

# The Jaggery Futures Market at Muzaffarnagar: Status and Policy Recommendations

Susan Thomas<sup>1</sup>

## 1 Introduction to commodities futures markets

Commodity futures trading in India had a long and healthy existence until all derivatives trading was banned in the 1960's. When commodity futures were revived, they were restarted on approximately six commodities: potato, jaggery, jute, turmeric, castor seeds and oils, pepper. However, none of these commodity futures markets have achieved the kind of liquidity that

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<sup>1</sup>Susan Thomas is Assistant Professor at IGIDR, email: [susant@igidr.ac.in](mailto:susant@igidr.ac.in), URL: <http://www.igidr.ac.in/~susant> on the web. This paper is based on work done for the Forwards Markets Commission, Bombay. I would like to thank Vikram Aggarwal and Viral Shah who provided able assistance during the research work for this report. I am thankful to the President and staff as well as several trading members of the Vijai Beopar Chamber Ltd., Muzaffarnagar, for their time and help in gathering information for this report. I also benefitted from discussions with D. Balasundaram at CPC Ltd., Coimbatore, C. B. Bhave at the National Securities Depository Ltd., D. S. Kolamkar at the Forwards Markets Commission, Bombay, and Ajay Shah, IGIDR.

are seen on commodity futures market outside of India, or indeed, the kind of liquidity that was present on these markets prior to the sixties ban.

There are several reasons that could be possible for this: One is that none of the commodities that started trading were “essential” commodities, like wheat, rice and sugar, and the volumes here are low because economic interest in these commodities itself is low.

However, casual conversation with commodities traders suggest that this is not a good rationale for the low volumes. The evidence they cite is the existence of “illegal or black” markets in the same commodity futures that have liquidity that is order of magnitude larger than those in the “legal” markets. For example, there is an unregulated, OTC market for castor seeds and oils in the Gujarati village of Bhabhar which is supposed to provide the price discovery for the legal markets in Ahmedabad and Bombay. There are supposed to be similar illegal markets for jaggery and oils in Delhi, Haryana, etc.

This suggests deeper reasons for why liquidity does not exist in the “legal, regulated” markets. One reason that commodity traders suggest is that most of these OTC markets are populated by small-size participants, who desire unregulated markets as a means of avoiding paying taxes on their financial transactions in the futures markets. An alternative reason could be that there are fundamental flaws in the current commodity futures markets that prevent them from providing the economic function of safe hedging and speculation, or price discovery, that they are supposed to provide.

This paper is based on work that was commissioned by commodities futures markets regulator, the Forward Markets Commission (FMC) to understand possible barriers to increasing the volumes traded at one of the more successful commodities futures markets in India. This is the jaggery futures market at Muzaffarnagar, the Vijai Beopar Chambers Ltd. (VBCL). This paper is presented in two main parts: the first is a description of the current market at Muzaffarnagar. The description includes that of the product, the participants, the trading, clearing and settlement systems. The second is a set of suggestions on possible policy changes in the design of the market with the aim of improving both the liquidity and the process of price discovery in the market.

In the paper, section 2 discusses the importance of futures trading in commodity markets in India. Section 4 is a description of the market, and

in section 5, the policy recommendations are outlined. We conclude in Section 6.

## 2 The importance of commodity futures

In India, agriculture has traditionally been an area with substantial government interventions. These interventions have involved maintaining buffer stocks, administrative price-setting, restrictions on imports and exports, controlled prices of agricultural inputs, restrictions on movement across states of agricultural goods, etc. It is increasingly clear that a free-market approach to agricultural policy would be much more effective at improving the income of farmers. This requires a sharp retraction of these policies.

In such a liberalised scenario, we have many practical questions. Who will maintain the buffer stock? How will we smoothen the price fluctuations? How will farmers not be vulnerable to a crash in prices on the date that the crop is ready for the market? How will farmers get signals that in the future there will be a great need for certain products? Futures markets are the institutional mechanism which perform this function.

When speculators make forecasts about the future, and expect that wheat prices will go up in the future, their actions will make *futures prices* go up today. We see this kind of behaviour in the commodity futures markets in India today (Thomas & Karande 2001, Naik & Jain 2002, Sahadevan 2002). In Thomas & Karande (2001), we analyse the behaviour of castor seed prices, both in the spot and futures market with a view to analysing whether futures market perform the role of price discovery for the spot. We find that this is indeed the case for most of the contracts. The only exception is the case of the contract that matures at the end of harvest, when the price discovery is faster in the spot market itself.

Thus, futures market prices do carry signals back to farmer making sowing decisions today and industrial consumers making production decisions about future consumption of wheat even today. Thus, a system of futures markets can help farmers to the next step of improving cropping patterns and production patterns based on market prices.

A key function of futures markets is connected with storage. The Food Corporation of India (FCI) is a highly inefficient mechanism for obtaining a large 'buffer stock' of foodgrain. A system with futures markets produces a functionally equivalent smoothing between the present and the future.

Arbitrage activities between high/low futures and spot prices produce their own 'optimal' buffer stocks and smoothened prices.

These activities work particularly effectively when there is free trade in agricultural commodities; arbitrageurs on the futures market will use imports and exports to smooth Indian prices using foreign spot markets. In this fashion, the futures market will function as an early warning system which will induce import or export activities on the part of private agents well before imbalances develop in India. This will help forestall episodes such as those on the onion and sugar markets in recent years.

In totality, commodity futures markets are a part and parcel of a program for agricultural liberalisation. Many agriculture economists understand the need of liberalisation in the sector. Futures markets are an instrument for achieving that liberalisation.

One concern that is often expressed is about the intellectual capacity for farmers in India, to trade in the futures market. Do Indian agriculturists have knowledge of the market, and access to it?

One argument is that even for farmers who do not use the futures market directly, there are major benefits that accrue to them through the impact of utilisation of futures markets by speculators, large farmers, the food processing industry, etc.

As a more direct answer to the concern, however, it is useful to point out that there were flourishing futures and options markets in India prior to the ban on futures trading in the 1960s. That was a time when there was much less literacy and knowledge of modern finance in India as compared with today. The scenario in India today can only be more favourable as compared to what it was a few decades ago. Even today, there appear to be a large base of trading in "illegal" futures markets, which is often cited as the reason for low trading in the legal markets. It should therefore be a reasonable assumption that well functioning markets will be used by Indian agriculturists.

### 3 Jaggery

Of the active commodity futures markets, jaggery has the most volumes, with soyabean coming in at a close second. Thus, it is meat that we study the jaggery futures market: by targetting the design.

Today, there are around four–five jaggery futures markets in India. They are located at: Bhatinda, Delhi, Hapur, Meerut, Muzaffarnagar. The most successful of the jaggery futures markets is the exchange at Muzaffarnagar, the Vijai Beopar Chamber Ltd. (VBCL). There is a big jaggery spot market at Muzaffarnagar as well.

Jaggery is produced from sugarcane juice. Sugarcane is an annual crop that is sown between the months of May and July and harvested between February to May. Sugarcane juice is processed into sugar and jaggery. There are different types in the jaggery produced, depending up on the region where the cane is grown. Some of the different types of jaggery are *chapu*, *khura*, *pansera*. *Khandsari* is a crude sugar–jaggery mixture.

In India, jaggery has been used as a sugar proxy: the processing of sugar is expensive and the poor choose to consume jaggery rather than sugar. The largest distortion in the production of sugar and jaggery has been the tight government control on both the quantity and the price of sugar produced. Nevertheless, over the years, the consumption of sugar has been on the rise matched by a drop in the consumption of jaggery. Today, the remaining two large jaggery–consuming states are Gujarat and Maharashtra.

The patterns in the production and consumption of jaggery is reflected in the volumes that are traded on the jaggery futures market. The volumes are limited by the fact that jaggery itself is a commodity with low volumes compared to the volumes that are produced and traded on the “essential” agricultural commodities like wheat, rice and sugar. Nevertheless, the issues in market design and the participation on the jaggery exchange can serve as a template for constructing and running futures markets on the essential commodities.

## 4 Current market design

The description of the current market design is organised around the following issues:

1. Contract design
2. Trading
3. Clearing
4. Settlement
5. Participants

## 6. Governance at the exchange

### 4.1 Contract design

There is only one jaggery futures contract that trades at VBCL, with the following features:

- Grade of the underlying

The grade of jaggery underlying the futures contracts traded at VBCL is Pansera. There are three grades of Pansera jaggery that is traded in the spot market – high, medium and low. Of these, VBCL trades futures contracts on the price of the medium grade.

If the trader delivers any other kind of jaggery instead of Pansera, the exchange specifies the premium which the seller will have to pay to the buyer to compensate for the difference in the delivery quality.

- Available maturities

Typically, there is one contract that trades at a given time on the exchange. Each contract has a different maturity depending upon whether jaggery is in season or not at the time of trading. The following are the typical contract maturities:

- 15<sup>th</sup> December to 15<sup>th</sup> July (6 months)
- 15<sup>th</sup> November to 15<sup>th</sup> January (2 months)
- 15<sup>th</sup> December to 15<sup>th</sup> March (3 months)
- 15<sup>th</sup> February to 15<sup>th</sup> July (5 months)

Technically, the exchange has to obtain permission from FMC for every new contract it trades. This is irrespective of whether it is a “standard” contract that has been traded before in the market, or a new contract.

- Cash or physical settlement

Each contract trades on a delivery unit of 4 tonnes, and the contracts are legally supposed to settle physically.

The prices at which the contracts settle every day based on the prices that are decided by the Daily Rate committee at the end of every trading day. These are, in turn, based on intra-day traded prices at the exchange.

## 4.2 Trading system

Trading at VBCL takes place on an open outcry market. Trading opens at 10am and closes at 3pm. There is a bell that rings to signify both the opening and the closing of the market. There are no designated market makers in the market. All members offer two-way quotes.

There are price limits which are imposed uniformly on all contracts, irrespective of their maturity. The price band is 15 percent up or down on a weekly price for a quintal. In some cases, when the quantity involved is larger, or for a price move over a month, there is a 30 percent price band that is binding. These price limits are set by the FMC, and are said to be quite broad, and bind rarely.

### 4.2.1 Information collection and dissemination

Bid and ask prices of the traded contract is posted on a board at the door of the exchange. The price is collected by polling eight brokers for bid and ask quotes, and “the consensus” bid and ask are put up on the board. The polling is done by an employee of the exchange who talks to the brokers. It is not clear how the brokers who give the quotes are selected. There appears to be no established criteria that these are the brokers who do the maximum volumes, or who have the largest number of traders on the floor.

There is currently no external agency that collects the prices that are posted at the exchange. The only source of price information about jaggery futures is from the exchange itself.

### 4.2.2 Transactions costs

The exchange gets paid a fee of Rs.2.5/unit traded. This charge is not a fixed one and it can be lower depending upon the total number of trades done. Out of the Rs.2.5, Rs.1.5 is brokerage that has to be paid to the trading member at the end of the month.

The dominant cost in carrying out spot–futures arbitrage are the costs of trading on the spot market, rather than those on the futures market. The impact cost on the spot can work out to around 8 percent, and 12 percent if the position is held to maturity.

### 4.3 Clearing system

The exchange has a clearing house that records transactions by members and calculates and implements risk management at the exchange. Clearing of trades is done both by the clearing house as well as the Trading Member's back office. Every trade is recorded twice: one record that is retained by the broker and the other that is stored at the clearing house. Each record includes the name of the counterparty, size, price of trade.

Counterparty risk management is done through a system of *Initial margin* and *Daily Mark-to-market margins*.

1. Initial margin

All members pay a fixed amount of Rs.5000 as the initial margin when they become members. The initial margin on a members open positions is Rs.500/unit of open positions.

2. Daily mark-to-market (MTM) or *cover margin*

The daily profits and losses are calculated and are to be paid up (if loss) or paid (if profit) by 11am on the day following the trade.

Trading ends at 3pm, when the clearing house and the members' back-office starts processing all the trades information. This is typically a two-hour process that carries on till 7pm. The *mark-to-market profit/loss* in every TM account is calculated by both the clearing house as well as the TM. Profits can be paid out to the TM, but are typically kept with the clearing house and carried over as margin for positions taken on the next day. Losses have to be paid to the clearing house between 11am and 1:30pm the next day.

In case losses are not paid by this time, a further grace period of two hours is granted to the broker, after which, non-payment of MTM margins results in disciplining action against the broker. There has apparently been no such disciplining action in the last seven to eight years.

All members clear through a designated clearing bank. There are approximately five clearing banks, none of which do nation-wide funds transfer (yet). These banks are: SBI, Punjab Bank, Syndicate Bank, All India Bank of Commerce.

Ordinarily, there is no flow of information from the clearing house to the Trading Members backoffice. If there is a mismatch of the amount calculated by the clearing house and the brokers, then records at both the

clearing house and the broker's backoffice are checked and compared. If the mismatch persists, then the case is brought to the exchange board for arbitration.

#### 4.4 Settlement

The contracts on the exchange are physically settled. The settlement price also appears to be decided by the daily rates committee, rather than at the spot market price for jaggery.

For all practical purpose, there is no delivery in these contracts. The exchange believes that the process of certification is cumbersome and leaves the exchange vulnerable to several types of disputes and arbitration cases, which imposes a large cost on the exchange.

##### 4.4.1 The problem of short squeezes

There appears to be a large fear of short squeezes on the part of the exchange as well as the brokers. This appears to be a factor inhibiting members from taking large open positions that carry over from day to day. This indicates that there is a lack of transparency of the prices from underlying spot market. This is despite the fact that several of the brokers on the futures markets either have firms that also trade in the spot market, or have joint ventures with firms that trade on the spot market.

#### 4.5 Participants

All trading on the exchange is done by *Trading members* (TMs) or *TMs/Brokers*. They can take positions that are proprietary or they can positions on behalf of customers, or *non-trading members*, who cannot directly access the exchange floor.

All members who access the floor of the exchange are selected based on recommendations from existing brokers. This implies an entry barrier to access the floor that is biased towards social networks rather than the credit worthiness of the individual.

TMs are different from brokers in that they have accounts with the exchange clearing house, and are margined by the exchange for their positions. Both TMs and brokers can take positions on their own book. One TM can have multiple brokers, but every broker can trade only through one

TM. TMs pay Rs.5000 as a security deposit to the exchange, whereas brokers pay Rs.250. The TMs security deposit is counted towards the initial margin against which open positions can be held.

#### 4.6 Governance

The exchange is governed by a board of directors. The board is organised as: four members from the spot market community, six from the futures community, two “shareholders”, four nominated by FMC, two “nominated by the board.” The board is in charge of taking important decisions like how a bankruptcy is to be “dealt with.”

The day to day management of the exchange operations is carried out by the 18 member exchange staff, six of whom are in the clearing operations. None of the management staff can take positions or trade themselves. The exchange secretary is in charge of all operational matters on the exchange.

There are several committees which are made up of members of the exchange to address different aspects of the working of the exchange. They have a typical duration that lasts one year. For example, some of the committees appointed by the board are:

1. Clearing house committee – for the management of the clearing house and for giving decisions on disputes at the clearing house.
2. Daily rates committee – a total of 12 members every year who get split into four groups of three each, one group of which meets daily to fix and notify the daily opening, high, low and close of the day. The different groups are rotated every week.
3. Survey committee – a total of 15 trading members appointed to certify the quality of the goods that are transferred from the buyer to the seller of the contract.
4. Arbitrators – a group of between 15 to 20 trading members/brokers who will act as arbitrators to any conflict or differences that arise in the trading, clearing or settlement process. Every dispute is handled by two of these designated arbitrators, one appointed by each of the two conflicting parties.
5. Vigilance committee – team that investigates any violation of the exchange bye-laws, rules, regulations and the FCRA, 1952.

There are typically around 120 members who trade when jaggery is in season, and approximately 40-60 in the off-season period. The market is

quite small and information about trading positions can be readily known to all members in the exchange.

#### 4.7 Regulation

The FMC is the regulatory body for commodity futures markets. It is an offshoot of the Department of Civil Supplies. It keeps a very close watch on the workings of the exchange. It appoints four directors on the board of the exchange.

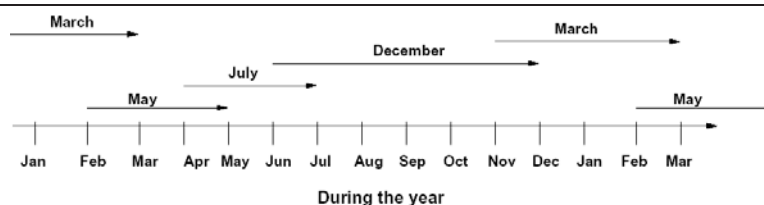
Daily reports of the prices, positions and margins of each of the trading members are passed onto the FMC at the end of every trading day. Position limits, margin rules, fees and charges have also to be approved by the FMC.

### 5 Analysis and Policy recommendations

There are several issues that can be addressed to change the market structure in order to improve the liquidity on VBCL. Some of these recommendations are *specific* to the jaggery futures market, such as the proposed contract design or the product grades. This is a commodity where the underlying spot market itself is small, with little scope of growth in the future. Indeed, we expect that this market will reduce in size and importance if the sugar industry is de-regulated. Therefore, the basis underlying our policy recommendations here need not necessarily be the best for futures markets for other, larger commodities (such as cotton, or castor, or the new proposed sugar futures markets). However, some of these proposals are generic to all commodities markets, such as a better system of price collection and dissemination of prices, or a design for better governance at the exchange. These can be applied to all commodities futures markets in India.

#### 5.1 Product design

- The current structure of the contracts in the market (Figure 6.1) appear to be a good basis on which trading is done. However, the feedback from the market appears to be that there is a case to trade more futures contracts, trading in parallel to the existent contracts, possibly with shorter durations.

**Figure 6.1** Current calendar for futures at VBCL

The availability of more futures contracts with shorter durations, especially during the jaggery season, might be useful to address the needs of hedgers – both buyers and sellers – who are said to use the futures market for price discovery.<sup>2</sup> Members at the exchange have expressed views on new, potential contracts, and should be examined by the FMC.

- For the contracts that are currently traded on a regular basis, the FMC might consider making these contracts “permanent”: those which the exchange can trade without having to approach the FMC for permission to trade. Contracts that have successfully gathered liquidity at an exchange can be considered tested and tried by the market, and found to be useful, which reduces the need for monitoring on the part of FMC.
- There could be a case for trading futures contracts on other grades of jaggery as well. Currently, the exchange prescribes certain offsets to the pansera futures contracts at which buyers and sellers can settle using other grades of jaggery. These numbers are derived as a result of market experience and knowledge. The offsets for single grade can vary according to the time at which the trading is done. For example, *khurapad dara 1* can be tendered at a premium of 2 percent during the March, May and December contract, and at par during the July contract.

If there is a mismatch between the current offsets and the typical correlation between the price movements of pansera and the other

<sup>2</sup>The jaggery futures markets is a more centralised and focussed trading area as compared with the jaggery spot market, which is spread over a much larger area. Price discovery on the spot market is most likely a more slow and tedious process compared with the visibility of the single, polled prices that are posted on the board of the futures exchange at VBCL.

grades of jaggery, the jaggery futures contracts may not be as useful to settle trades in other grades of jaggery.

Therefore, either these numbers could be revisited using historical price data on the different grades of jaggery, and revised if necessary. The alternative is to trade jaggery futures on these other grades directly.

- Options contracts offer better flexibility in the kind of risk management for both users as well as brokers. These contracts help to increase the liquidity of both the futures as well as the underlying spot markets the world over. For example, equity options started trading on the Indian stock markets in July 2001, and the liquidity of the futures and the options markets move together.

The caveat in starting trading on options contracts is the higher sophistication of risk management that is required at the exchange and the clearing corporation. There has to be an upgrade in the level of skills and systems to manage the extra risk that is ushered in when trading options. However, these systems have been built and in place for equity markets in India. Since the kind of risk management required is similar across equity and commodity options markets, these can be readily implemented at the VBCL clearing house to support trading options.

## 5.2 Trading

The issues in trading revolve mainly around the transparency of the market.

- There should be a more transparent mechanism to disseminate prices, both on the futures as well as the spot market. The largest commodity futures exchange in the world, the CME and CBOT at Chicago, are floor-based, open-outcry systems, which put out real-time information to the world. Therefore, there should be stronger information dissemination of the futures price, and this should also be accompanied by better dissemination of the spot price, as follows:
  1. The current mechanism of price gathering is by polling traders on the floor of the exchange. The process of polling can be enhanced by (a) improving the polling technique in terms of the question asked about the price and the members who are asked and (b) by better methods in processing the polled information.

A technique similar to the one used in getting information on the short-term interest rates as is employed by NSE for the NSE-Mibid-Mibor, or the British Banker's Association (BBA) for the London Libor, can be readily employed (Shah 2000).

2. Currently, information from the spot market is gathered by individual members over the telephone, and by partners in the brokers' firms. All information retrieval is *manual* and therefore, time-consuming. A similar polling technique, as described for the futures prices, can also be employed for the spot prices.

Once such a polled rate is gathered with regular and high frequency from the spot market, it will become the common spot rate that is available to all futures markets traders simultaneously.

3. The information gathered both for the futures and spot should be more readily visible on the floor of the exchange compared with the board posted at the doorway of the exchange. There could be an electronic display, which could flash the prices for both the spot and the futures regularly and is visible to all.
4. The information gathered both for the futures and spot should be more readily visible to the outside financial world. The rates that are collected should be disseminated on the internet, on the website of VBCL (as is done in the case of the equity markets today).

A more transparent and scientific price dissemination mechanism can help increase the trading volumes on the exchange in the following ways:

1. One of the strongest inhibitants to increased trading on the market appears to be a fear of short-squeezes, which stems from a lack of certainty about the underlying spot price. Better prices on the spot would reduce the trader's uncertainty about the price of the spot.
2. There is a non-trivial participation by non-trading members in creating volumes in the market. One of the factors inhibiting a larger audience of non-trading members is an inherent distrust of the brokers and trading members. If the price dissemination

comes from a method that is more scientific, there might be better acceptance of non-trading members of the prices that come out of the exchange, and a greater trust to take positions based on these prices.

- In discussions with the exchange staff, there were severe apprehensions of the high cost of setting up electronic systems to carry out either order-matching or clearing systems. However, these costs have reduced substantially over the last five years. Today, a simple order-matching system is not a very expensive proposition.

This would be useful in three ways:

- It would improve the instantaneity of order execution.
- It would facilitate the availability of trade prices as soon as the trade is executed, which would help in the price discovery process.
- If there is a simple order-matching system in place, where the computer matches orders in a price-time priority setting, it could encourage the participation of both non-trading members as well as (possibly) traders from other exchanges, if trading terminals were made available to them as well.

This would go a long way in pooling more orders into a common market, which is a reliable way to increase the liquidity on an exchange.

- Any proposal to increase the order flow and trading on the exchange has to be backed by stronger systems of risk management. The current clearing system has proved to be sufficient for managing the risks of the current levels of trading. However, from another point of view, the extent of the current trading levels could be captive to the limitations in the clearing and risk management capacities in place currently. It is quite likely that with better risk management systems, even the current set of market participants given the current levels of information, might generate higher trading volumes.

Thus, in order to improve the levels of trading on the exchange, an important factor would be improvements to the clearing systems in place.

### 5.3 Clearing

There are two major issues in the current exchange structure that might be re-examined. The first is linked to the availability of a transparent market price along the lines discussed in the previous section on trading, and the other is the processes and systems for controlling systemic risk arising from counterparty default.

- The settlement price should not be set by the daily rates committee. The setting of the settlement price by a select set of members of the exchange leaves the price vulnerable to accusations of price manipulation, and helps build the lack of trust in the price and the exchange and her members.

Most exchanges base the settlement price either as the average of the last half hour of traded prices, or determine the closing price using a call auction at the end of the trading day.

Either of these is a feasible mechanism to employ to determine the settlement price at VBCL, and could certainly be extrapolated to being applied at other commodities futures markets as well.

- Issues of risk management: The current system of calculating initial margins appears to be based on rules of thumb, rather than on any empirical evidence of the historical data. There is a case in favour of applying modern statistical measurement of volatility of the jaggery and jaggery futures price, and the calculation of the VaR of members portfolios. There are two main advantages to using the VaR:
  1. The VaR as the initial margin is an economically efficient way to cover for the risk in a members portfolio.
  2. It would reduce the level of complexity in the present margin system, which would cover events like the Rs.1 move in the price of the futures.

The clearing house should move towards using a full-fledged VaR based risk management system for initial margin. A stronger risk management system would help the clearing house to support novation, which would then support higher levels of trading from a more heterogeneous set of traders.

- There are two approaches to having novation at the clearing house, which are *building in-house skills* and *outsourcing to an existing clearing corporation*.

Building in-house skills takes a longer time. However, once these skills have been learnt, adaption of the system to new market processes, systems and innovations in products, is easily done at the clearing corporation itself.

Outsourcing to an existant clearing corporation means that novation can be achieved with a lower time to market. However, this limits the ability of the exchange or clearing house to drive innovations rapidly themselves. An upside is that the outsourced clearing corporation becomes an easy avenue to access skills and resources using which skills at the home clearing house can be built.

#### 5.4 Settlement

The trading community has done away with all significant problems of settlement by not holding open positions till the day of maturity. Therefore:

- Since all contracts at the exchange are being settled before it comes to maturity, all contracts should be made cash-settled. For this to be done, there has to be a well-defined, credible price to be used for settlement.
- The cash-settlement should be done on the price of the underlying on the day that the contract matures. To facilitate this, we require a robust mechanism of price discovery of the spot price as described in the previous section on Trading.

#### 5.5 Participants

The current barriers to entry to trading on the floor is based on social networks. This should be changed. Entry barriers should be based on

- The credit worthiness of the individual as measured by their ability to pay margins and
- The knowledge of the individual in their capacity as a broker. Exchanges all over the world require that brokers are certified and registered to trade on the exchange. This could be implemented at the commodity futures markets in India as well.

The equity markets in India have the experience of having traders mandatorily needing to be certified to trade on the equity derivatives markets. The NSE also requires that spot market traders be certi-

fied to be able to trade on the exchange. These systems are in place already. Therefore, certification can be also be outsourced, or implemented jointly with such existant systems.

## 5.6 Governance

Governance of exchanges has become a central topic for discussion in India, and elsewhere in the world. There is currently strong support for exchanges being demutualised and being run by a professional management team.

The advantages of this is centrally, the disassociation between exchange being managed and operated by the same people who intermediate between investors and the financial instrument. History is peppered with examples of an abuse of power when the two are the same. This has resulted in a build up of distrust from the investment community, which affects their willingness to trade, and therefore the volumes and liquidity on exchanges.

This is exacerbated in economies with poorly defined legal recourse to dispute resolution such as in India. The two main recommendations targetting governance of the jaggery futures exchange is therefore:

- Encourage a move towards less member involvement in the management and operation of the exchange. Committees should be replaced by rules that are legally binding, wherever possible.
- In situations where arbitration is the final recourse, the arbitration should be done by third parties who are *not* exchange members, but rather are professionals from the field of finance.

## 5.7 Regulation

The FMC currently has a role where it is more involved in the micro-management of the exchange than is perhaps necessary. An example is the permissions that the exchange requires from the FMC to trade contracts that are “regular” contracts.

It would be beneficial for the FMC to refocus it’s role from controlling the details of operations to researching and addressing broader level issues, such as:

- Prudential regulation for entry of members.
- Registration and standards of certification of members.

- A framework for assessing the risk management at the clearing house.
- A framework for monitoring practices of the exchange and members.
- Enforcement of rules and laws.
- Being the last recourse and arbitrator for the end-user.
- A framework for education of the end user and the brokers.
- Marketing the role of commodity futures and their markets to the public.

## 6 Conclusion

Commodities futures markets are a strength of Indian agriculture that has been neglected over the last four decades. While the importance of agriculture has been dropping in the Indian economy, it still forms a significantly large part in relation to other economic sectors, that focus and attention in this area can achieve a considerable impact on the growth of the country.

Futures markets in agricultural commodities all over the world are used by economic agents to control their exposure to price risk and to better manage their wealth. The existence of well-established, transparent and liquid futures market can be used by financial institutions to better manage their exposure to the agricultural sector, and offer innovative products to farmers. Well functioning commodities markets can be used even the Government of India to do better manage programs such as the Public Distribution System, or structure better forms of crop revenue insurance to farmers.

India has a two-fold advantage in this area:

- There is ground knowledge about these markets that have existed when the earlier commodities futures markets were thriving. This knowledge still exists and will be one of the finest assets in setting up new systems and institutions of commodities futures markets.
- Institutional knowledge developed over the last decade in how to set up markets that can be used reliably for safe and transparent price discovery and trading, accessible to all the citizens of the country.

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