The Potential Effects of Government Intervention in a Market Economy

Scholarly research for the consideration of:

The Expert Committee to Examine the Impact of Futures Trading on Price-rise in Agricultural Commodities

Professor Abhijit Sen Member, Planning Commission	Chairman
Shri Sharad Joshi MP	Member
Prof. Siddharth Sinha IIM, Ahmedabad	Member
Prof. Prakash Apte Director, IIM, Bangalore	Member
Dr. Kewal Ram Member, FMC, Mumbai	Member

Submitted by Financial Markets International of Washington, DC, and Mumbai, India.

April 2007

The Potential Effects of Government Intervention in a Market Economy

by

Kate Hathaway

Kate Hathaway, an international consultant on commodity futures markets, served for twelve years at the US Commodity Futures Trading Commission (CFTC) as Chief of Staff to the CFTC Chairman advising on regulatory, legislative, and adjudicatory issues. Prior to that, she served as the Director of Education and Communications. She is a Commodity Markets Advisor to the FMI India Commodity Futures Market Project.

Edited and Reviewed by:

Gopal Naik, Ph.D., is a professor in economic and social sciences with the Indian Institute of Management in Bangalore (IIM), and previously taught agricultural management and agricultural marketing research for seven years at IIM Ahmedabad. He served as a member of the board for the Ahmedabad Commodity Exchange for two years and has received numerous awards for his writing and research.

Charles M. Seeger, Chairman and CEO of Financial Markets International, specializing in capital markets development, commodity markets laws and regulations, and exchange operational procedures. He was formerly Senior Vice President and Counsel for the Chicago Mercantile Exchange. He directs the FMI India Commodity Futures Market Project.

R. Jayaprakash, Resident Adviser on the FMI India Commodity Futures Market Project, and formerly headed the Market Watch and Surveillance Department at the NCDEX, Ltd. He worked as a senior adviser to commodity futures exchange initiatives in Asia and Africa, was an executive with ICICI Bank, and began his career with positions at the Reserve Bank of India and the Bank of India.

Ann E. Berg, an international commodity specialist, is a former exporter and commodity futures trader who served on the Executive Committee of the National Grain Trade Council, and was twice elected to the Board of Directors of the Chicago Board of Trade. She is Commodity Hedging Expert to the FMI India Commodity Futures Market Project.

This research paper was prepared with the support of the United States Agency for International Development project requested by the Government of India, via the Department of Consumer Affairs, as implemented by Financial Markets International. The opinions and conclusions expressed in this publication do not necessarily reflect the views of USAID.

Financial Markets International is an international consulting firm that specializes in assisting countries to develop sound and efficient markets. FMI has worked in over 35 countries with the U.S. Agency for International Development, World Bank, Asian Development Bank, and private corporations since 1992.
www.fmi-inc.net

FMI, 7735 Old Georgetown Rd, Suite 310, Bethesda, MD 20814, USA, Tel: 301-215-7840

FMI, 208 Keshava, Bandra-Kurla Complex, Bandra (E), Mumbai 400 051, India, Tel: 22-6710-910

The Potential Effects of Government Intervention in a Market Economy

Executive Summary

Most governments intervene in commodities markets to achieve policy goals. These goals may be economic - - such as export promotion, commodity sector protection, and price stabilization, or societal - - such as hunger alleviation and equitable income distribution.

Interventions in regulated futures markets can be either discretionary or automatic (often referred to as *rules-based*) and may be initiated by the exchange as a Self Regulating Organization (SRO) or by the regulator charged with market oversight. Discretionary futures markets interventions usually involve limiting, suspending, or halting trading in a particular contract market.

Governments also intervene in markets in ways that broadly affect the overall cash and futures markets. These interventions may include embargoes, price controls, quotas, duties, direct purchases of buffer stocks, and other price-impacting policy measures.

An historical review of market interventions reveals that, while rules-based interventions can succeed within a market economy, discretionary interventions often fail to achieve projected policy goals. Indeed, discretionary interventions often produce a variety of unintended consequences that prove costly to the government and harmful to the majority engaged in the producing and marketing of the targeted commodity.

Introduction

This report focuses on the outcomes of interventions in a market economy by examining the risks, costs, gains, and unintended consequences of specific interventionist measures. This report focuses on the agricultural sector because of the recent policy actions taken by the Government of India (GoI) in an effort to curb inflation in four commodities – urad, tur dal, rice and wheat.

Inflation in India recently touched a two-year high of 6.12%, according to data compiled by the Office of the Economic Advisor. Yet, food-price inflation in India stands at 11% now, almost double the 6% pace a year ago. The rise in prices of certain agri-commodities was among the highest in the wholesale price index (WPI). Led by urad, which rose by 39.8% over the past year, the pulses family jumped by 27.5%. There has been considerable discussion regarding whether, and to what extent, futures trading has contributed to the price-rise in agricultural commodities. The Standing Committee constituted by the Central Government to curb inflation reports: "Most analyses of the recent sharp increase in the prices of essential commodities have linked the inflationary pressures to the speculative spree in these commodities in the futures markets. In many of these, the hoarders have taken future positions at high prices to prosper by their hoarding operations."

Against this background, the Forward Markets Commission (FMC) delisted futures trading of urad and tur dal after the market close on the 23rd of January 2007. On February 27th 2007, the FMC directed all national exchanges to suspend the listing of new wheat and rice contracts. The FMC further prohibited new position taking in the existing contracts, allowing only the squaring off of open positions (liquidation only).

Once the futures market trade was banned in urad and tur, the spot market prices of these pulses dropped almost 20%. In the wheat market, however, spot prices rose in certain areas about 15%. These two diverse outcomes require a rigorous analysis of the variables affecting both spot and futures markets prices in the four underlying commodities.

The *de facto* Role of Futures Markets

The Indian government's concern about speculation and inflationary trends of consumer prices of food grains is not unusual among governments. Elected legislators in market economies around the world periodically question the role of speculators in the futures market when the price of a staple commodity rises precipitously.

For example, in the U.S. as recently as April 2006, after the hurricane Katrina decimated the Gulf coast, Walter Lukken, a commissioner at the U.S. Commodity Futures Trading Commission (CFTC),was called before a House of Representatives committee to explain why the prices of crude oil and gasoline were rising in the futures and spot markets. Was it because of

speculation? Commissioner Lukken assured the representatives that "*based on our surveillance efforts to date, we believe that crude oil and gasoline futures markets have been accurately reflecting the underlying fundamentals of these markets."* He went on to explain: *"some have said that blaming the futures markets for high commodity prices is like blaming a thermometer for it being hot outside. The CFTC's role is to ensure that no one is holding a match under the thermometer and in my view; we are doing an effective job*[1]*."*

This testimony by a CFTC Commissioner to the Congress is telling. The fact that Congressmen demand such a presentation is symptomatic of the politicians' need to want to blame futures markets for supply and demand disruptions. And, this occurs at least annually in the U.S., where futures markets are active, deep, liquid, and 150 years old. In short, blaming the futures markets for rising prices and supply shortages is a recurring phenomenon, especially among politicians and government officials. They not only have to explain why the costs of staple commodities are rising, but ultimately want to be able to control these rising costs. Yet, effecting an immediate change in fundamental supply and demand conditions is not possible.

Since futures markets provide centralized, transparent, and accessible information about the future price of a commodity it is easy to focus attention on these markets. If prices are rising, futures markets speculators become the villain. Futures markets are perceived as not only the source of information, but the *cause* of the inflation. Although "shoot the messenger" is a cliché, it is the appropriate one to describe what happens.

This occurs even in countries where futures markets exhibit the characteristics of mature, well functioning markets including:

- Spot market efficiency[2].
- Abundant licensed warehouses.

[1] Oral Testimony of Walter L. Lukken, Commissioner, U. S. Commodity Futures Trading Commission before the Committee on Agriculture United States House of Representatives, April 27, 2006.

[2] Deficiencies in the cash market will not impede the futures market from operating. Witness the years of relatively successful grey markets in cotton and oilseeds. .In fact as we have already seen improvements in the cash markets where futures markets have been available. . There is a synergy at play. The need to deliver specific grades of a commodity in the futures market will encourage improvement s in the grading of commodities in the physical market. Information from the futures market will influence and improve storage decisions. Each of these markets will allow the other to become more efficient. If government interventions are removed, e.g., storage and movement restrictions, bank financing of hedging operations, the private sector will quickly adapt to the new regulatory environment.

- Efficient transportation unencumbered by law or tax.
- Contract design conforming to cash market practices.
- Market oriented delivery points.

In the U.S., Congress calls upon the CFTC to address these concerns in one futures market or another at least once or twice a year.

Types of Intervention

Interventions in regulated markets are either automatic or discretionary. Automatic interventions are triggered by preset parameters outlined in exchange's or the regulator's rules and regulations. These include speculative position limits, daily price fluctuations, and increased margining based on volatility models.

Within the scope of the law, a regulatory authority or an exchange may take a discretionary action during a perceived emergency situation, such as an extreme political event, logistical constraints, market congestion, or natural calamities. Discretionary actions include suspension or halt of trading, price curbs, trading for liquidation only, or suspension of members determined to be in violation of rules and/or acting in a manner detrimental to the exchange.

Recent examples of market closures due to an extreme political event or a natural calamity include the market closure for four days following the 9/11 destruction of the New York trade towers; and the flood in Chicago April 14, 1992, which forced the Chicago Board of Trade (CBOT), the Chicago Mercantile Exchange (CME), and the Chicago Board Options Exchange (CBOE).

An example of an exchange (CBOT) and a regulator (the CFTC) ordering position liquidation occurred in 1989 when both entities initially "jawboned" the European agro-giant Ferruzzi into partially reducing its long soybean positions.[3] The matter culminated in an emergency order from the CBOT Board of Directors on July 11 to suspend trading in the July contract except for

[3] Ferruzzi controlled most of the deliverable warehouse receipts and held long futures positions in excess of 20 million bushels. Both the CBOT and the CFTC determined that the concentration of cash and futures longs was creating a distortion in soybean futures prices by causing them to trade a significant premium to the cash market.

liquidation only. Soybean futures fell precipitously and several lawsuits from farm groups followed.

Governments also sometimes intervene in ways that broadly affect the overall cash and futures markets. Standard policy interventions to support the agricultural sector include price supports, set-asides, marketing orders, and buffer stocks. Other discretionary interventions may include embargoes, price controls, quotas, duties, direct purchases of buffer stocks, and other price-impacting policy measures.

Historically, in India's case, interventions have been linked to the legal and regulatory environment of the agricultural sector through the Essential Commodities Act, 1955 (EC Act) and agricultural production, distribution, and trade policies.

Can Futures Markets coexist with Government Interventions?

Futures markets do coexist with a myriad of government policies and interventions that address the spot market and regulatory environment related to the underlying commodity. However supply and demand factors must continue to impact the pricing of those commodities.

For instance, the U.S. and the European Union have both subsidised their respective agricultural sectors. Examples of common supports to agriculture include:

- Price supports, mandatory farm prices paid by government to farmers when the market price falls below the intervention price set by the United States Department of Agriculture (USDA).

- Marketing orders, limits sale of some products by quality standards, size, etc.

- Set asides, limits area planted to specific crop; intended to limit production thereby supporting the market price. Farmers are paid to set aside acreage according to rules set out by USDA.

- Export subsidies, additional support for the exporter who sells below the market price.

- The "multifunctionality of agriculture[4]" a fundamental element of EU policy protection for the "visual amenity of the countryside" (i.e., environmental and landscape protection). "In short, the policy seeks to support the maintenance of the specific model of agriculture which is a key part of Europe's heritage."

Regardless of the interventions, including others not listed here, the futures markets in the United States have continued to efficiently serve U.S. markets and international markets by providing a price discovery venue and a means to manage the risks involved in agribusiness.[5]

This has not been the case with the European Union. The Common Agricultural Policy set out to provide (1) free movement of agricultural commodities within the EU based on common prices, no national barriers to trade, and harmonization of technical regulations; (2) preference for EU products over those from outside countries, which was maintained through import protections; and (3) joint financing of the CAP by its member countries. It used strong market interventions, particularly high support prices, to accomplish these goals and it was wildly successful in reaching those objectives.

As with any interventions, there were unintended side effects and a number of costs.

- The EU increased supplies beyond domestic consumer demand, becoming a large holder of intervention stocks.
- Used costly direct export subsidies to move surpluses into foreign markets.
- Commodity intervention schemes set prices for many commodities at levels far above world prices.

These consequences led in turn to:

- High EU budgetary outlays (over 50% during the 1980s and 1990s).
- Wider use of supply controls (leading to even higher outlays).

---

[4] The CAP reform – A policy for the future, a fact sheet available through the EC website. See also ERS, Multifunctionality in the WTO trade negotiations (overview), November 15,1999, at http://www.ers.usda.gov/briefing/wto/multifunctionalityoverview

[5] Some traders maintain the U.S. wheat market is so heavily subsidized that U.S. wheat futures contracts are no longer effective for the international market. However, these contracts continued to be used by the international agribusiness community.

- Increased tensions with the United States and other major agricultural traders.

During the period prior to 1992, the European Union countries had no futures markets in agricultural commodities. The interventions were so extreme that they eliminated all price risk and produced a system unresponsive to the market forces of supply and demand.

By 1992 however, the EU adopted significant CAP changes. Widely known as the "MacSharry reforms," after the former EU agricultural commissioner who pressed for them. Beginning in 1993, intervention prices for major commodities - cereals, beef, and dairy products - were reduced, and supply controls were extended to additional products. The EU instituted direct payments to farmers linked to historical production and to environmentally sound production practices (volume limitations on certain commodities applied). However, farmers were not fully compensated for revenue lost due to cuts in intervention pricing.

These changes in agricultural supports reintroduced price risk into domestic agricultural markets in the EU, thus allowing futures markets to develop and trade in some domestically produced farm products. Because of the McSharry reforms and the resulting market liberalizations by 2006, wheat trading on the Euronext wheat contract increased by 30 percent from the previous year.

In summary, futures markets can co-exist with government interventions if they are non-discretionary and provide either price supports below market clearing levels or income supports decoupled from commodity prices.

Evaluating the Intervention

The criteria to assess the success or failure of any government intervention are relatively straightforward:

- Objective of intervention.
- Alternative tools available for achieving the objective.
- Success of the intervention in achieving the objective.
- Costs (risks, unintended side effects, etc.) of intervention.

Perhaps one of the most dramatic examples of a market intervention by government is the Carter administration's 1980 grain embargo in USA. As Robert Paarlberg put it, "*The urge to teach someone a lesson seldom inspires sound policy. The lessons learned are too often one's own*"[6]. This proved to be the case with Carter's grain embargo.

On January 4, 1980, then President Jimmy Carter hastily announced that the U.S. would not participate in the 1980 Moscow Olympics and he was abrogating contracts to deliver any grain to the Soviet Union in excess of the 8 million tons of grain already guaranteed under the terms of a 1975 bilateral agreement. The embargo encompassed overall 17 million tons of U.S. grain ($2.6 billion worth of farm products in all) that would not be delivered to the Soviet Union in 1980.

The purpose of the embargo, as stated by the President, was to punish the Soviet Union for its invasion of Afghanistan in December 1979. The President did not require any actions of the Soviets that could result in the embargo being lifted. Perhaps the wisdom prevailing at the time suggested it would be easier to declare success if the Soviets did not have to take a specific action, i.e., withdraw troops from Afghanistan.

Apparently the President and his advisers believed a severe reduction in livestock herds would be sufficient for the US to declare success. The Soviets had been building up their livestock industry since 1972 and had used grain imports to do so. In 1979 the Soviet Union suffered very dry weather and the grain harvest had fallen 48 million tons (20%) short of production targets. Thus, it had planned to import an all-time record quantity of grain about 35 millions within the next year. About three-quarters of that total was expected to come from the U.S.

In the end, the embargo failed to achieve its political objective of deterring the Soviet incursion into Afghanistan. The embargo lost political support within the U.S. and both the international grain trading firms and other grain exporting countries, all of which had agreed to support the embargo, at first "leaked" grain and eventually supplanted almost all of the expected U.S. exports to the Soviet Union.

---

[6] Paarlberg, Robert L., "Lessons of the Grain Embargo," Foreign Affairs, Fall 1980, Vol 59(1).

Immediate action was needed to protect the farmers and the grain exporters who had already purchased US grain and contracted delivery of that grain with the Soviet Union. Without another government intervention the grain exporters would suffer catastrophic losses and the farmers would have suffered a subsequent collapse of farm prices.

After consultation with the U.S. Department of Agriculture (USDA), the CFTC issued an emergency action on January 6, 1980, ordering the suspension of futures trading for two days for wheat, corn, oats, and soybean meal and soybean oil on four exchanges. Allowing the markets to trade before the government was able to assume the contractual obligations of exporters for undelivered embargoed grain probably would have led to panic selling in the futures markets

To protect exporting firms that had already purchased large quantities of grain ear-marked for delivery to the Soviet Union, the USDA announced that the Commodity Credit Corporation (CCC) would step in to assume the contractual obligations of exporters for undelivered embargoed grain , at a short-run cost to the government of about two billion dollars.

The CCC temporarily isolated this embargoed grain from the market, as best it could, through a technique of "rolling forward" contracted port delivery dates. Some of this grain (4.2 million tons of wheat) was held in an emergency food reserve. But by midsummer, the CCC had managed to "retender" most of its embargoed grain back into market channels.

In summary, it was an unsuccessful market intervention that cost US taxpayers hundreds of millions of dollars. It significantly increased support payments to farmers; and it had an unfavorable impact on US export sales, at least to the Soviet Union, for a number of years. Larger federal subsidies for farm prices, and deeper federal involvement in the farm sector, are also legacies of the embargo that still linger today.

History of Commodity Markets in India[7]

India has a long history with futures markets, and in fact pioneered the development of the futures markets with trading in commodity futures during the 19th century. As soon as the cotton

[7] Professor Gopal Naik contributed this section detailing the history of India's commodity future markets development, as well as Appendix A.

exchanges were established in the U.K. and the U.S.A. (1870), the cotton merchants in Bombay (mostly Europeans) followed suit and founded the Bombay Cotton Traders Association, and started a cotton futures exchange in 1875 for regulation of trade. Soon, a rival body known as the Bombay Cotton Exchange, which was predominantly Indian, was set up. Dissatisfaction on the part of the dealers led to the emergence of a third body in 1915 called the Bombay Cotton Brokers' Association, which was intended mainly to regulate futures business. In 1918, the Government of India constituted a "Cotton Contract Committee" to control the cotton trading in Bombay. A clearinghouse was established and periodical settlements were effected. In 1919, the Committee was replaced by a Cotton Contract Board, which in turn founded a central cotton association in 1922 under the name of East India Cotton Association. The futures trade was extended to other commodities, such as oilseeds in 1900 and gold in 1920.

The Seeds Traders Association Ltd. in Bombay, which traded oilseeds and their products, including castor seed, groundnuts, and groundnut oil, started futures trading in 1926. Subsequently numerous other futures markets in oilseeds came into existence in Gujarat, Saurashtra, and the Punjab. The Wheat futures market at Hapur began functioning in 1913. Many other futures markets in wheat were subsequently developed in the Punjab and U.P. as well as at Bombay and Calcutta. Futures trading in raw jute and jute goods began at Calcutta in 1912. A futures market in bullion was established in Bombay in 1920. Similar markets later came into existence at Rajkot, Jaipur, Kanpur, Delhi, Calcutta, and other centres.

Futures exchanges proliferated, and many of the exchanges traded the same commodities, and some had formal trading links. Users were quite sophisticated; for example, traders in the cotton market undertook arbitrage with other major international cotton markets, such as Liverpool, New York, and Alexandria. At the same time, a number of foreign companies used the Indian markets. A complete regulatory framework for futures trade was drafted, including rules and conditions for trading in futures, a broker's licensing system, and a clearinghouse structure. Options on a number of commodities were also traded; for example, options on cotton were traded up to one year out, until their ban in 1939.

The development of futures trading was constrained during World War II. Options on oilseed and cotton, foodgrains, spices and sugar were first banned. The inflation of the later war years was a direct outgrowth of conscious government policies designed to meet exigencies of the war effort. The imperial administration, concerned with obtaining railway wagons for military

transport, placed serious restrictions on the commercial use of the railways, causing shortages in most essential commodities imported into the city. The spiraling prices fuelled speculative activity in the futures markets, and futures trading was halted due to rampant hoarding. After WWII and up to 1954. Futures trading in many commodities like foodgrains, jute and oilseeds were banned under the Defence of India Rules. After independence, the ban was continued under the Essential Supplies (Temporary Powers) Act although conditions, particularly towards the end of the First Five Year Plan, were favorable for the resumption of futures trading in many commodities. The Government of India was determined that futures trading should be permitted only under proper regulation and the Forward Contracts (Regulation) Act was passed by Parliament in 1952. The Act provides for regulation of trading by an exchange on a day-to-day basis according to its rules and Byelaws, which are approved by the FMC. This led to the establishment of the FMC in September, 1953 which gradually brought under its regulation futures trading in cotton, kapas, raw jute, jute goods, groundnut, groundnut oil, castorseed, linseed, rapeseed, gur, pepper, coconut oil, bullion and turmeric. The FMC was designated as the ultimate regulatory authority for futures trading and the Ministry of Consumer Affairs in the Central Government was given broad powers over the FMC.

Although restrictions on futures trade in essential foods, such as sugar and foodgrains remained, the Act allowed futures market trade in a limited number of commodities. The Act stipulated that futures markets should normally be self-regulating, through the governing bodies of recognized associations, in which the government had the right to place several representatives. For all practical purposes, the GoI outlawed futures contracts other than through the members of these FMC recognized associations.

The crackdown on futures markets occurred because the GoI believed that these markets helped drive commodity prices up by giving free reign to speculation. To further combat speculation, other restrictive measures were imposed on the activities of the thirty-one "recognized associations". For example, speculators were asked to pay extra margins whenever regulators deemed it necessary, and trade in contracts was simply stopped for prolonged periods (skipping one or more normal delivery months) when prices reached certain ceilings. Therefore, futures trading in most commodities (except for pepper, turmeric, castor seed, and linseed) were banned in the mid 1960s. In 1977, futures trading in non-edible oil seeds like linseed and castor seed were also suspended.

During this period, the government also constituted a number of expert committees to look into revival of future trading, and to advise the government on policy matters. [8] The expert committee on strengthening and developing agricultural marketing headed by Shri Shankerlal Guru (2001) recognized the role of futures markets in price-risk management and in facilitating direct marketing. This report emphasized that: 1) Derivatives markets play a valuable role in shaping decisions of the market intermediaries through price discovery, including decisions of farmers about planting and investments into inputs; 2) Futures trading may bring about an element of stability in seasonal price fluctuations, because in the absence of hedging facilities, dealers of agricultural commodities would restrict their purchases to the immediate needs of the processors or consumers, resulting in a post-harvest fall in prices and sharp rise in prices during the latter part of the season; 3) Well functioning derivatives markets provide a platform for market participants to hedge their exposure, and price volatility is reduced (for more information on Indian commodity futures markets since 2001, see Appendix A). The National Agricultural Policy of the Government of India, 2000, also mentions the functioning of a futures exchange for better price discovery as one of the main elements to remove fluctuations in price due to information asymmetry.

Since 2003, the business community in India has made a significant commitment to futures markets, investing hundreds of crores to establish world class exchanges. They have brought sophisticated expertise to the enterprise to ensure that the markets will operate according to international best practices. The exchanges have also tackled the thorny problems of warehousing, spot market transparency, price reporting and educating potential market participants (please see Appendix B for further information).

The FMC as a regulator of commodity futures markets is in a transitional phase. Legally it is still advisor to Central Government regarding forward markets and the operations of the exchanges. In that role it is charged with stabilizing agricultural commodities at levels deemed "politically" acceptable. To achieve this, it tries to use some of the regulatory tools available for regulating futures market trading. Meanwhile, since 2000, the FMC has made considerable efforts to bring about greater discipline and transparency in the markets, and has also added to its roles that of promoter of commodity exchanges. The FMC works with the exchanges to put

[8] See: Charles M. Seeger, **Roadmap: Commodity Futures Markets Development in India 2005 and Forward**, USAID, December 2004. Appendix A: Review of Selected Reports and Studies on the Development of Commodity Futures in India.

into place rules, regulations and practices that regulate futures markets in India according to best international practices.

The FMC needs to operate under a regulatory framework that enables it to:

- Protect market integrity.
- To preserve the economic functions of the commodity markets - - to shift commercial price risk and aid in price discovery.
- Ensure market fairness.
- Ensure financial safety and soundness by guarding against systemic risk.

In order to act effectively, the FMC must have legal support and certainty. The bill to amend the Forward Contracts (Regulation) Act, 1952 is before the Parliament now. If the FMC had the legal status today that the amendments would provide, accompanied by the necessary regulatory framework and by the requisite staff, it would have been able to provide the Department of Consumer Affairs and the Expert Committee an analysis of speculative and hedging activity in the tur, urad, rice and wheat markets during the last year. It could have included in that analysis a review of the supply and demand fundamental affecting the spot and the futures markets.

With those resources - legal, regulatory and human - perhaps the delisting of the tur and urad market and suspension of trading in rice and wheat could have been avoided. Or at the minimum, the precipitous way in which the markets were banned could have been avoided.

Indian Experience with Market Interventions

There have been numerous interventions in the Indian markets both direct and indirect. This section will only focus on the most recent interventions.

On January 23, 2007, after more than three years of significant effort to develop commodity markets in international and domestic agricultural and natural resources markets the FMC banned trading in urad and tur dal because of perceived “excessive” speculation and inflation in food grains. About one month later on February 27, for the same reasons, the FMC limited trading in the wheat and rice markets to squaring off only until expiration of the contract.

Some of the consequences of this intervention are outlined here.

- *Potential Market Growth lost to Regulatory Uncertainty*

Markets do not flourish when regulatory actions occur at the discretion of the regulator without substantial warning and discussion with the exchanges and even the participants involved. This type intervention by FMC may inhibit trading on active contract markets in which market participants fear a similar ban.

- *Consequences for Brokerage Houses and Hedgers*

While it is extremely difficult to quantify the costs involved in this market ban and market suspension in the case of rice and wheat, those affected confirm lost revenues. Five brokerage houses that have a significant presence in the commodity futures market were interviewed[9] and all five houses reported that the ban and suspension of trading caused widespread trading losses and smaller deliveries.

They described the market as "panicky" with trading proceeding very cautiously. For brokerage houses and hedgers these precipitous market closures could be particularly costly in the long run. For the brokerages, revenue losses could be permanent if they lost clients who are uncomfortable with the unpredictable and discretionary government actions.

- *Absence of information future price for Government to plan procurement*

With an active futures trading in food grains, Food Corporation of India (FCI) the food grain procurement agency of the Government, could use the futures market to obtain price information which reflects both the price of wheat in the future and the storage decisions of producers and traders. By suspending trading in wheat the GoI has caused the FCI to lose a powerful source of market information in making it procurement decisions.

In India, the GoI is a major player in the agricultural markets. It purchases and sells wheat as well as other essential commodities. The public distribution system is supplied with grain

[9] Each of these brokerage houses agreed to be interviewed only if anonymity was guaranteed.

obtained from imports, withdrawal from stocks, and procurement. On the demand side, the government purchases wheat at the procurement price which it announces before the arrival of the annual harvest in April.

Without the futures market, the GoI must depend upon the spot market for market information as it has done historically. These prices are often volatile and based on fragmented markets with poor price discovery.

Based on an analysis of data on wheat procurement by official agencies[10], it appears speculators in the Indian wheat spot market made systematic mistakes in forecasting future prices. The bias in the forecasts varied directly with past prices spread (from the beginning of the marketing year when the government's procurement price is dominant in the market to the end of marketing year when the cost of storage has bid up the price above the procurement price level).[11] In other words, in years following large seasonal price rises, traders store too much wheat.

Forecasting storage requirements is also difficult without the futures market. Given that demand is likely to change from year to year and no new supplies can be expected during the crop marketing year since storage of wheat in India is a mostly seasonal activity, the problem then becomes forecasting the storage plans of others. With no mechanism to coordinate storage decisions of market participants, forecasting the future price of wheat from spot market activity becomes more difficult.[12]

The FCI could even benefit from the futures market in another way. It could be using the futures markets to hedge its price risk to some extent. Other state marketing entities, or parastatals, such as the Australian Wheat Board, used to hedge some of its risk in the wheat futures market in the U.S. In consultation with the surveillance officials at the FMC, the FCI could determine to take a limited position in the futures market.

---

[10] Ramaswami, Bharat, "Forecasting Errors in the Absence of a Futures Market: The Seasonal Allocation of Wheat Supplies in India," Review *of Development Economics*, 4(2), 184-193, 2000.
[11] *Ibid.*
[12] *Ibid*., For instance if past experience leads spot market traders to expect a large seasonal price rise, a large remaining supply of wheat at a future date would depress the price, invalidating the initial expectation.

- *Price Volatility*

By essentially closing these four contract markets (futures market prices in a suspended market are not reflecting supply and demand fundamentals) the GoI has lost a potential tool for managing price volatility. Volatility can threaten the economic productivity of the agricultural sector through reductions in investment, export earnings while increasing the need for more imports. The GoI has historically used number of policy interventions to address this volatility including price controls, price supports, buffer stocks, crop insurance, credit restrictions and external trade restrictions. While to GoI is moving away from the use of these instruments it could also used the futures markets to cope with price volatility and manage risks. By providing all players with the same information and the same mechanism for price discovery, as well as risk management, futures markets can level the playing field for commodity trade. In addition, through arbitrage, differentials between spot and deferred prices can be diminished.

Conclusions

Futures markets and government interventions can co-exist if interventions are non-price distorting and based on automatic parameters. Whenever interventions constrain the supply and demand fundamentals or introduce an unpredictable market factor, they tend to cause economic harm. Such harm, although difficult to quantify is often irreversible – as the loss of export dominance by the U.S. after the 1980 grain embargo would testify.

In the case of India, the interventions in the futures markets have caused harm to a variety of players including farmers, hedgers, traders warehousemen and ultimately consumers due to the greater unpredictability of prices. Moreover, the government has lost a vital tool. Without the white wheat benchmark – which has a unique pricing structure among wheat varieties - it has lost an important informational mechanism to aid its seasonal allocation of wheat and manage price volatility.

Finally, one of the unintended consequences of the interventions is the introduction of regulatory risk into the market place. Markets do not do well with any degree of uncertainty. In fact, evidence indicates that in emerging market countries, uncertainty in several different areas, regulatory uncertainty being one of them, can spell the difference between successful, thriving futures markets and those that never really develop.

The FMC takes many discretionary actions in areas – i.e., price bands, margin, special margins, speculative limits, positions limits among others – that are meant to be rules-based. The rules regarding these measures should be standardized to the extent possible. Standardized procedures should guide the daily functioning of the exchange without the discretionary actions of the FMC. When discretionary actions are used recurrently, they lead to uncertainty among market participants and hinder not just the efficient functioning of the futures market, but exchange growth and agricultural development as well.

Put simply, market participants like to know the rules of the road; they will not take the journey if they are confronted with too many detours and dead ends.

Appendix A

Current Scenario of Commodity Markets in India

There are currently 24 major exchanges that are registered with the FMC for trading in futures. Out of these are four are national exchanges, namely, National Multi Commodity Exchange of India (NMCE), the Multi Commodity Exchange (MCX) and the National Commodity Derivatives Exchange of India (NCDEX). The National Board of Trade (NBOT) is also a national level exchange, but is yet to set up trading arrangements outside Indore. The remaining are regional exchanges. As many as 80 commodities are currently traded in these exchanges, and the volume of trade is booming as can be seen by the table below.

Commodity Futures Trading Value and Volume since 2001-02				
	2002-03	**2003-04**	**2004-05**	**2005-06**
Volume of Trading (in trillion kg)	314.4 (44.4)*	492.9 (57.7)*	1,942.1 (294)*	6,685.09 (244)*
Value of trading (Rs. in trillion)	0.66 (92.8)*	1.29 (94.4)*	5.71 (341.9)*	21.34 (274)*

**Figures in parenthesis are % change over previous year.*
Source: Ministry of Consumer Affairs, Food and Public Distribution.

Volume of Trade

National commodity exchanges have registered 99 per cent jump in their turnover at Rs 40.72 trillion for the financial year ended March 31 compared with Rs 21.34 trillion during the same period of the previous year. MCX has maintained its leadership over other national commodity exchanges by posting 138 per cent rise in turnover at Rs 22.93 trillion (Rs 9.61 trillion). NCDEX reported 7 per cent growth at Rs 11.trillion (Rs 10.91 trillion), while that of NMCE was Rs 1.17 trillion. Regional commodity exchanges have logged in Rs 1.2 trillion in FY07. The three national exchanges alone have

contributed about 97 per cent to the total turnover. The prominent regional exchanges are the Chamber of Commerce, Hapur (Rs 93.70 billion) and The Ahmedabad Commodity Exchange Ltd (Rs 68.41billion) followed by The Rajkot Seeds, Oil and Bullion Merchants Association Ltd (Rs 34.65 billion) and Surendranagar Cotton Oil and Oilseeds Association Ltd (Rs 32.51billion).

The top five commodities traded in the futures market were gold (Rs 10.21 trillion), silver (Rs 7.02 trillion), guarseed (Rs 3.25 trillion), chana (Rs 3.07 trillion) and copper (Rs 2.72 trillion). There was a significant growth in the trading volumes of other commodities such as zinc, nickel, mentha oil, soy oil, potato, jeera and red chilli.

The national exchanges offer trading facilities through its trading and clearing members located across the country. These members are spread over 500 centers in the country and trading taking place on over 5000 terminals in each exchange.

NMCE was the first national electronic exchange to emerge and had the backing of Central Warehousing Corporation that helped to make delivery of commodities and attracted hedgers. It leveraged on broker network and concentrated on plantation sector such as rubber, pepper, cardamom for its growth. NMCE faced minor set-back when spices board submitted a proposal to ban cardamom trading on the exchange.

The NCDEX was promoted as a model exchange, with the backing of National Stock Exchange and ICICI Bank. The membership fee was kept way above the other national exchanges, thereby making it available to only large institutions. The top management team of NCDEX was largely from ICICI Bank.

The first break-through in volume came about from Guar seed, an unknown commodity to the world. In fact, by 2005 end, guarseed and guar gum accounted for over 75% of the volume in the exchange. The introduction of pulses, however, created problems. Among the three pulses actively traded, two of them, urad and tur were based on foreign origin, making these commodities extremely volatile and susceptible to manipulation as imports are managed by a handful of importers. Sugar, wheat and maize experienced rapid increases in volume during 2006.

MCX chose to launch the bullion contract first. It low membership fee enabled all-India footprint, its partnership approach provided a new tool to the physical market participants. Also, by choosing an international benchmark it need not have to reinvent the wheel. There was also a very strong 'international basis' for the participant to look up to. The success in bullion was replicated in metals – base metals, and energy products too. Most of the trade in MCX in energy products and bullion is speculative in nature. However, MCX is also the platform in which maximum delivery of bullion takes place. By choosing the bullion, energy and metal sector, the exchange has been able to grow and outgrow the competition, with a market share of over 73% by volume

India has had an uneven history with commodity futures markets. There have been long periods when futures trading was permitted and others when it was partially or completely banned. Even during the periods when futures markets in certain commodities were banned, grey markets traded some commodities in India.

So while India has flirted with futures markets over the years, it has never made a commitment. This time around it appears the invitations have gone out, the *sangeet* [13] has occurred, but there is no *mehndi*[14] nor has the p*arikrama*[15] occurred. It also seems the *anna praashan*[16] is a long way off.

[13] evening of music.
[14] henna design on the hands and feet.
[15] one step in the Hindu marriage ceremony which legalizes the marriage.
[16] food offering to fire and between the couple to express mutual love and affection.

Appendix B

Problems encountered in the National Exchanges and measures taken to correct them are as follows:

Problems	**Measures**
Excessive speculation	Margins increased gradually from around 5 – 7% to as high as 42% in case of urad just before the ban
Sustained high prices	Delist trading in such commodities
Steep movement in near-month contract affecting spot prices	Position limit on nearby contracts drastically reduced to one fifth of normal Maximum allowed daily price movement reduced from 8% to 6% to 4% in volatile commodities
Default in delivery	Delivery choices from 'seller-option' to 'both-options' to 'compulsory delivery' Penalty for non-delivery increased from 0.5% to 5%
Dispute on local-based premium and discounts	Abolition of location premium / discounts and introduction of 'at-par' contracts
Violation of open interest rule	Temporary suspension of members from trading
Illegal overseas trade services	Specific directive from the FMC to members and their clients
Portfolio advisory / management and losses on account of such services	Explicit ban on portfolio advisory or management services by clients of member exchanges till further directive on such services is brought out. Specific guidelines to delink brokerage services from proprietary trade
Narrowly defined contracts such as urad / lemon tur	Broad-based contract with locally grown varieties got introduced in place of old contracts
Market hygiene	Random audit by the regulator of the top volume generators in each market. This is over and above the inspection by the exchanges
KYC	Plans to give a unique number to all clients of a member
Differential norms across exchanges for the same commodity	This anamoly was rectified through a noticification. Commodity of similar risk profile will have uniform prescription in terms of daily limits and so on. However, margin is a function of clearing house risk appetite hence will be decided at the exchange level.