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RESEARCH NOTES

Ring System Required for Farm Futures

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INTRODUCTION

At the behest of the Government of India, the three national commodity exchanges, set up a little over three years ago, were required to organise futures trades in all commodities, whether of agricultural origin or not, through electronic online trading systems. The authorities did not stop at that. They even directed the old regional commodity exchanges, which had no other branches, to introduce the online trading system in place of the traditional ring-based open-outcry system, which was in vogue for almost a century. Not all, though some of these old exchanges complied with this government directive and developed the requisite electronic system at huge costs. Disappointingly, even the limited trading volumes at these exchanges – like the East India Cotton Association and the Bombay Commodity Exchange had prior to their going live on the online system – vanished quickly. The new national exchanges with their ultra-modern electronic trading facilities, in contrast, are witnessing huge futures business in mainly non-agricultural commodities, such as gold, silver, and crude oil. Among the agricultural commodities, the national exchanges attract surprisingly enormous trading volumes in less-known guar seed and its product, guar gum, as well as another unfamiliar farm product, mentha oil. While most major agricultural commodities and their products, including cereals, cotton, jute, sugar, oilseeds and oils (barring refined soybean oil to some extent), are almost neglected, minor pulses and spices like gram and cumin seed are, paradoxically enough, somewhat traded, *albeit* not in great amount. On the other hand, the regional exchanges in North and South India, with the traditional ring-based open-outcry system, continue to have a fairly good turnover in more widely consumed farm products like gur, potato, pepper and soybean oil.

While mandating the modern electronic trading *modus operandi* for the new national exchanges, the authorities perceived such a system, in which the central computer matches all the bids and offers automatically and anonymously, to be not only more transparent, but also a superior form of trading than the age-old open-outcry practice. Following the spectacular success of the National Stock Exchange (NSE), and subsequently that of the Bombay Stock Exchange (BSE), it was tacitly believed that the impersonal electronic trading would not only generate large trading

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The views expressed in this article are personal.

volumes in national commodity exchanges but also attract the commodity trade and industry and even farmers to hedge their requirements in the futures markets developed by these exchanges. No doubt, these exchanges did generate huge business in their futures (in fact, the aggregate trading volumes in them now exceed those in the cash segments of the stock exchanges), but, disappointingly, they failed to entice the genuine physical market players, let alone the growers of farm produce.

COMMODITY VS. STOCK EXCHANGES

What was lost sight of was that commodity exchanges are not stock exchanges. The factors determining prices in commodity exchanges are far too many and complex than those that set stock prices. These include, among others, weather and crop reports; changes in crop varieties and the end-uses; outputs of substitute crops; market arrivals and stock movements; buying and selling pressures in the various physical markets; prices in the assembling, terminal, and international markets; and export and import trade; besides such macro-economic factors like agricultural, industrial, trade and transport policies; monetary credit, and fiscal policies; and state and local taxes and levies. Not only do these factors affect supply of and demand for commodities, but often bring about shifts in demand and supply schedules and their curves. Unsurprisingly, most farm commodities and their products not just face short-term and seasonal price variations, but even day-to-day and intra-day price fluctuations, giving rise to the inevitable price risks to the physical market functionaries in their business, which they seek to cover through hedging in the futures markets.

Unlike the stock market, which is primarily a speculative market, a commodity futures market is a hedge market. The need for a commodity exchange arises from the desire of the physical market functionaries in commodities to avert the unavoidable price risks in their dealings. They also require the futures market as a source of reference pricing for their physical market forward deals in both the domestic and export markets, provided the prices quoted therein truly represent the equilibrium or near-equilibrium prices. Hence the two major functions of a commodity futures market are price risk management and price discovery.

In contrast, the stock exchange is supposedly required to assist corporations and institutions for raising capital and other financial resources by rendering their stocks and other forms of securities easily marketable. Hence, investors and speculators predominate in the stock market. Price discovery and risk management have little relevance to the stock exchange. The commodity exchanges, however, have a major role to play in determining what the textbooks on economics describe as equilibrium prices. It is therefore vital to develop a commodity futures market as a 'perfect' market, with 'free' flow of market information affecting supply and demand, and easy entry to the market for all those who deal in physical commodities.

WHY RING TRADING?

Needless to say, what proved fine for the stock exchange might not be *ipso facto* good for the commodity exchange. Contrary to normal expectations, what is sauce for the goose is not necessarily always sauce for the gander. And, astounding as it may appear to the present-day tech-savvy exchange managements and the new generation regulatory authorities of the government, no other system is more apt for futures trading in agricultural commodities than the traditional ring-based system. There are several valid reasons for that.

First, the ring system is much more “open” than the impersonal electronic system since trading takes place openly on the trading floor. In other words, it is not only transparent, but is also “seen” as transparent. In fact, the ring system is akin to “auction” in that a large number of buyers and sellers (all of whom are auctioneers as well as bidders at the same time) gather together at one place, actually see and hear each other’s bids and offers, and strike deals loudly in the “open” for all to notice. With video cameras installed on the trading floor, even live trading can be seen from homes and offices.

Second, and even more importantly, though believed to be transparent, the online system is somewhat “secretive” in nature. It does not quickly divulge information on either market intelligence or major market players. Strange as it may appear, the dissemination of diverse market information, particularly related to the operations in the physical markets (both domestic and overseas), is more rapid by word of mouth on the trading floor than in the isolated offices of brokers and trading houses operating online. Such rapid dissemination, in turn, encourages speculative and arbitrage business to yield quick intra-day returns and helps price discovery. The fast dissemination of market information is all the more important in agricultural commodities and their products, as the factors affecting their prices are varied, many, and complex. That is not the case with the prices of stocks or other financial instruments.

True, in technology-driven electronic exchanges, market information is disseminated by the exchanges from the available published and Web sources. But the major source of information pertaining to physical market deals in the domestic and overseas markets is the actual player in the physical market whose trading behaviour on the futures market reflects such information. Such reflection is obviously clear on the transparent trading floors of the commodity exchanges rather than in the opaque anonymous online trading system.

As it is, the underlying forces affecting supply and demand determine primarily commodity prices, whether for futures or physicals. The physical market deals play a major role in the determination of such prices. However, most physical market deals are shrouded in secrecy. And so are their prices. For fear of affecting prices adversely, buyers and sellers in the physical markets are reluctant to divulge the details of their deals. But the knowledge of such deals swiftly reaches the trading

floors on which are assembled the representatives of the physical market functionaries or their brokers for either risk management or price discovery. The online exchanges have little access to such deals, and are consequently in no position to transmit such information through their network.

Third, the impersonal electronic trading is far from attractive to floor traders and jobbers who provide the much needed breadth and liquidity to the commodity futures markets. They also facilitate the flow of market information among the diverse market players. Their virtual absence in the online system has not merely deprived the commodity exchanges of the free flow of market intelligence, but has also aggravated to some extent the total transaction costs for both the genuine hedgers and speculators owing to the resultant widening of differences between the bid and offer quotes.

This is not all. The direct transaction costs on the online exchanges have proved to be too high - notwithstanding the supposed savings on paper and other costs - owing to high capital and operating costs of the system for both the exchange and its members. High membership fees and annual subscriptions, exorbitant security deposits and heavy initial and variable margins levied by the exchanges to cover their costs, have all conspired to increase the trading costs for the physical market players whose marketing and processing margins are small. Unlike the high-value financial instruments and even commodities like bullion and crude oil, the low-value, high-bulk agricultural commodities and their products can ill-afford such high transaction costs in commodity futures. In fact, these costs deter small jobbers and speculators from joining such exchanges or even operating on them, which tend to inflate the overall costs for genuine physical market traders still further. Small wonder, they have neglected the national commodity exchanges.

After all, unlike speculators, hedgers need to incur transaction costs on both their physical and futures markets. Since such transaction loads are entailed twice, while entering and exiting the markets, high transaction outlays necessarily put off most merchants and manufacturers from hedging in electronic commodity bourses.

Last but not the least, it is actually absurd to operate an electronic trading system in the futures business for agricultural commodities when the physical markets in them do not have such trading practice for either spot or forward deliveries. Had e-commerce been widely prevalent for the physical trades in farm commodities, the players in the commodity futures would have been aware of not only the physical market prices but also trading and delivery volumes in them. That would have helped arbitrage between the physical and the futures contracts and improved the price relationship between the two markets, ensuring proper price discovery and efficient risk management. The success of the online computerised trading in stock futures and options is not so much because of the ease and operational efficiency of such a system as for the fact that the spot market deals in securities are also executed electronically.

In fact, unlike the spot markets in stocks and securities, which are restricted to just two exchanges, namely, the BSE and the NSE; the physical markets in commodities are spread across the country. In the absence of any electronic spot market in commodities, there is really no easy way of knowing the price and transaction details that relate to physical market deals for either domestic purchases and sales or exports and imports. The only relatively reliable source of such information is the trading floor of a commodity exchange on which congregate the representatives of major physical market functionaries or their brokers and commission agents. That helps to enhance the efficiency of the commodity futures market for both price discovery and risk management.

ELECTRONIC GAMBLE

Be that as it may, there is no denying that the electronic gamble ordered by the government has, by and large, paid off for the national exchanges. These exchanges, with their online trading systems, have undoubtedly recorded extraordinarily high business turnover in just about three years. These volumes have also resulted in their showing fair amounts of profit over a short period, whereas the old exchanges still strive to survive on a hand-to-mouth basis. Yet, there is no denying that the futures business in the national exchanges is confined mostly to bullion and crude, besides just a few unimportant and inconsequential agricultural and plantation crops. Dismally, they have as yet failed to penetrate the crucial agricultural sector. What's more, most of the business undertaken in them is by stockbrokers and security market players having little interest in physical commodity trade. Not unexpectedly, the open interests at these exchanges are too small, if not negligible. Worse still, deliveries against farm futures contracts traded at the national exchanges are few and far between. Manifestly, there are hardly any hedge interests in these exchanges.

In the absence of any meaningful hedging, neither the price discovery nor the risk management function is performed effectively at the electronic national exchanges. This is especially true for agricultural commodities. Even in bullion and crude oil, these exchanges appear to just follow the price leadership of the New York Mercantile Exchange (NYMEX) and do not seem to set the prices for the world markets. Disappointingly, these national exchanges have designed most of their futures contracts in farm commodities and their products to satisfy the speculative passion of the stock market players and the gamblers in different regions of the country, rather than serve the risk management and pricing interests of the physical market functionaries in agricultural commodities. Not surprisingly, those who genuinely need hedging are avoiding these exchanges.

PRACTICES ABROAD

What is perhaps quite fascinating to note is that almost all the reputed international exchanges like the Chicago Board of Trade (CBOT), the New York Board of Trade (NYBOT), the International Petroleum Exchange (IPE) in London,

the London Metal Exchange (LME) and several others in South America, still prefer the traditional ring-based open-outcry system for especially agricultural commodities, though most of them have installed the electronic online system as well. Almost 90 per cent of the trades in farm products at these exchanges (including the CBOT, the world's largest agricultural commodity futures market, which acts as a price leader for most farm commodities globally) are actually carried out through the traditional open outcry. Traders resort to the online system only after the official trading hours, and that too when absolutely unavoidable. Little surprise that CBOT is still treated as the benchmark for world pricing of agricultural commodities. The new electronic exchanges established outside the United States simply follow the lead of CBOT.

Even at the Chicago Mercantile Exchange (CME), which showed the way for setting up electronic trading systems in North America, almost all the futures and options trades in farm commodities (like live cattle, pork belly, lean hogs, and milk) are placed through the traditional open-outcry system in its trading pits. Only the financial futures (for equities, currencies, and interest rates) are traded on the electronic online system. Paradoxically, options on these financial futures are transacted mostly in the pits through the traditional open-outcry system.

More surprisingly, traders at the NYMEX and its COMEX division, which organises futures and options trades in mainly energy products (crude oil, heating oil, natural gas, gasoline, and propane) and metals (gold, silver, platinum, palladium, and copper) too prefer the ring-based open-outcry system to the anonymous electronic trading. On its website, NYMEX reports that "although the NYMEX ACCESS® trading session extends over 17 hours, open-outcry trading – the auction that takes place on the trading floor for six and a half hours each day – is the primary market, accounting for 97 per cent of the Exchange volume. The open-outcry trading session has greater liquidity and is usually faster placed." No wonder, metal and energy traders opt for the traditional ring trading through the open-outcry method at NYMEX, instead of the ultra-modern Internet online NYMEX ACCESS®. Open-outcry trading represented approximately 86 per cent of the total futures and options contract volume executed and/or cleared on NYMEX in 2004. All through NYMEX has maintained its position as a premier marketplace for energy and metal products, whose price lead continues to be followed by all the other online exchanges in and outside the United States – the competition from the online CBOT in bullion notwithstanding. Recently, in November 2004, NYMEX launched its open-outcry ring trading of the Brent Crude Oil futures contract at its newly opened branch in Dublin, Ireland. And subsequently in February 2005, it proclaimed its plans to introduce a ring-based open-outcry exchange in London.

Meanwhile, the Dubai Mercantile Exchange (DME), a 50-50 joint venture between NYMEX and Tatweer, a subsidiary of Dubai Holding, has announced that although it will install a fully electronic exchange, "in a unique concept, it will also bring together a community of traders that will operate from trading hubs and individual trading stations on the Exchange's trading floor." In other words, instead

of yelling and howling, the traders will put through their bids and offers through their workstations on the trading floor, which will be flashed instantly on the electronic screens for all to see. DME thus seems to pioneer an electronic open-auction ring-trading system, which will function more silently than the open outcry, but with the same end results.

Like other commodity exchanges in the United States, NYBOT also relies on floor-based trading for efficient discovery. "For over a century, the global futures and options markets of the New York Board of Trade have relied on the open-outcry auction process as the best environment for negotiating the best price for cocoa, coffee, cotton, orange juice, sugar and a variety of financial and index products," declares in its website. "Risk managers and investors trust the open-outcry process because trading is "open" in all our trading rings where the "outcry" for each trade is heard by all who compete in those rings for price."

The LME likewise states on its website, "The ring sessions, and especially the second morning rings from which official prices emerge, concentrate liquidity because the physical trade requires prices as close as possible to the daily settlement prices. This concentration of liquidity ensures both transparency of pricing, and more representative prices than may be obtained through inter-office trading." Hence, "A significant proportion (almost 90 per cent) of all LME contracts is traded in the ring sessions, including the kerb, or as a result of that trading. The balance goes through the inter-office telephone market and LME select," which is its Internet trading system. In fact, LME prices are all set in its ring, and these prices are accepted globally and used widely for benchmarking in the non-ferrous metals and plastics industries.

Commodity exchanges in Japan, like the Tokyo Grain Exchange (organising futures for corn, soybean, azuki or red beans, coffee, raw sugar, and vegetable index, as also options for corn, soybeans and raw sugar) and the Central Japan Commodity Exchange (conducting futures for eggs, gasoline, kerosene, gas oil, and ferrous scrap), trade in a form of auction called "Itayose", where several short sessions (of 15 to 45 minutes each) are held in succession. These are for different commodities in sequence and held at pre-determined intervals of the day. For options, trading hours extend to two hours.

At each trading session, a provisional price, which is the last settlement price of the commodity to be traded, is offered by the exchange. Members then submit their orders. The exchange thereafter raises or reduces the provisional price, at which members revise their orders. This process continues till the aggregate buy orders matches the total sell orders at a price so adjusted from time to time by the exchange. At that price, all orders are executed at once. Little known outside Japan though, the "Itayose" method has some distinct advantages. Since trading is restricted to a short period of the day, it tends to be heavily concentrated, improving the liquidity of the market. Because the process of arriving at the final price, at which all trades are executed simultaneously, is highly visible to all the market participants, it necessarily

results in an efficient price discovery. The exchange prices so reached therefore serve as helpful benchmarks for the physical market deals.

The Dalian Commodity Exchange (DCE), the premier marketplace in China for trading in futures of farm products like corn and soybean complex (bean, oil and meal) and accounting for over half of the total trading volumes in commodities in that country, has also not abandoned the trading hall. However, the trading hall is equipped with computers. But trading is restricted to two hours in the morning and an hour and a half in the afternoon, which helps to improve liquidity. The automatic computerised matching system of the exchange processes the buy and sell orders and matches these with the time and price sequence. DCE has thus cleverly combined ring-based trading with computerised trading, thereby benefiting from the best of both worlds.

CONCLUSION

Clearly, the most preferred mode of the futures and options trading in commodities (especially of agricultural origin), in the major global exchanges – which are the price setters for all other exchanges in the world – is the traditional auction through open outcry or otherwise in the trading hall or ring, since it performs the ‘price discovery’ function most efficiently, and, in the process, assists in effective ‘risk management’ as well. It is therefore high time that the Indian commodity exchange authorities and regulators quickly learn their lesson from the experience of the advanced countries rather than being carried away by the electronic online technology. The online system appears very appealing *prima facie*, but is decidedly unsuitable for the futures trade in many commodities, especially farm products – its supposed gains to the stock and bullion markets notwithstanding.

Not that computer technology is not needed. It must be fully utilised in the trading halls of all the exchanges for recording the prices and trading details on their electronic boards, as also for simultaneous and instantaneous dissemination of the price as well as market information through the Web channels. The electronic trading facility may also be available for trading after the official trading hours. In the present era of globalisation, prices need to be ‘discovered’ round the clock for all the seven days in a week, and price risks need to be managed all the time. But the concentration of trading through restricted trading hours in the trading hall alone can improve market liquidity and set the price benchmarks. If India were to become a price leader in farm commodities, the ring system of trading, with or without computer assistance, for order matching is a must for the agricultural commodity exchanges in the country. Contrary to the erroneous belief, ring-based trading is neither outdated nor has it outlived its utility.

NOTE

1. For detailed discussion on the subject, see Pavaskar, Madhoo (2004), “Commodity Exchanges are not Stock Exchanges”, *Economic and Political Weekly*, Vol.39, No.48, November 27, pp.5082-5085.