

HOW FARMERS BECOME ENTREPRENEURS?

Trading in agricultural commodities has been a boon for farmers, providing far better information and transparency than had been the case in the days of spot trading



For Rajesh, a small farmer in Uttar Pradesh, most concerns revolve around his small plot of land, where the stalks of green chana (gram) dictate his livelihood. In good years, he can expect a crop of 56 quintals. In bad years, it can drop to 28. And then he has to deal with the fluctuations in prices, which in 2008 varied by 10% around a base of Re 1, per quintal.

Rajesh sighed; the weather was unpredictable, but at least he could gather good information on the commodity prices, thanks to the Mumbai Multi-commodity Exchange (MCX) blackboard hanging on the wall of the post office in the next door village, 10 kilometres away (see box).

Thanks to regular updates sent from Mumbai to the larger post office in the taluk, and then printed and mailed to the local post office, he had access to data from the Mumbai MCX and other exchanges in India. He might not know what exact quantity he will end up with, but he will know at what price he can sell it.

History

India's first exchanges for trading commodities started over 135 years ago, when cotton was traded in about twenty regional exchanges spread around the country. These exchanges were so-called forward markets, wherein the sellers typically carried the physical goods with them. These were pit-based

facilities, with buyers and sellers shouting their bids. These trades were almost always accompanied by physical delivery of the goods. Cotton was handed over for hard cash – although in those days the cash was often gold, or silver coins, or guaranteed bank drafts.

The Bombay Cotton exchange was founded at the same time as the Chicago Board of Trade, which is now one of the largest commodity Exchanges in the world, with an annual volume of transactions of a staggering 153 million lots, about 1.6 times the volume of the Mumbai Multi-Commodity Exchange. But these exchanges had no technology, which is what sets these exchanges apart nowadays.

In 1960, the Indian

government banned the regional trading centres, in order to reduce the role of speculators, who were perceived as parasites living off hard-toiling farmers. But the liberalisation and globalisation path adapted by the government during the last decade or so prompted a re-thinking. The government realised that it had to transform the farmers into entrepreneurs if India were to become self-sufficient in food. The question that arose was how to make the proper tools available to the farmers? Should it be via a return to the creation of more formal commodity exchanges, to dampen the volatility that exists in a spot market?

In 2002, the government issued a tender for the creation

of a proper commodity exchange, modelled on those existing elsewhere in the world following global best practices. The groundstone of this policy shift was to have a national electronic exchange, so that buyers and sellers nationwide, would have access to fully transparent data. MCX was actually the second commodity exchange to be created (the first was the National Multi-Commodity Exchange of India Ltd, or NMCE and the third was National Commodity Exchange of India Ltd. or NCDEX).

Basic definition

A commodity exchange is a virtual (or financial) marketplace for specific commodities. The transactions occur between members of the exchange, on their own initiative, or at the request of buyers and sellers. Each transaction involves contracts (more on that below) for a specific commodity. Many of the transactions traded every day are purely for investment purposes; but many of the transactions actually involve the actual sale of physical goods and their actual physical delivery. Transactions of both natures have their roles within the life of a commodity exchange.

Contract characteristics

On any commodity exchange, each transaction is defined by its underlying contract. The first fundamental characteristic of each contract is whether it is a buyer's or a seller's contract. This is important since the contract determines point of delivery, and transport costs can be substantial (transporting, say, 10 tonnes of chana is not necessarily cheap).

Each contract will also include other important elements:

- a standardised commodity (defined from an established list, e.g. 7mm cardamom, or soybean, or gold biscuit).
- a delivery date (or maturity date).
- a delivery place (for example north India or south India).
- the amount of the commodity, called the lot size (usually the minimum amounts are quite high, for example 500 kilograms of cardamom or 10 tonnes of chana or 8 grams, 100 grams and 1 kg gold coins and ingots).
- the value, or price of the contract.

Contract types

There are three basic types of contracts in commodity trading.

1. Spot contracts
2. Futures contracts
3. Forward contracts

BLACKBOARD TO RICHES

MCX earns its money by charging traders a trading fee. It re-invests in its core stakeholder: farmers

In the mid-2000s, the board of the Mumbai Multi-commodity Exchange (MCX) was in session, and one of the topics on the agenda was how to increase the social contribution of MCX, namely how to help the millions of Indian farmers.

The conditions in the countryside could not have been further from those in Mumbai: irregular power supply, in-existent Internet connectivity, low technological access. So a programme called Gramin Suvidha Kendra (GSK) was conceived, with ambitious targets, yet low-tech needs.

MCX's chief economist, V Shunmugam explains the basics: "Our thinking was to link up with the network of about 155,000 post offices dispersed throughout India (of which about 89% are in rural areas). Because there is a legal obligation regarding the distribution of the mail, there is at least one post office for every five villages. We started in 2006 with just one post office. We now have 250 to 300 boards set up."

GSK uses a very simple principle: install a large blackboard on the outside of a post office, and have the current prices for agricultural commodities chalked up every day. In order to provide the up-to-date prices to the local post offices, MCX cannot rely on direct communication. Instead, MCX communicates the information to the taluk level, and it is there that printouts are made and dispatched, along with regular mail, to the local post offices, using the faithful bus service trundling along the back roads and dirt paths of the deepest Hindi hinterland. Naturally, the prices that end up on the blackboard might not be as fresh as those on a Reuters or Bloomberg screen, but they are still miles better than last season's actual prices.

"We provide prices for about five to ten products," pursues Shunmugam, "and we make sure that both locally grown products and good potential products are included. It is what we call the 'sell and sow' portfolio: what is being produced in the vicinity of the post office, and also which products might be good for the near future of the farmers."

Although GSK is still in its infancy – and is still a 'cost centre' for the MCX – the objectives of the project are to be financially self-sufficient. "We hope to attract funding sponsorship from corporates that are interested in reaching the farmers. Think weather insurance companies, or water purification companies for example," explains Ms Sarita Bahl, Vice President, CSO/MCX. She also explains that the project has caught the eye of the Bill and Melinda Gates Foundation. ■

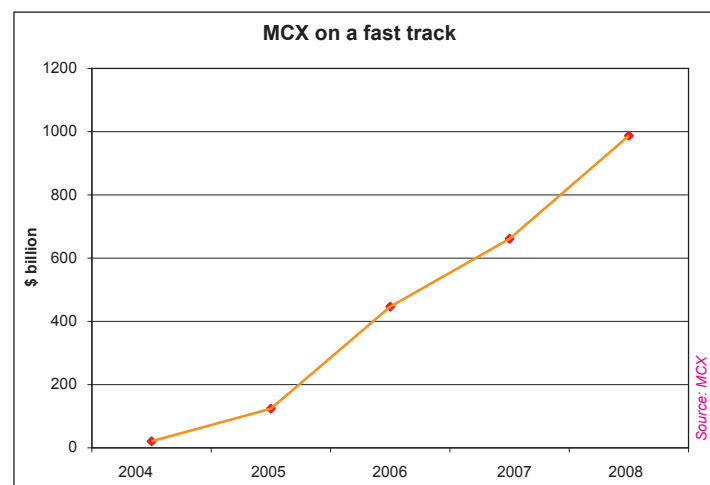
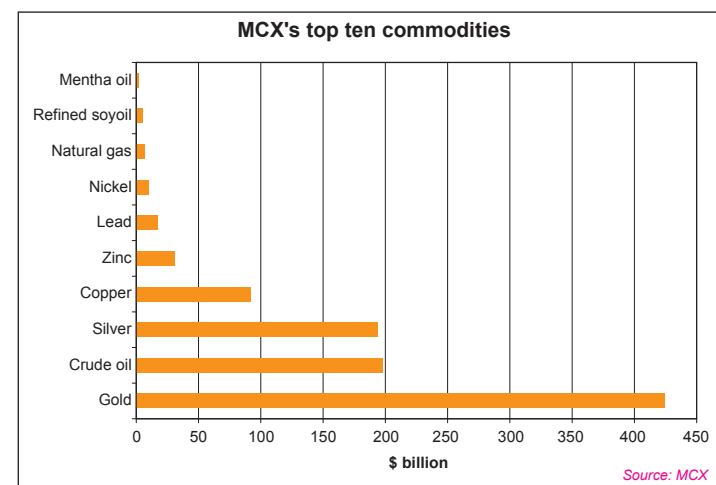
Spot contracts

Spot contracts are the smallest part of the market, since they include compulsory delivery of the goods, whereas futures and forwards are purely financial contracts and do not require delivery of goods if they are

resold before maturity. Typically spot contracts are for delivery in less than 11 days, and are usually for two or three days.

Futures contracts

This is the main instrument traded on the MCX. Futures



Cardamom from India to Saudi coffee drinker



Note: Actual production cost not available but would include seed, fertiliser, and labour cost of farmers. Cardamom quality: extra bold, 6-7 MM, Source: MCX

contracts, like forwards, are financial transactions, i.e. usually without trade of physical goods. Although futures are somewhat similar to forwards, there are some substantial differences:

- a counter party is specified (if traded at an exchange), and so the exchange will penalise the defaulting party,
- the contractual terms are public,
- the commodity covered in the contract is standard (e.g. 7mm cardamom and also 6mm cardamom is deliverable at a discount).

Forward contracts

A forward contract is a financial contract, i.e. usually without trade of physical goods. It is a private, unregistered transaction, where only the two parties to the deal know the terms. A forward contract will specify price, quantity, and terms of delivery (date, location). Forward contracts are non-standardised, so they can also cover 'unusual' (i.e. non-standard) commodities. Since these are confidential contracts without a counter party, there is no formal guarantee, for example, in case of non-delivery by seller, or delivery of goods not

conforming to the contract.

At the maturity of the contract (when it expires), both forwards and futures contracts can be rolled over, upon mutual agreement between the parties.

How the commodity exchange functions

Like stock markets, commodity exchanges are 'market platforms' wherein only paying members can trade directly and others would have to become their client to trade on. The Mumbai MCX counts about 2,000 members. In turn, each of these members reaches out to hundreds or thousands of clients – banks, food industry giants, wholesalers, other actors in the agro/food business, and the myriad speculators and daytraders – who wish to have transactions carried out on their behalf. The MCX members then act as brokers to fulfill the requested deals. All the transactions are carried out on a server which is connected seamlessly to the computer terminals of the members, using dedicated screens.

As a self regulating entity the key to MCX's

effective functioning is its market operations department, which is divided into surveillance, clearing and settlement divisions. These divisions manage the market operations in a more effective manner. To support the traders, the exchange services quality department constantly monitors the effectiveness of various exchange functions and provides feedback in order to improve them.

The business development department helps to expand the exchange business. It is split into marketing and product knowledge management, both needed to develop the business by empowering the traders. The membership, compliance, and legal department manages the daily communications with the traders, pertaining to their issues, or requests on the exchange platform. This ensures a stream of innovations in the MCX offerings, and this helps the exchange maintain its competitive edge.

MCX's research and development department helps to create and develop new products (i.e. contracts) for

the exchange. This is done by intensive interaction with the physical market participants to decide on new contract specifications.

MCX revenues derive from commissions on each transaction (trading fees), from membership fees paid annually, and from license fees. The approximately 2,000 members of the MCX include speculators, arbitrageurs, hedgers, jobbers, farm cooperatives, large agro/food producers, food wholesalers and retailers.

Every day, at the MCX, more than 314,000 transactions are completed, covering a basket of 55 tradable commodities. The most actively traded goods are gold, crude oil and silver. The top agricultural commodity is refined soybean oil.

The vast majority of trading on the MCX is in futures contracts. Only about 1% of the transactions are on the electronic spot market as it exists on National Spot Exchange Limited – sister concern of MCX. "Our spot activities are the new kid on the block," explains V Shunmugam, the chief economist at MCX. "It was launched in October, 2008. Spot trading is always more complex to set up, since one needs to deliver the goods."

The advantage of an exchange is that it can cut out intermediaries that normally add to the end-user price. Typically, there is a 30% to 40% price difference between the price to



the end consumer and the price on the commodity exchange.

Another important function of a commodity exchange is to insure market transparency and fluidity. The MCX recently carried out a 'dipstick' survey among 33 farmers, and this showed that farmers used the MCX prices in order to decide when to sell their goods, and thus benefited from better returns. The MCX futures and spot prices are displayed outside the village post-offices and updated daily and freely available to anyone.

Commodity exchange actors

The traders on the MCX are a motley bunch, including hedgers, arbitrageurs, speculators and jobbers. How their roles vary is loosely defined, but here are some guidelines.

Hedgers are participants in the futures market who are interested in transferring the risk associated with the underlying commodities they would be carrying in the physical market. A hedger establishes a position in the futures market that is equal and opposite to a position in physical market, so that a loss in one market, is offset by a gain in the other market. By doing so, the hedger streamlines the information available in the system, and thus improves the efficiency of commodity pricing.

Arbitrageurs are interested in making transactions in two different markets simultaneously, to profit from price differentials/inefficiencies in these two markets, thereby hoping to gain profit out of it. Arbitrageurs therefore provide pressure to

CARDAMOM'S LONG JOURNEY

Take cardamom as an example of how agricultural commodities go from field to kitchen cabinet and how commodity exchanges help along the way

India is the world's second largest producer behind Guatemala. Some 40,000 farmers produce anywhere between 9,000 and 12,000 tonnes, depending on the disposition of the weather gods.

Cardamom grows on bushes in the southern areas of India (Kerala, Cochin). After the harvest, the capsules are dried and graded, that is sorted into homogenous categories. The diameter of the capsule typically, serves as the criterion, with capsules of 7mm or larger being the best category. MCX for example trades the 7 mm category and 6mm cardamom is also deliverable at a discount. The 5mm graded cardamom is sold in the southern market. The damaged or undersize capsules go into processing for the production of masala.

The first step in the sale process is that cardamom is physically taken to areas where it is sold in auction. After the auction in the hills, the buyer (who is a wholesaler, or spice trader) takes direct delivery of the goods and has them shipped to his warehouse. At most, the cardamom can stay in the auction area for one week to 10 days, before it starts deteriorating. The traders can then sell their cardamom directly to traditional buyers, or on exchanges, like the MCX. Large agro/food companies purchase directly from the producers (or their cooperatives) which ensures that they get lower prices, since no intermediary has been used.

MCX handles perhaps 1% of the total cardamom market, so it has not replaced the physical trading that is still the bulk of the sales for farmers. Its futures contract, sized at 100kg and launched in 2006, offers a hedge against cardamom price volatility (a range of Rs 350 to Rs 650 per kg).

smoothen and equate the prices of commodities and negate the differentials.

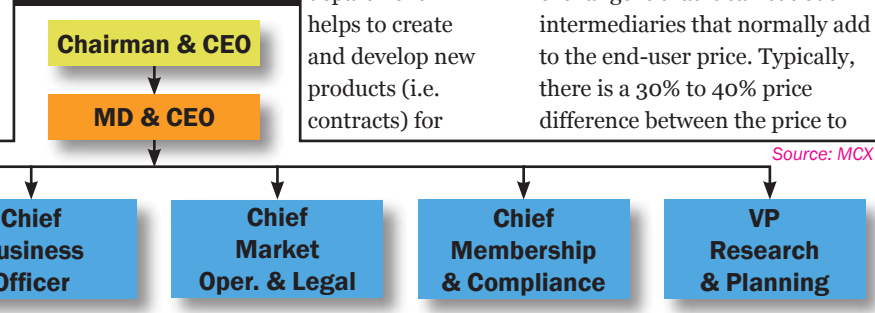
Speculators accept the risk from other players in the market and pass on the information about the fundamentals into the markets. They benefit as much with increased prices, or decreased prices, based on their positions on the exchange. Informed and regulated speculation is useful for developing an efficient marketplace/exchange, and helps in developing liquidity.

Jobbers operate (buy or sell) on every price tick movement, creating market depth. They

provide positions for others to take up while entering or exiting market to minimise their cost of transactions.

So, while to some it may appear that a commodity exchange is a hotbed of parasitical speculation (with smarter-than-thou traders hoping to outbet other 'lesser-brained' traders), in fact the liquidity and price efficiencies that the exchange provides are key to increasing the wealth of the producing farmers as well.

SIMPLIFIED ORGANISATION CHART



Source: MCX

FOOD FIGHT				
Comparison of top worldwide commodity exchanges				
Name	MCX (Mumbai Commodity Exchange)	NCDEX (National Commodity & Derivatives Exchange)	NMCE (National Multi-Commodity Exchange)	CME (Chicago Mercantile Exchange)
Location	Mumbai	Mumbai	Ahmedabad	Chicago
Year Founded	2003	2003	2002	1898
Number of members	2,015	2,097	n.a.	3,138
Lots traded FY2008 (millions)	94	27	22	3,300

Source: Company websites, GO analysis

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