Renaissance of Commodity Derivatives Market in India

Its Past and Future Growth Potential

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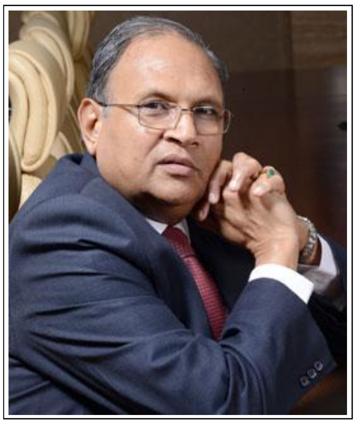

The modern futures trading in commodities has traces back to the 17th Century. That was when the first ever case of futures in rice was recorded in Osaka, Japan. However, there are traces suggesting that futures may have been traded in China as long ago as 6000 years.

The organised futures trading began in the United States only towards mid-1800s with the setup of Chicago Board of Trade (CBOT) in 1848. CBOT was founded as a cash market for grain, but forward or "to-arrive" contracts started trading at the CBOT almost immediately. By 1860s, the Board got involved in public debates on grain trade that led to the formulation and adoption of regulations under the Illinois Constitution and the subsequent enactment of the Warehouse Act. This Act, which provided for state inspection and regulation of warehouses was possibly the first instance of operations of free market forces within the framework of state regulations in modern times. The consequent increase in trade led to the rise of Chicago as a major trading hub. Chicago came to be recognized as a link between the commercial center of New York and agricultural hinterland of western US. Later in 1870s and 1880s, New York Coffee, Cotton and Produce exchanges were established.

Globally today, futures trading in commodities are wide spread. More than 25 countries have organised futures exchanges and commodities ranging from agricultural products like Corn, Wheat to metals like Gold, Copper to petrochemicals like polypropylene, PVC and animal products like Cattle, Milk powder are traded on these exchanges.

Rise of commodity market in India

The futures trading started in the same time period in India. In fact, references to 'futures' are found in Kautilya.s *Arthashastra* (4th century BCE). Futures trading in India began as a response to the uncertainties in global cotton market following the outbreak of the US Civil War in 1860s, when the US supplies of cotton to the British textile industry stopped and Indian cotton started flowing in greater quantities to mills of UK. With the growth of exports, cotton business increased exponentially. To regulate this trade, the European buyers-exporters of cotton established the Bombay Cotton Trade Association Ltd. The Bombay Cotton Exchange was subsequently established in 1893. These two exchanges, between them, shared most of the ready, forward and futures business till about 1913. While derivatives trading in cotton was flourishing, derivatives on other commodities were also launched across various places in the country. Futures trading in Wheat started in 1913, Raw Jute and Jute products in 1919 and Bullion in 1920.

The commodity derivatives market experienced rapid growth during the period between First and Second World Wars. Although it continued to grow in the post-independence period, the market got a severe jolt when futures trading in most of the commodities were banned in mid 1960s following war, natural calamities and the resultant shortages.

It may be pointed out that a vibrant derivatives market in India, especially in cotton, already existed in India in the late 19th century. A number of traders, such as Roychand Premchand (popularly known as 'Cotton King', and 'Bullion King', and a founder member of Bombay Stock Exchange) and Seth Hukumchand Jain (1874-1959), known as 'Cotton Prince of India' made notable contributions to the growth and development of commodity derivatives market. These traders had even then invented products like 'options on futures' (Teji – mandi) to provide hedge within hedge. Some market experts believe that 'options on futures' was a gift from the Indian cotton trade to the global commodity derivatives market.

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After India embarked on economic liberalisation policies in the 1990s, the government realised the importance of futures trading in commodities to reinforce the competitiveness of Indian agriculture, commodity trade and commerce. In 2002, the NDA Government under the prime ministership of Shri Atal Bihari Vajpayee, allowed re-introduction of commodity futures and permitted for setting up of national, electronic multi-commodity exchanges in India, following which 3 national electronic multi-commodity exchanges started their operations. While a technology company was behind the establishment of MCX, which is today the largest commodity exchange in India with a market share of 84.3% (2015-16), the other national exchanges, NCDEX and NMCE were promoted by financial institutions like a leading private bank, an insurance major & a stock exchange, and Central Warehousing Corporation & cooperative institutions respectively.

Commodity exchanges: drivers of real economic growth and development

While stock markets are often seen as barometers of the economy's health and prospects, commodity markets encompasses the entire real economy and, therefore, its growth contributes to real economic growth, incomes and livelihoods.

Commodity markets have had tremendous economic significance in the lives of people and economic wellbeing of nations. The introduction of commodity exchanges has revolutionized trading. Apart from their core role in price discovery and price risk management, exchanges offer a liquid platform for trade, a central counterparty that eliminates counterparty risk, price information that is freely and transparently disseminated. They have also led to the creation of different types of infrastructure such as warehouses, vaults, quality testing labs, grading/sorting centers and an assortment of logistic services. Such infrastructure enable the smooth functioning of the commodity derivatives market, especially the aspects connected to delivery, and in the process, they lead to creation of an array of ancillary services, such as warehouse receipt-based financing. The commodity derivatives markets have been able to directly benefit the value chain participants of various commodities. According to a Study by IIM Calcutta and NISTADS, New Delhi (2012), MCX Mentha Oil futures facilitated the rise of India as a major exporter of processed mentha crystals, transitioning from being an exporter raw materials. An earlier study by UNCTAD (2009) reported reduction in the number of intermediaries in mentha value chain after the introduction of futures trading, reducing the price spread in the marketing channel from 11-12% to 7.5 – 10.5%. Similarly, the same study found that futures market in cardamom has helped to stabilize prices in the spot market. It also found that cardamom futures trading has encouraged farmers to grade their produce, thus increasing their returns.

All of these direct and ancillary functions have spun a number of observable benefits, including creation of employment opportunities. According to an estimate by Deloitte (2013), the Indian commodity derivatives market has created about 15 lakh jobs, which is 0.93% of India's service sector labor force. Another study by the Tata Institute of Social Sciences (2012) reveals that, commodity exchanges like MCX have provided an efficient risk management platform for small users such as SMEs. It says that MCX platform has ensured stable and fair prices for the SMEs. Fair prices reduce the cost of production and import bill, boost the growth of SMEs and provide accurate demand-supply signals that reduce the risks in SMEs. Accordingly, the growth and development of commodities derivatives market is a paramount for the creation of a modern commodity eco-system. The scope and growth of these ancillary services may expand going into the future.

Strategic significance of commodity exchanges to an economy

In USA and China, commodity exchanges are being promoted as vehicles for not just development, but also for spreading their national, regional and international influence. Today, China is exerting a strong influence over the prices of global commodities including industrial metals, gold and agricultural products. Beijing is setting to play a larger role in global price discovery, due to the surge in volumes in its futures markets. According to the World Federation of Exchanges report, trading in commodities on the Dalian Commodity Exchange and the Shanghai Futures Exchange surged to more than 1 billion contracts last year (2015). The three Chinese commodity exchanges occupied the first three positions in the global ranking of commodity futures market. In 2015, DCE moved to World No. 1 position amongst global commodity futures exchanges. In April 2016, Shanghai Gold Exchange launched its yuan-denominated gold benchmark, which is set to challenge the century-old system of fixing the gold price in London on the London Bullion Market Association (LBMA).

As world's top consumer and producer of most metals, China is taking steps to boost stockpiles, as the country grapples with a raw-materials glut amid the slowest growth in decades. The nation is reported to be increasing reserves of some metals and attempting to build stockpiles in addition to their inventories to support prices.

Similarly, China also plans to allow foreign investors to trade its proposed crude oil futures contract. It wants more control over oil pricing as its reliance on crude imports increases. The Chinese regulator is reportedly reviewing the

Figure 2: Evolution of commodity exchanges in the world

Evolutionary Stage	Electronic	Demutualisation	Listing	Consolidation
Feature	Enhanced Reach Driving Liquidity	Profitability and competitiveness coming to the fore	Value Unlocking	Acquiring Liquidity
Exchange	Dalian Commodity Exchange Shanghai Futures Exchange, Bolsa de Comercio de Buenos Aires	Korea Exchange, London Metal Exchange, Tokyo Commodity Exchange	Multi Commodity Exchange of India Ltd., Hong Kong Exchange and Clearing, Singapore Exchange	Regional: BM&F Bovespa Global: ICE, NYSE, Euronext Merged London Stock Exchange Deutsche Borse Merger (proposed)

Product innovation: central to exchanges' growth

The commodity derivatives market has grown on the back of product innovations such as the multiple varieties within each commodity, and multiple variants (say, in lot sizes) of each commodity. An example is the availability of gold contracts in multiple denominations: size variants ranging from 1 kg to 1 gram, as available on MCX. In the times to come, product innovation is likely to gather further momentum with introduction of products such as options; and trading in indices and intangibles, which have long been in demand in the Indian commodity markets. The Union Finance Minister, while presenting the Budget 2016, announced that new derivative products will be developed by SEBI in the commodity derivatives market. The new products such as options and products on indices and intangibles such as weather will usher in a new era for the markets and the country.

Weather influences daily lives and choices, and has an enormous impact on the performance of businesses. It also remains a key aspect of Indian agriculture (which along with fisheries and forestry accounted for over 15% to GDP in 2015-16) and affects lives of over a million farmers across the country. Weather plays a vital role even today in economies of developed countries like US, where it is estimated that nearly 20 percent of the U.S. economy is directly affected by the weather.

Thus, weather is not mere an environmental factor but an important economic factor. Almost every industry including agriculture, energy, entertainment, travel and construction etc. get affected by the vagaries of weather. The weather products on exchanges provide perfect solution for farmers, industry, insurers and other players like warehouse service providers to protect themselves from losses that arises on account of weather. MCX has been publishing rainfall indices covering locations viz. Mumbai, Jaipur and Indore since 2006 that signify deviation of actual rainfall from the past trend in these centres. Derivative products on weather indices, when allowed in the Indian market, can help key stakeholders to manage their risks. For example, weather derivatives can help insurance companies to offer weather related insurance products to the millions of farmers at vary competitive rates.

On a similar note, freight derivatives, when allowed in India, can help key stakeholders in the transportation and logistics industry to manage their risks. Ship-owners and charterers face enormous risks which emanate from fluctuations in freight rates and bunker prices, to manage which freight derivatives will be immensely useful.

Technology to drive the exchange businesses

The success of commodity exchanges is to a considerable extent the outcome of the state-of-the-art technology adopted by them to complement the suite of product and process innovations and take them to the last mile. A document published by UNCTAD in 2002 states that that "the world is seeing the onset of a third wave in the evolution of commodity exchanges, driven by technology rather than policy developments". As against the open outcry system, the modern technology-driven exchange system has led to a number of benefits, such as:

Wider reach: online trading enables large number of participants to trade irrespective of their location, which has enabled more efficient price discovery in the futures market and effectively contribute to "financial inclusion".

Extended trade timing: Indian commodity futures exchanges, backed by robust technology, operate their trading platforms for about 13.5 hours daily, which is particularly helpful for effective risk management as Indian markets are available when the global exchanges in the western world open for business.

***Risk management*:** The emergence of efficient risk management systems and surveillance systems in commodity exchanges has also been facilitated by robust technology infrastructure.

***Innovative trade facilities*:** Commodity exchanges have also innovatively leveraged technology to create new products and opportunities, which have improved trade execution times, generating liquidity, and in the process helped achieve higher hedging efficiency of futures contracts

***Driver of ecosystem development*:** Price dissemination through a host of electronic media has not only enhanced the relative bargaining strength of the small stakeholders in the commodity value-chain, but also brought about „empowerment through information.

Information and Communication Technology (ICT) will continue to be the backbone of development of the exchange-traded markets in the future too. Multiple mediums of connectivity with nationwide points of presence, fault-tolerant servers, presence of intrusion detection and prevention systems, provision for real-time data replication to disaster recovery sites, etc. will be the hallmarks of the technology used by commodity exchanges which will increase public access.

Strength of regulation and its role in market deepening

The role of an enabling regulatory framework for development of the commodity market has been observed in virtually all countries. In recent times, one of the watershed moments of the growth of India's commodity market has been the strengthening of its regulatory body, achieved by way of merger of the erstwhile regulator, the Forward Markets Commission (FMC) with the Securities and Exchange Board of India (SEBI) in September 2015. This merger has been a shot in the arm of the commodity markets as SEBI has got considerable statutory powers, autonomy and human resources under its command (compared to FMC) to expend on the orderly growth of the commodity market. Under the new regulatory regime, a host of measures have been taken for enhancing the market integrity, which included registration of members, introduction of a comprehensive risk management framework for commodity exchanges, issue of guidelines for Annual Systems Audit, Business Continuity Plan and Disaster Recovery, issue of a consultative paper on warehousing norms for agricultural and agri-processed commodities traded on national commodity derivative exchanges, etc. The merger will pave the way for introduction of new products and likely participation of institutions such as banks, mutual funds and insurance companies. The presence of strong regulator will enhance confidence among stakeholders and will make commodities derivatives market a more vibrant industry.

The SEBI has issued a draft comprehensive guidelines for warehouse service providers, in order to strengthen the warehousing industry, incentivize institutionalized warehousing and align their processes with the best practices of this industry in the world.

A comprehensive risk management framework was issued by SEBI with the objective of aligning and streamlining the risk management framework across national commodity derivatives exchanges. It has revised Daily Price Limits (DPL) and Position Limits for agricultural commodity derivative contracts and introduced Extreme Loss Margin of 1% in all commodities. In September 2015, SEBI issued a comprehensive *SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015*, which mandates all listed companies to disclose commodity price risk and hedging activities.

The strength of the regulator was evident recently when a joint team comprising of police and SEBI officials busted a huge *dabba* trading platform in Mumbai, where traders allegedly made up to Rs. 5 crore per day through illegal trade. In another case, SEBI, along with the police, conducted a massive action including raids at 11 places, registering 8 offences against 20 people in Nagpur. It was revealed in this case that fund flow in dabba trading could be as high as Rs. 9000 crore per month in Nagpur alone, as per media reports.

On the lines of the above, one may expect continuing initiatives by the regulator to introduce regulatory norms that are in line with international practices as also oriented towards greater market development.

Adoption of IOSCO Principles in Indian commodity derivatives market

Going ahead, the regulation of the commodity derivatives market may be harmonized with global practices, especially adopting international norms such as those by IOSCO. In many countries, regulatory reforms initiatives are underway to implement measures such as US Dodd Frank Act Wall Street Reform and Consumer Protection Act (Dodd-Frank), the Markets in Financial Instruments Directive/Regulation (MiFID II/MiFIR) and the European Market

Infrastructure Regulation (EMIR). The September 2011 'Principles for Regulation and Supervision of Commodity Derivatives Markets' published by IOSCO at the behest of G-20, are aimed at ensuring a globally consistent approach to the oversight of commodity derivatives markets which will deliver effective supervision, combat market manipulation and improve price transparency. They address the following areas:

- Design and/or review of physical commodity derivatives contracts
- Surveillance of commodity derivatives markets
- Addressing disorderly markets
- Enforcement and information sharing
- Enhancing price discovery

In addition, IOSCO has published 'Principles for Financial Market Infrastructure. and Principles for Financial Benchmarks' which have significant relevance for the growth and development of the Indian commodity derivatives into truly global market places. During May 2016, IOSCO published its final report on 'The Impact of Storage Infrastructure on Commodity Derivatives Market Pricing', elucidating its views on the measures needed for the development of warehousing infrastructure, which is a sector witnessing massive changes in India, in response to the regulatory requirements and market need. These principles may be gradually adopted in India too.

In the above-mentioned report of May 2016, IOSCO observes that financial regulators in most countries generally do not have direct day-to-day authority over warehouses. In most cases, financial regulators regulate exchanges, which, in turn, are responsible for ensuring compliance by commodity warehouses with exchange or clearing house rules regarding storage and delivery. Thus, there is a risk that financial regulators have a limited ability to detect emerging problems; and when problems are identified, it may take longer to resolve them because of questions of regulatory reach, notes IOSCO.

Under the 'Timelines for Compliance with various provisions of Securities Laws by Commodity Derivatives Exchanges' in November, 2015, SEBI has stipulated that commodity derivatives exchanges shall transfer the functions of clearing and settlement of trade to a separate clearing corporation within three years. In view of the regulatory thrust across the world to shift clearing of standardised OTC products to Central Clearing Parties, a significant potential exists for a separate clearing corporation for undertaking clearing of commodity forwards in the country.

The roadmap for commodity markets

The significance of the commodity derivatives market is not in its size, or even in the speed at which it grows, but in the impact it creates in the social and economic development of the country. As numerous independent studies have proven, the commodity derivatives market in India has indeed created a perceptible impact in the lives and livelihoods of a large section of the stakeholders of the country's commodity economy. However, it is also true that what has been achieved so far is only the tip of an iceberg of enormous possibilities. With the introduction of some of the institutional changes as enumerated above, a structural shift in the trajectory of the commodity market, especially of its key institutions such as exchanges, can be anticipated. The shift would need to be oriented towards the broader goal of deepening the market so as to make it more inclusive and provide the right risk management avenues to the stakeholders it exists for.

Some key issues afflicting the further growth and inclusiveness of the commodity derivatives market need to be immediately addressed. Foremost among them is the incidence of CTT, which has dealt one of the most severe blows to the otherwise healthy growth this market was experiencing till 2012-13. By discouraging hedging, removing employment opportunities and creating a roadblock in the growth of the market, CTT has left adverse social and economic impacts in India. This is an important item on the agenda of institutional changes needed for expanding the horizon of India's commodity markets.

Illustrating the diversion of organised trade, a study by The Nielsen Company (2013) concluded that the *Dabba* Market is more than 3 times of trading through regulated Exchanges. The study was done prior to the imposition of Commodities Transaction Tax (CTT) and now, dabba trading is put at 8 times of organised trading as per market reports.

As the commodity derivatives market expands, it will not only lead to the creation of ancillary infrastructure, but also services such as trading in warehouse receipts, which exchanges may find it profitable to support. Similarly, in the Indian commodity derivatives market, there is a felt need for dematerialization of holding and repository services in the commodity derivative market, which may be introduced. With the introduction of GST and creation of a seamless pan-India market, trade in commodities will surely get a fillip, which is an opportunity for repository institutions in the commodity market.

The Hon'ble Union Finance Minister while presenting the Annual Budget for 2016-17 announced that that new derivative products will be developed by SEBI in the commodity derivatives market. The introduction of options would fulfil a long pending demand for suitable risk management instruments in the Indian commodity market space. Along with other products such as trading on commodity, weather or freight indices, options can provide a big impetus for the next level of growth and development of the commodity market in India.

The other reform the commodity market is awaiting for is the permission to institutions such as banks, insurers and mutual funds to enter the market. Currently barred, these institutions can play a critical role in deepening and broadening the commodity derivatives market. By facilitating the participation of numerous and diverse stakeholder groups, entry of financial institutions can make the Indian commodity derivatives market truly inclusive.

It is in enabling these institutional changes to take place, including the creation of a supportive policy framework for the commodity derivatives market, that the horizon for the commodity exchanges could really be expanded.