world production of Crude Palm Oil, with most of that produced intended for export. Crude Palm Oil futures are actively traded on the Bursa Malaysian Derivatives (BMD), and futures also trade on the Mumbai Multi-Commodity Exchange or MCX for the product.

India is the one of the largest importer of Crude Palm Oil in the world. India is dependent on palm oil imports for over 30% of its annual edible oil requirement

and more than 65% of India's annual edible oil imports. Crude Palm Oil futures contract was launched on MCX platform in 2004.

Castor seed Trading in India

Castor plant (*Ricinus communis*), a tropical plant belonging to the Euphorbiaceae family, is cultivated around the world for its non-edible oilseed. Castor seed is the source of castor oil, which has a wide variety of uses. The seeds contain between 40% and 60% oil that is rich in triglycerides, mainly ricinolein. The seed contains ricin, a toxin, which is also present in lower concentrations throughout the plant. Castor oil is unique with no synthetic substitute.

Castor seed production in India is around 9-10 lakh MT. Castor oil (extracted from castor seed) and its derivatives have vast and varied applications in the manufacturing of soaps, lubricants, hydraulic and brake fluids, paints, dyes, coatings, inks, cold resistant plastics, waxes and polishes, nylon, pharmaceuticals and perfumes. Castor oil is the largest vegetable oil exported out of India. India is the biggest exporter of castor oil holding about 70% share of the international trade in this commodity followed by China & Brazil.

II.Grains:

India has moved rapidly from being an importer of food grains to becoming an exporter. Today, it is the second largest rice producer after China, with a share of 20% of world in production, and is ranked tenth amongst the world's wheat growers. Currently India is one of the largest producers of cereals and grains. India produced more than 200 million tonnes of different food grains every year. The country is self-sufficient in grain production. Grain processing is the biggest component in the food sector, sharing over 40% of the total value. Grains can emerge as a major foreign exchange earner for India in the coming years. India's food grains production is now at around 230-240 million tonnes. These include rice, jawar, bajra, maize, wheat, gram and pulses.

Wheat Trading in India

Wheat is a globally important source of dietary carbohydrate (starch) and protein (gluten). Wheat is the most important food grain in the world that ranks second in total production as a cereal crop, behind maize and ahead of rice. Wheat is the staple food of millions of people. Its grain is a staple food used to make flour for leavened, flat and steamed breads, biscuits, cookies, cakes, breakfast cereal, pasta, noodles etc and for fermentation to make beer, alcohol, vodka, or bio fuel. In the Mediterranean region, centuries before recorded history, wheat was an important food.

India is the third largest producer of the wheat

crop. It has been successfully fulfilling its large domestic consumption demand in the past few years and has been exporting the surpluses to give the major exporters of the world a good competition. India produces about 75 million tonnes of wheat per year or about 12 per cent of world production. Being the second largest populous country, it is also the second largest in wheat consumption after China, with a steep growing wheat demand. The major Wheat producing states in India is placed in the Northern part of the country with UP, Punjab and Haryana contributing to nearly 80% of the total wheat production. Wheat occupies a major share of 35% production in the total production of crops cultivated and 65% of total cropped area in the country.

Pulses Trading in India

India is the world's largest producer, consumer of pulses. Chana, Tur, Urad, Moong are some of the major pulses grown in the country. Of the total pulses production in India Chana contributes more than 40%. Chana is also the only commodity traded in the pulses segment and India being the lone platform for the trade globally. Also Chana trading has been attracted by large corporates as well as retail traders due to its growing usage in food industry making it very attractive for hedging and arbitrage perspective.

Chana Trading in India

India is the world's largest producer, consumer as well as importer of chana (Chickpea). Chana or chickpea is an important pulse crop of India and is a rich source of protein and used as edible seed and also for making flour. It is highly nutritious and ranks third amongst important legumes after dry bean and peas. Two types of chana like desi and kabuli are being cultivated across the globe. Indian production contributes to nearly 65-70% of the global production. Out of the total pulses production in the country chana contributes to nearly 45-48%. Indian spot markets are largely fragmented with very long value chain. The major players in the value chain are commission agents, broker's stockiest, wholesale traders, dal mills and retail outlets. India imports nearly 20% of the world imports of chana, closely followed by Pakistan (18%), Bangladesh (9%) and Spain (8%). On the exports side, India exports 20% of the world exports, closely followed by Australia (20%), Mexico (12%) and Myanmar (10%). Major producing states are Madhya Pradesh, Maharashtra, Andhra Pradesh, Rajasthan and Karnataka. Major trading centers of chana in India are Indore (Madhya Pradesh), Latur (Maharashtra), Akola (Maharashtra), Bikaner (Rajasthan) and Delhi.

III.Spices:

Spices have been an essential part of human civilization. In the Indian civilization too, trading of

spices has been integrally connected to its history. Spices were traded through India right from the time of Romans. India is known as the 'The home of spices'. India is the leading producer, consumer and exporter of spices in the world. India contributes about 48% to the world spices demand. At present, India produces around 2.75 million tons of different spices valued at approximately 4.2 billion US \$, and holds the premier position in the world spices market. In India, spices are important commercial crops from the point of view of both domestic consumption and export. Spices export from India has registered an all-time high both in terms of quantity and value. Chilli, Coriander, Jeera, Pepper, Turmeric and cardamom constitute spice complex for derivatives trading in India. The performance of these contracts illustrates the success of efficient price discovery in the Indian domestic market through derivatives trading.

Jeera Trading in India

India is known as the 'The home of spices'. India is the only country in the world to produce variety of spices due to diverse weather conditions. India is the largest producer, consumer as well as exporter of Jeera in the world. This makes Jeera prices very vulnerable to changes in Indian demand and supply. At present, India produces around 2.75 million tons of different spices valued at approximately 4.2 billion US \$, and holds the premier position in the world spices market. In India, spices are important commercial crops from the point of view of both domestic consumption and export. Jeera futures contract was launched on NCDEX platform on February 2004 and has witnessed considerable volatility since its launch

Pepper Trading in India

Black pepper - the black gold of spices is one of the most popular spices in the world. India is second largest producer for black pepper in world after Vietnam. Out of all the varieties of pepper (white, green, pink, black) Black and the White variety are widely used. Besides India, the other major consuming countries are Srilanka, Brazil, Indonesia and Malaysia. Amongst the non-IPC countries, Thailand is a second largest consumer of the Black Pepper and is next only to India in consumption.

India is also the largest pepper consumer in the world. Pepper futures contract was launched on NCDEX platform on April 2004 and has witnessed considerable volatility since its launch.

Turmeric Trading in India

Turmeric is the ancient and sacred spice of India. Worldwide it is known as golden spice. Apart from India, it is cultivated in most of the Asian countries, Africa, South Pacific Islands, Malagasy, Caribbean Islands and

Central America. Turmeric belongs to the group curcuma and there are 30 varieties included in it 'Alleppey Finger', 'Erode and Salem turmeric', 'Rajapuri' and 'Sangli turmeric', 'Nizamabad fingers' are some popular varieties of India.

India is the largest producer, consumer as well as exporter of turmeric in the world. India contributes nearly 85-90% of the global turmeric production. India's annual production ranges between 8.5 to 9.3 lakh tons. Turmeric futures contract was launched on NCDEX platform on July 2004 and has witnessed considerable volatility since its launch.

Dhaniya/Coriander Trading in India

Coriander is an important spice crop and hold main position in flavoring food. It is a native of Mediterranean and commercially produced in India, Morocco, Russia, East European countries, France, Central America, Mexico, and USA. In India, Coriander is cultivated during Rabi season during mid - October and mid - November and harvested during February and March.

India contributes to more than 50% of the global production and is also the largest consumer and exporter of Coriander in the world. India is the biggest producer, consumer and exporter of coriander in the world with an annual production averaging around 3 lakh tonnes. Dhaniya futures contract was launched on NCDEX platform on August 2008 and has witnessed considerable gain in volume of trade since its launch.

Cardamom Trading in India

Cardamom is popularly known as the 'Queen of Spices' as it is one of the most exotic and highly prized spices (after saffron and vanilla). Guatemala and India are the two major cardamom-producing countries in the world followed by Indonesia. Guatemala produces nearly 40-45% of the total global cardamom production. There are three distinctive types of cardamom grown in India viz., Malabar, Mysore and Ceylon type. The Malabar type, traded as Alleppey Green cardamom, is considered as the best in the world. The two major commercial varieties of small cardamom in the world are the Malabar and the Guatemalan. Indian cardamom is slightly smaller, but more aromatic.

India is the second largest producer, consumer as well as exporter of Cardamom in the world. Cardamom futures contract was launched on MCX platform on February 2006 and has witnessed considerable volatility since its launch.

IV.Others:

India plays a crucial role in both the commodities Cotton and Sugar. India is the second largest producer consumer and exporter of Cotton. While production and global trade of sugar is very volatile because India is the largest consumer of sugar in the world, surplus or deficit in India

tilts the global prices in the one or the other direction. Effectively both these commodities are very broad commodities has large economies of their own in India are an important price influencing factor in world. Within India both the commodities provide very important source of income to millions of farmers, traders and exporters, and because of its importance are highly politically sensitive commodities.

Cotton Trading in India

Indian Cotton Industry's history of establishment has a rich past. English did gradual inaugurations of a number of beneficial industries in India and the country was opening its eyes to a whole new era of mechanization. With 19th century India had successfully established major production industries, owing to the initiative of the British East India Company. Cotton was an essential staple fabric, which was needed in almost every work of life in India. Indian Cotton Industry was the precise industry which fostered a humble beginning, attracting budding Indian industrialists. The first ever derivative market in India was Cotton Futures and was set up in 1875 in Mumbai. As the world's second-largest cotton producer, consumer, and exporter, India commands special global attention. India's strong economic growth over the past decade has greatly expanded the country's domestic market, leading to increased apparel spending and evolving apparel preferences among Indian consumers. Currently textile manufacturing is India's second-largest industry (behind only agriculture), employing over 35 million people.

Indian exchanges have a highly liquid Kapas contracts on NCDEX, and cotton contract on MCX is in making. Active derivatives in this segment will allow Indian physical traders to actively do price risk management.

Sugar Trading in India

India is the world's largest sugar consumer, accounting for 15% of global consumption. In India sugar production follows a 5-7 year cycle. Sugar production increases over a 3-4 year period, reaches a high, which in turn, results in lower sugar prices. Lower sugar price and increased sugarcane arrears results in lower sugarcane production for the next 2-3 years. And the sugar prices shoot up and the area under sugarcane rises during the next season. As a result Sugar in India is also a huge 'swing producer' - severe year-to-year production fluctuations affects its trade status and in turn global prices of sugar. The Indian sugar industry remains the second largest rural agro-industry after cotton textiles. With over 600 operating sugar mills across India, about 50 million sugarcane farmers and a large number of agricultural labourers are involved in sugarcane cultivation and ancillary activities; the industry remains a potent rural economy driver.

Mentha Oil Trading in India

Mentha oil and its constituents and derivatives are used in food, pharmaceutical and perfumery and flavoring industry. Mentha is widely cultivated in India and its leaves are used in making sauces/chatni in most households. Menthol crystals are the basic ingredients for toothpaste, mouth fresheners, pharmaceuticals, ayurvedic and Unani medicines, chewing tobacco, pan masala, pain balm, confectioneries, cosmetics, and fragrances industries, etc.

India is the largest producer and exporter of mentha oil. At present, the major producers of mint oil in the world are India (80%), China (09%), Brazil (7%), and the US (4%). At present the major producers of mint oil in the world are India, China, Brazil and the US. India exports different types of mint oils to a number of countries including Argentina, Brazil, France, Germany, Japan, UK, USA, etc. these varieties include the Japanese mint oil

Potato Trading in India

Potato is the world's fourth important food crop after wheat, rice and maize owing to its great yield potential and high nutritive value and accounts for nearly half of the world's annual output of all root and tuber crops.

India is ranked third in potato production after China and the Russian Federation. Potato is cultivated in India under highly diversified agro climatic conditions ranging from sea level to snowline. Potato is mainly a Rabi crop and is grown in UP, Punjab, Haryana, West Bengal, Madhya Pradesh, Bihar, Andhra Pradesh, Tamil Nadu, and Gujarat.

Oil & Oil seeds

Indian Oilseed and Produce Export Promotion Council (IOPEPC) are concerned with the promotion of various Oilseeds and Oils. Formerly known as IOPEA, it was

formed on 23 rd June 1956, at a preliminary meeting held in Bombay under the Presidentship of late Shri Lalji Mehrotra, former President of Federation of Indian Chambers of Commerce and Industry (FICCI) and India's one time ambassador to Myanmar and Japan. The formation of IOPEA was, in fact, the first organized effort to promote and protect the interests of India's export trade in commodities like Oilseeds, Vegetable Oils and Oilcakes in a collective and concerted manner through a representative body.

PERFORMANCE OF AGRICULTURAL COMMODITIES IN INDIAN COMMODITY MARKET

The Government of India in 2003-04 had initiated major steps towards introduction of futures trading in commodities, which included removal of prohibition on futures trading in all the commodities by issue of a notification and setting up of the National Level Commodity Exchanges. The momentum gathered in 2009-10 continued in 2011-12 and manifested itself in increases in volumes, participation, number of commodities traded and various new initiatives taken by the National Exchanges (Table 3).

The major agricultural commodities traded at these exchanges were soya oil, mentha oil, guar seed, guar gum, chana/gram, rubber, potato, chillies, jeera (Cuminseed), cardamom, pepper, turmeric, wheat, maize, kapas (cotton) etc. These exchanges have introduced various innovations which would increase efficiency of agricultural commodity marketing in the country. The development of a system of physical delivery of commodities backed by warehouse receipt system is expected to help eliminate rigidities inherent in the trading of physical goods by providing for a judicious mix of protection against both price and quality risks.

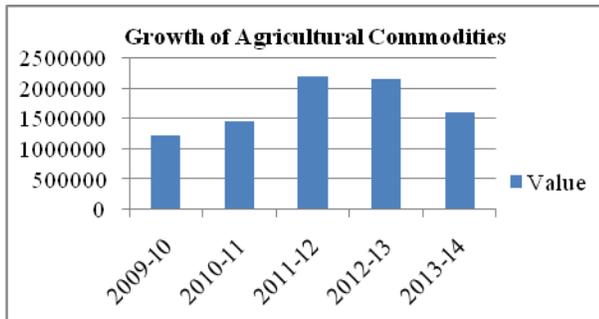
Table: 3 Value (in Crore) of trading in agricultural commodities

Agricultural Commodities	2009-10 In Crore	2010-11 In Crore	2011-12 In Crore	2012-13 In Crore	2013-14 In Crore
Chana/Gram	127950.47	126158.29	306411.78	165039.10	164754.94
Wheat	4015.01	3316.88	2661.42	5406.46	1637.22
Maize	790.56	1730.06	2294.48	10938.34	6168.26
Soy Oil	235605.92	345286.26	538383.46	708315.97	290044.79
Mentha Oil	13173.04	60527.10	101410.51	102399.93	41798.11
Guar Seed	283431.09	254690.88	338216.19	0.00	24719.80
Guar Gum	29593.86	49942.57	100515.47	0.00	12237.77
Potato	4575.74	14428.17	14156.71	5843.42	4239.66
Chillies	1998.17	8493.79	11611.26	11752.80	7537.48
Jeera(Cuminseed)	33720.04	60864.48	55982.69	65955.88	28917.50
Cardamom	2503.69	10882.04	16373.87	24139.38	11310.62
Pepper	27705.73	84786.09	79518.79	34742.45	1600.70
Rubber	7123.20	23846.92	16697.51	9939.76	10514.94

Other agri- Commodities	445762.51	411436.10	611915.37	1011226.92	996920.17
Total	1217949.04	1456389.62	2196149.50	2155700.42	1602401.96

Source: FMC, (www.fmc.gov.in)

Figure: 1 Performance of Agricultural Commodities (Value in Cr.)



Source: FMC, (www.fmc.gov.in)

The table shows the performance of agricultural commodity market in India for period 2009-10 to 2013-14, which indicates an increasing trend in value of traded commodities in 2009-10 to 2013-14. It was 1217949.04 crore in 2009-10 which increases to 2196149.50 crore in 2011-12. Value of trade decreased in 2012-13 was 2155700.42 crore. Similarly, the value of commodities traded in 2013-14 was 1602401.96 crore that consider

CONCLUSION

Commodity futures and derivatives market have a crucial role to play in the price risk management process, especially in agriculture. However, they have been utilized in a very limited scale in India. The production, supply and distribution of many agricultural commodities are controlled by the government and only forwards and futures trading are permitted in certain commodity items. But there is always been a doubt, as expressed by different bodies, on the usefulness and suitability of futures contract in developing the underlying agricultural commodity market, especially in agricultural based economy like India. There are 113 agricultural and non-agricultural commodities notified for trading in commodity market as per the Act 1952. There should be

being it is not a good sign for Indian commodity market. Guar seed and Guar Gum were not traded during the year 2012-13 in commodity market. Guar seed and Guar Gum were not traded during the year 2012-13 in commodity market. Wheat, maize, soya oil, menthe oil, potato, chilies, jeera, cardamom, and pepper share value to total value registered fluctuations in 2012-13, 2013-14 and the same trend can also be seen in the value of different other agricultural commodities traded in commodity market. Wheat, maize, soya oil, menthe oil, potato, chilies, jeera, cardamom, and pepper share value to total value registered fluctuations in 2012-13, 2013-14 and the same trend can also be seen in the value of different other commodities traded in commodity market. Chana/gram, Soya Oil and Guar seed are major value drives amongst agricultural commodities at the exchanges. In 2009-10 the value of trade in Guar seed was Rs 283431.09 crore and that of Soya Oil was Rs 235605.92 crore on the national and regional exchanges. In 2013-14, the value of trade in Soya Oil was Rs 290044.79 crore and that of Chana/gram was Rs 164754.94 crore on the recognized exchanges.

an opportunity to provide trading of all agricultural commodities in exchanges. The present study is an investigation into the present status, growth and developmental policy alternatives for commodity markets in agricultural commodities in India. The performance is evident in the spread of commodity market network as well as in value of trade. The value of trade has increased from Rs 1217949.04 crore in 2009-10 to Rs 2196149.50 crore in 2011-12. It indicates a positive growth in the agricultural commodity market in India. Agricultural sector plays a key role in the economy to provide food security to the trillions of people. The value of trade decreased from Rs 2155700.42 crore in 2012-13 to Rs 1602401.96 crore in 2013-14. The decreased in the value of trade has been various reasons.

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