GROWTH AND PERFORMANCE OF INDIAN AGRICULTURAL COMMODITY MARKET

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Abstract: The purpose of this paper is to 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. Commodity markets have a crucial role in developing agriculture dominated economies. Commodity markets have a significant role in the price risk management process especially in case of India being an agricultural dominated economy. 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. The present study is an investigation into the commodity markets in agricultural commodities in India. The paper shows the growth in commodity futures market along with identification of problems that are affecting the performance of agricultural commodity futures in India. 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 prospects.

Keywords: commodity markets, commodity futures, price discovery, hedging, risk management, speculation, agricultural commodities.

Introduction: India is the second largest producer of food in the world: more than 200 million tonnes of food grains, 150 million tonnes of fruits and vegetables, 91 million tonnes of milk, 1.6 million tonnes of poultry meat, 417 million livestock, and 6.05 million tonnes of fish and fish products. The Indian agriculture has made great strides over the years. 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. . The food grain production has increased more than fourfold - from 51 million tonnes in 1950-51 to 212 million tonnes during 2003-04 growing at an annual average rate of more than 2.4 percent per annum. The recent trends in performance of Indian agricultural production however present a dismal picture. During the 1990s, there has been a deceleration in production of all the principal crops. The growth in production of 'all principal crops' decelerated from 3.19 percent per annum during the decade of eighties to 2.29 percent per annum during the decade of nineties. During the first four years of the current decade the growth rate so far has been a mere 0.70 percent. It is not only the growth at the aggregated level that has decelerated, similar pattern has been observed in the case of growth rates of almost all the crops. While the growth in production of food grains has fallen from 2.85 percent in eighties to 2.02 percent in nineties and a mere 0.27 percent in the current decade so far, the growth of non food grains during the corresponding periods has declined from 3.77 percent to 2.69 percent to 1.35 percent. The growth in yields of principal crops notably rice and wheat have also decelerated. The overall growth rate of yield of all the principal crops has decelerated from 2.56 percent in 1980s to 1.33 percent in 1990s and has recovered slightly to 1.53 percent during the four years of the current decade. While the growth in food grain production during the nineties has managed to be just equal to population growth rate (2.02 percent versus 2.16 percent), the preliminary data for the more recent years indicate food grain production growth rate far behind the population growth rate. 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), Ahmadabad; 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), Ahmadabad; 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 (2001-2014)
3. To find out the share of agricultural commodities in commodity futures market for period (2001-2014)

Review of literature: Few studies are available on the performance and efficiency of Indian commodity futures market. Inspite of a considerable empirical literature, there is no common consensus about the efficiency of commodity futures market. Gopal and Sudhir (2002) suggested that agricultural commodity futures market has not fully developed as compared to mechanism of price discovery and risk management. In his study he found some aspects to blame for deficient market such as poor management, infrastructure and logistics. Narender **(2006)** emphasized that Indian commodity market starts its progress since 2003 with increased number of modern commodity exchanges, transparency and trading activity. The volume and value of commodity trade has shown unpredicted mark. This had happened due to the role played by market forces and the active encouragement of Government by changing the policy concerning commodity derivative. His views were on the promotion of barrier free trading in the future market and freedom of market forces to determine the price. Himdari **(2007)** According to his views the significant risk returns features and diversification potential has made commodities popular as an asset class. He found that Indian market have improved pretty well in recent years and would result in fundamental changes in the existing isolated local markets particularly in case of agricultural commodities. Kamal (2007) given his conclusions that in short span of time, the commodity futures market has achieved exponential growth in turnover. He found various factors that need to be consider for making commodity market as an efficient instrument for risk management and price discovery and suggested that policy makers should consider specific affairs related with agricultural commodities marketing, export and processing and the interests involved in their actual production. K. Lakshmi **(2007)** shown the implications on the grant of permission to Foreign Institutional Investors, Mutual Funds and banks in commodity derivative markets. She concluded that participation of these institutions may boost the

liquidity and volume of trade in commodity market and they could get more opportunities for their portfolio diversification. Arup et al. (2008) to facilitate business development and to create market awareness, they conducted an index named MCX COMAX for different commodities viz. agricultural, metal and energy traded on Multi Commodity Exchange in India. By using weighted geometric mean of the price relatives as the index, weights were selected on the basis of percentage contribution of contracts and value of physical market. With weighted arithmetic mean of group indices the combined index had been calculated. It served the purpose of Multi Commodity Exchange to make association among between various MCX members and their associates along with creation of fair competitive environment. Commodity trading market had considered this index as an ideal investment tool for the protection of risk of both buyers and sellers. Swami and Bhawana (2009) discussed that with the elimination of ban from commodities, Indian futures market has achieved sizeable growth. Commodity futures market proves to be the efficient market at the world level in terms of price risk management and price discovery. Study found a high potential for future growth of Indian commodity futures market as India is one of the top producers of agricultural commodities. Gurbandani and D.N,(2010) they tested the market efficiency of agricultural commodities traded on National Commodity Derivative Exchange of India and pointed out that Indian commodity derivative market has witnessed phenomenal growth in few years by achieving almost 50 time expansion in market. By applying autocorrelation and run tests on four commodities namely-Guar seed, Pepper Malbar, refined Soya oil and Chana (Gram) the study observed the random walk hypothesis and tested the week form efficiency of these commodities. The study also indicated key evidence of liner dependence for selected agricultural commodities which has reflected by high coefficient values of autocorrelation. Indian agricultural commodity market is efficient in week form of efficient market hypothesis. Sheeb and kanwal (2010) tried to examine the need for commodity trading advisors and discussed the important functional and policy considerations in initiating the commodity futures market for commodity trading advisors in India. Study found an unstructured expansion in Indian commodity market, in spite of high demand for commodities in both derivative and spot markets. There had been limitations through policy restrictions and at the same time there had been an attempt for liberalisation of the derivative market to bring both markets at par with global commodity market. Study concludes that the participation of non professional people make commodity trading a risky venture and they add volatility factor to the market. So it has been argued that participation of commodity trading advisor will provide expertise in commodity futures trading and it will protect the traditional portfolios with better profit and less risk. Brajesh and Pandy (2013) investigated the short run and long run market efficiency of Indian commodity futures market. They had tested four agricultural and even nonagricultural commodities for market efficiency and unbiasedness. The result confirmed the long run efficiency of commodity futures prices and inefficiency of futures prices in short run Sanjay Sehgal, Dr. Namita 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 Chhajed 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. Harwinder 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. 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.

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, newspaper & various internet sources like www.mcxindia.com,
www.ncdexindias.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 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 Kautialya's Arthasastra. 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, Ghaziabad, Sikendrabad and Barely 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, and wheat, and 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:

1. The Exchange which organizes forward trading in commodities can regulate trading on a day-to-day basis;
2. The Forward Markets Commission provides regulatory oversight under the powers delegated to it by the central Government, and

3. 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.

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. 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.

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