CCP: GR-RI 07/4

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February 2007

منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Organización de las Naciones Unidas para la Agricultura y la Alimentación

COMMITTEE ON COMMODITY PROBLEMS

JOINT MEETING OF THE INTERGOVERNMENTAL GROUP ON GRAINS (31ST SESSION) AND THE INTERGOVERNMENTAL GROUP ON RICE (42ND SESSION)

Istanbul, Turkey, 14 – 17 May 2007

COMMODITY EXCHANGES AND DERIVATIVES MARKETS EVOLUTION, EXPERIENCE AND OUTLOOK IN THE CEREAL SECTOR

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EXECUTIVE SUMMARY

1. Technological innovation and the liberalization of the agricultural sector have generated a surge in commodity exchange and derivative market development for managing global and domestic commodity price risks. As a proactive approach for minimizing uncertainty, risk management tools are increasingly replacing government support programmes as an alternative for raising price predictability and enhancing producer income stability. While the expansion in world trade has spurred income growth in emerging markets and elevated demand for all agricultural products, it has also contributed to greater price volatility, leading to a need for instruments that could mitigate uncertainties associated with unexpected price changes. On a national front, institutional development and legislative measures permitting derivatives trading have paved the way for striking success in managing risks and reducing volatility in many developing countries. Private sector initiatives, seeking to tap the potential value of agricultural trading, have been key catalysts in this process. Given the favourable prospects for continued expansion in world trade, the outlook for further spread of commodity exchanges and increased use of derivatives markets remains positive. However, the future of risk management as an effective tool in the pursuit of market stability will depend upon continued liberalization of the agricultural sector and watchful markets oversight by the individual exchanges.

I. THE EVOLUTION OF COMMODITY EXCHANGES AND DERIVATIVES MARKETS – BACKGROUND, ROLE AND REQUIREMENTS

A. BACKGROUND

2. The growth of commodity exchanges and derivatives[1] markets reflects two intersecting global developments: the management of price and event risks associated with capital and commodity market liberalization and the promotion of derivatives as a new "investment class" by financial intermediaries. Unprecedented in scope, global notional volume of exchange traded derivatives surpassed US$1 quadrillion in 2005[2], surging by an estimated 30 percent in 2006. Although financial derivatives, such as currency and interest rate futures, dominate derivatives trading, agricultural derivatives trading has experienced phenomenal growth at both established and emerging exchanges.

3. Among the agricultural crops, the level of "self-sufficiency" in cereals is often considered an indicator of food security at national levels[3]. In past decades, policies to achieve self-sufficiency relied on state subsidization of cereal production, usually in the form of price supports. Because of their market distorting effects, many domestic price support systems, especially in the developed countries, evolved gradually into income stabilization schemes during the 1990's. While some countries, such as Argentina, Brazil, New Zealand and South Africa, opted for the elimination of price supports and other interventionist measures, many introduced safety net programmes as a mean to ensure minimal levels of income for producers when prices decline below certain threshold levels. The shift from price to income supports combined with

[1] Derivatives markets allow buyers and sellers to transact in standardized instruments "derived" from an underlying asset. These instruments include futures, options on futures and over-the-counter swaps. See Role of Derivatives Markets.

[2] The Bank For International Settlements; www.bis.org.

[3] Cereals include wheat, rice and coarse grains (namely: maize, barley, sorghum, oats, rye, and millet).

other liberalization measures has created the impetus for an expansion of risk management instruments.

4. Coinciding with these policy developments, a revolution in information technology has spurred the growth of risk management centers, especially in areas where market fragmentation impeded efficient pricing. Historically, most commodity exchanges developed as physical transaction hubs where producers delivered and sold their crops to buyers with storage facilities. Because producers had little choice but to accept the spot offer price, most exchanges were "buyers markets". Market fragmentation – i.e., poor price correlation among the regional exchanges – also characterized the exchange network. Electronic transaction models and instant price dissemination systems have transformed these market arrangements: the new electronic exchanges broadcast multiple prices from various markets – spot and forward –, giving producers a range of seasonal and geographic options for storing or marketing their crops. By disseminating a spectrum of instantly observable or 'transparent' prices, these exchanges have conferred pricing power to the producer and aided institutional development – e.g., grading and warehouse receipt systems, supply chain integration and farm credit facilitation.

5. In newly formed futures and derivatives markets, electronic platforms have been pivotal in establishing market integrity. By incorporating instant audit trails and safeguards against fraud, market manipulation and execution errors, they require less regulatory supervision than the traditional open outcry systems. Their superior oversight and surveillance functions have allowed electronic exchanges to gain overwhelming government endorsement, even in countries such as China, India and Thailand that previously halted or banned commodity futures trading. In addition, the trend toward restructuring the governance of the exchanges from mutually held, often exclusive, membership associations to transparent shareholder organizations has instilled participant confidence in exchange integrity.

B. ROLE OF COMMODITY EXCHANGES

6. Technology and globalization have widened the role of commodity exchanges. Although many exchanges maintain their basic function as transaction hubs for physical spot and forward sales, modern exchanges have become significant centers of information: they broadcast local and world prices, supply and demand data, weather and relevant government policy actions. Their proactive role in institutional development has also made them a driver for greater productivity and marketing efficiency. Due to the erosion of interventionist policies, exchanges are promoting the use of grade standards and warehouse receipts, thus enabling producers to capture rewards for quality production. Reliable grades and negotiable receipts are in turn helping producers to secure financing. In all, exchanges are evolving into integrative cooperative operations, empowering producers and improving rural incomes.

7. Because technology has greatly reduced the cost of entry, virtually any arena – geographic or electronic – transacting in commodities can become a commodity exchange. However, every exchange still requires several minimum standards (ranging from transaction to dispute settlement rules) in order to operate in an environment of trust.

C. ROLE OF DERIVATIVES MARKETS

8. The primary purpose of derivatives markets (often called futures or futures and options markets) is to transfer commodity price risk to another party. Risk transfer is achieved by transacting in futures contracts, which are agreements to buy and sell a commodity for delivery (or cash settlement) at a later date.

9. Futures are "proxy" transactions, an interim way of securing prices for goods in advance of physical purchases or sales. The use of these instruments, however, is not without risk:

producers hedging their anticipated crop may suffer monetary losses if their harvest falls short of the quantity hedged. A well designed futures contract must correlate with the underlying cash market, have simple standardized terms and be resistant to market manipulation. Derivatives exchanges constantly monitor their products to ensure that they fulfill their hedging function. Historically, most derivatives contracts have failed at launch and many started with scant volume before becoming successful.[4]

10. Agricultural derivatives trading has often lagged equities and financial futures development. Significantly, agricultural derivatives require a cooperative framework among market participants for proper functioning during the delivery or settlement period (called "convergence"[5]). Warehouses registered with the exchange must meet quantity and quality specifications and comply with load-out procedures for the commodities they deliver. A large exchange such as the Chicago Board of Trade (CBOT), for example, has dozens of such arrangements with Illinois River barge loading delivery points for its maize and soybean contracts.[6] Alternatively, in the event contracts are cash settled, exchanges must adopt and enforce an unbiased method of obtaining cash prices from market participants. These measures add considerable difficulty and cost to creating and maintaining agricultural contracts vs. financial contracts. Currency or interest rate futures, for example, are often settled by official government pronouncements which are cost free (e.g. – in the United States, the Federal Reserve announcement of the Fed Funds rate is the settlement mechanism for the Fed funds futures contract at the Chicago exchanges).

11. Therefore, success of agricultural derivatives markets and their futures and options contracts is dependent upon several factors, including a well-established standardized cash market, a sufficient number of hedgers and speculators willing to trade the product, a well-functioning financial system and a satisfactory legal and regulatory framework. Derivatives markets must also exist within an environment of economic and political stability. If sovereign currency volatility or hyper-inflation exceeds the price risk of the underlying cash commodity, derivatives trading has little chance of success. Moreover, political instability poses a barrier to proper market function and acts as a deterrent to capital investment.

II. DEVELOPMENTAL EXPERIENCE OF COMMODITY EXCHANGES AND DERIVATIVES MARKETS

12. By any standard, the recent growth in commodity exchanges and derivatives markets has been spectacular.

13. The CBOT (the largest agricultural exchange by volume) remains the global benchmark pricing centre for wheat and maize. However, since the 1990's, cash and futures exchanges in both developed and emerging countries have gained national traction: by tailoring their product bases to domestic trade patterns and conditions in terms of quantity, quality, delivery and currency, they provide domestic participants more precise tools in dealing with local conditions, such as regional supply shortages or surpluses, quality issues, logistical problems and government actions - conditions often not reflected in the CBOT prices.

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[4] The most heavily traded commodity contract today – crude oil – began trading at the NYMEX in 1983 with about 1000 contracts a day, only, during its first year.

[5] In well functioning futures contracts, the futures price converges to the cash commodity price obtainable in the delivery market.

[6] The CBOT delivery system for maize and soybeans changed in 1998 from an in-store warehouse receipt system based in Chicago and Toledo to a "shipping certificate" system in which barge loading stations deliver a pledge to load out a specific quantity of maize or soybeans within a defined time period. The wheat contract remains an in store WHR contract.

14. Surprisingly, agriculture has been the leader in derivatives market volume with a compound annual growth rate of 29 percent between 2001 and 2005.[7] In general, the most successful commodity operations have taken place in countries with the fastest economic growth such as China and India. Currently, Asia hosts as many as 8 of the top 15 commodity derivatives exchanges by trade volume. Partly because of their small contract size,[8] some exchanges have exceeded or are nearing contract volumes realized on renowned exchanges.

15. Among countries in *Asia*, **India** has experienced phenomenal growth in commodity derivatives markets since 2003, when the Government lifted restrictions on futures trading[9]. Because the Government has approved the operation of multiple exchanges, the exchange environment has become highly competitive in terms of product development and business strategies. Much educational and promotional effort also preceded the launch of India's exchanges. The two major exchanges - the Multi Commodity Exchange (MCX) and the National Commodities and Derivatives Exchange (NCDEX), both limited shareholder organizations, list and trade dozens of products in several commodity sectors. Both exchanges deal in physical delivery contracts with NCDEX reporting about 50,000 metric tonnes of agricultural deliveries per month. Although rice is listed on both exchanges, rice contracts have proven unsuccessful, largely because of market fragmentation and the government intervention policies in the domestic rice economy. MCX and NCDEX have reportedly tapped into the long supply chain inherent in Indian marketing and have demonstrated that the price discovery process reduced post-harvest producer price volatility.[10] MCX has launched initiatives to integrate India's spot commodity exchanges into a national-level electronic platform and to provide warehousing services across the country. These initiatives are aimed at improving collateral management systems, warehouse receipt financing and quality production.

16. **China** experienced a surge in commodity exchange and derivatives market creation after 1990. Because the Government deemed speculation excessive at many of these exchanges, it intervened with two structural reforms called "rectifications" and closed down dozens. Today, three major commodity exchanges exist: The Dalian Commodity Exchange (DCE), the Shanghai Futures Exchange (SHFE), and the Zhengzhou Commodity Exchange (ZCE). Of the three, the DCE is now China's largest agricultural commodity exchange and a major exchange for soybeans. It also hosts a liquid maize contract trading 70 million contracts in 2006. Intended for domestic pricing, the contract is sized at 10 metric tonnes and allows multiple registered warehouses to serve as delivery points. The ZCE lists a wheat contract also trading in high volume, with 14.5 million contracts in 2006.

17. As a major rubber and rice exporter, **Thailand** launched a futures exchange (the Agricultural Futures Exchange of Thailand) in the two commodities in 2004. Although the rubber contract has remained successful, the rice contract suffered from design flaws and excessive volatility shortly after launch. Following a contract revision, it enjoyed some success, but has since become inactive due to a revised and more generous producer price support scheme operated by the Government.

18. The Tokyo Grain Exchange in **Japan**, the world's oldest commodity futures exchange, now merged with the Yokohama Exchange, began trading maize futures in 1992. The contract is an import-based contract specifying the delivery of U.S. origin maize in 100 metric tonnes, cost

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[7] The World's Commodity Exchanges – past, present future, UNCTAD & Swiss Futures and Options Association, 2006.

[8] Contract sizes in emerging markets' agricultural contracts tend to be specified at about 10 to 20 tonnes compared with the 127 to 136 tonnes of the agricultural contracts traded at the CBOT.

[9] India first established futures trading in 1875. Once home to over 300 spot commodity and futures exchanges, after independence, the country tightly regulated trade and prices of many commodities.

[10] "Commodity Exchanges: Initiating India's Second Green Revolution," D.G. Prasad and Ritambhara Singh, The World's Commodity Exchanges, UNCTAD, 2006.

and freight (CIF) delivered Japanese ports, denominated in Japanese yen. Since Japan must import its maize needs, the contract is a primary benchmark for domestic feedlot operators and other end-users. In 2006, the maize futures volume was 4.7 million contracts. Rice futures were first traded in the country in 1893, but were then discontinued in the 1930s. Although in 2006 the Tokyo Grain Exchange and the Kansai Commodities Exchange requested authorization to list rice commodities futures, their trading is not yet allowed by the Government. Because of the prevailing domestic and trade[11] rice policies, Japan's domestic rice price is several times higher than the world level.

19. **Turkey** has an established system of over 90 spot market commodity exchanges. Significant effort has been expended to liberalize the wheat sector, establish a reliable warehouse receipt system and improve productivity, though the results have been mixed. In 2005, Turkey launched its first derivatives market, the Turkish Derivatives Exchange (TURKDEX), a limited shareholder organization, as a risk management centre for both financial (currencies, bonds and equity indices) and agricultural (wheat and cotton) futures, but, so far, has achieved success only in the former. Market fragmentation, state intervention and lack of forward trade impede wheat derivatives formation[12].

20. Elsewhere in Asia, the National Commodity Exchange (NCEL) is a limited shareholder organization in **Pakistan**, aiming to be that country's first on-line, internet-based commodity exchange. Newly operational in 2007, it plans to list rice and wheat as its first two agricultural products after its initial launch of gold futures. In the **Islamic Republic of Iran**, establishing an agricultural commodity exchange has experienced a slow start, mainly because of the strong government presence in the domestic basic food market.

21. In *Africa*, the Securities Exchange of **South Africa** (JSE) is the region's premier exchange, combining securities and commodities trading, having absorbed the South African Futures Exchange (SAFEX) in 2001. Its white maize contract is the largest commodity contract by volume, trading about 110,000 futures and 38,000 options per month. It is sized at 100 metric tonnes and denominated in rands. The exchange is producer-oriented, with over 100 registered warehouses as delivery points. It developed the contract in response to the cessation of Government price supports in the mid 1990's. According to JSE, about 20 percent of maize farmers in South Africa use its contracts for hedging purposes. The Exchange also lists contracts in milling wheat, yellow maize and sunflower seeds.

22. Except for South Africa's JSE/SAFEX, establishing commodity exchanges elsewhere in Africa has been a slow and painstaking process. Because of the region's size and diversity, it is difficult to categorize all the reasons for delayed progress, but several general factors can be cited:

- Market fragmentation – regionalism, state policy, crop varieties, asymmetrical pricing, deficient price dissemination.
- State intervention – marketing boards, import/export restrictions, taxes.
- Underinvestment in infrastructure and crop quality – warehouses, irrigation, transportation, seed stock.
- Underinvestment in institutional development – warehouse receipt system, farm credit, commercial code.

[11] Japan's WTO bound tariff on rice has been set at 341 yen per kg (about US$ 3000 per tonne).

[12] The 2006 intervention price for wheat was established at 380 Turkish Lira (US $ 253) per tonne, well above the world price.

23. Several initiatives are under way to redress these constraints. KACE and ACE are electronic commodity exchanges in **Kenya** and **Malawi** respectively. They issue daily reports of prices, activity and trade related information and serve as platforms for bi-lateral trade. Their mission is to increase producer awareness, promote institutional development and enhance productivity. **Nigeria** has recently introduced spot trading in maize, soybeans and other products within its Abuja Securities and Commodity Exchange. One ambitious recent undertaking is the Pan African commodities and derivatives exchange (PACDEX) based in **Botswana**. This exchange, projected to be operational in 2007, aims at providing centralized clearing, trading and processing to a network of regional markets in Africa. Establishment of PACDEX has gained popularity and support within the region, especially with the passage of the Arusha Declaration by the African Union (AU)[13] in 2005.

24. In *Western Europe*, Euronext is the leading cross-border fully electronic exchange trading maize, feed and milling wheat and other soft commodities such as coffee, cocoa and sugar. In 2006, the exchange's volume for milling wheat nearly doubled from 2005 reaching 407,000 contracts. Maize traded in lesser volume. Milling wheat and maize are 50 tonne-unit physical delivery contracts, priced on an in-store basis at registered warehouses located in France. Several small commodity exchanges trade cereals in *Eastern and Central Europe*. In **Romania**, the Romanian Commodity Exchange (RCE) is a hybrid combining a traditional floor-based auction and an electronic-order system, primarily for wheat. Commodity exchanges also operate in the **Czech Republic, Bulgaria, Slovakia, Slovenia** and **Yugoslavia**. Only **Slovenia** offers futures on wheat, since the others are primarily spot and forward market operations. The region's largest exchange and centre for feed and milling wheat futures is the Warsaw Commodity Exchange (WGT) - an open outcry exchange – in **Poland**. The WGT hosts the largest bi-lateral or business-to-business (B2B) electronic spot commodity exchange in Europe[14] and connects Poland's 18 commodity exchanges. The Budapest Commodity Exchange (BCE) in **Hungary**, formerly the regional wheat trading centre, saw its volume drop precipitously after being absorbed by the Budapest Stock Exchange in 2005 and is now defunct.

25. In *Latin America and Caribbean*, **Brazil** and **Argentina** have a long history of agricultural trading and have experienced rapid growth in their wheat, maize and soybean sectors over the past few decades. Both countries, troubled during the 1980's with external debt and hyper inflation, embarked on aggressive area expansion programmes and infrastructure improvements. Once known only as a coffee grower, today Brazil is the world's leading sugar and second largest soybean producer. Commodity exchange and derivatives markets development in the region has followed a path parallel to their export markets. Brazil's Bolsa Mercados Futuros (BMF), although primarily a financial futures exchange, lists soybean and maize contracts that reflect prices based upon in-store elevators situated in Paranaguá, a primary export corridor in southeastern Brazil. In Argentina, the Bolsa Rosario is a 100 year-old commodity exchange, primarily trading wheat and maize. The bulk of the trade takes place between large-scale farming operations and major exporters[15] in both spot and forward positions. Argentina does not subsidize producer prices and, instead, levies an export tax on maize, wheat, soybeans and soy products. Although collected from the exporter, the tax is charged back to the producer. Rosario established an electronic futures and options exchange in 1998 for wheat (25 tonnes contract size) and maize (50 tonnes contract size), which are based on the FAS[16] price in Rosario export elevators. In contrast to most cereal futures contracts, the Rofex wheat and corn contracts are cash settled, without delivery of the physical grain. In 2006, the exchange contract volume equated to roughly 5 million tonnes.

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[13] The AU is composed of 53 African nations.

[14] The World's Commodity Exchanges, UNCTAD, 2006, p.109.

[15] The export giants Cargill, Bunge, Louis Dreyfus and ADM are all active members of the Bolsa.

[16] The FAS (free along side) value reflects the FOB world market price less the 20 percent export tax.

26. Aside from exchanges in Argentina and Brazil, another exchange involved in cereals is the Commodities and Services Exchange A.S. (AGROBOLSA) in **Honduras** which is a private organization that makes registries within the Granza Rice Agreement[17]. This exchange enables national rice millers to import duty free rice when domestic shortfalls exist. A similar purpose is served by the National Commodities Exchange (BAISA) in **Panama,** which assists in distributing tariff packages for imported rice, maize and other agricultural products to ensure a high level of transparency in the distribution process. **Chile** established a futures Exchange in 2005, which lists wheat, maize and wine.

27. In *North America*, the CBOT in the **United States** is the oldest exchange and the current world benchmark for yellow maize, oats, soft red wheat and rough rice. In 2005, the CBOT converted from a membership organization to a public corporation listing its shares on the New York Stock Exchange. The CBOT experienced a 40 percent increase in agricultural volume in 2006 vs. 2005 registering over 128 million contracts traded. Maize experienced the greatest year-to-year volume growth rising 72 percent. Although the contracts for these commodities retain their hedging function for both domestic and export operations, they have attracted much hedge fund interest, as institutional bond and equity traders have sought investment asset classes with higher volatilities and thus potentially greater profits. Significantly, the CBOT has increased the net speculative position limits allowable nearly 8 fold over the last decade. A single fund, for example, can hold a net position of 22,000 contracts in corn futures and options – the equivalent of 2.8 million metric tonnes. Experts estimate that hedge funds – which are highly unregulated (but are off-limits to most retail customers) - comprise a substantial percentage of the agricultural trading volume and open interest.[18] A debate about the impact of hedge fund activity on prices is ongoing, with some contending that the flow of money into commodities has artificially inflated prices. CBOT officials estimate that, in 2006, the exchange's notional trade volume in the agricultural complex exceeded $US 2 trillion. As of August 2006, grains are traded both on the exchange floor and on the electronic matching system (e-cbot), with some floor traders using both methods simultaneously.

28. Two other exchanges in the United States offer wheat contracts: the Kansas City Board of Trade (KCBT) lists a hard red winter wheat contract and the Minneapolis Grain Exchange (MGE) a hard red spring wheat contract. Both exchanges have listed their contracts electronically on e-cbot, while retaining their exchange floors.

29. In **Canada**, the Winnipeg Commodity Exchange (WCE) is a 100-year old futures exchange originally designed as a domestic and export pricing mechanism with delivery of wheat and barley in the Great Lakes shipping port Thunder Bay. Because of the slowdown of Great Lakes grain exports and the increase in domestic feeding, the WCE redesigned its feed wheat and barley contracts to a multiple-point delivery system in western Canada, so as to reflect the domestic trade pattern. However, WCE trading volume remains at modest levels (combined volume of 230,000 contracts in 2005/2006) because feed wheat and barley prices are highly correlated to the CBOT maize contract and also because the Canadian Wheat Board intervenes in wheat and barley export shipments.[19] On the other hand, the canola (rapeseed) contract is the benchmark for the global canola market and trades at volumes approximately ten times greater than the two cereal contracts.

30. In **Australia**, the Australian Grain Exchange is a hybrid electronic exchange, combining bi-lateral spot and forward trading with futures trading in wheat, which is projected to become

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[17] "The Commodity Exchange of Honduras and its operations in the rice market," André Carías, The World's Commodity Exchanges, UNCTAD, 2006.

[18] The CFTC January 2007 reports that Large Traders (non-commercials) comprised a little less than half the open long and spread (long + short) positions in the maize contract.

[19] The Canadian Wheat Board retains the sole authority to export feed grains. It arranges export sales and tenders to producers in order to purchase the export quantity.

operational in 2007. It aims to serve both producers and other market participants, such as merchants, end-users and potential exporters, as the Australian Wheat Board liberalizes its single desk export policy. It is supported by numerous industry participants.

31. Following the breakdown of the former Soviet Union, farming changed from a collectivized to a privatized system in the **Russian Federation**, **Ukraine** and, to a lesser extent, **Kazakhstan**. Trading is also mostly privatized, except in Kazakhstan. During the 1990's the Russian Federation and its neighboring states saw a surge in commodity exchange development and scattered derivatives trading. Most of these exchanges are now defunct due to default problems and the lack of a functioning warehouse receipt system. Currently, an estimated 45 cash commodity exchanges operate, many of which participate in grain auctions held by federal or regional entities involved in support price operations. Institutional development is now proceeding with the implementation of warehouse receipt systems in the Ukraine and Kazakhstan but not yet in the Russian Federation. There, legislation has languished, although the country is developing a derivatives market - the National Mercantile Exchange (NAMEX) - primarily for wheat trading.[20] NAMEX plans to create a domestic contract and an export contract (basis Azov Sea). Ukraine has also established an electronic registry of bonded warehouses.

III. OUTLOOK

32. The rapid growth of regional commodity exchanges and derivatives markets as risk management centers should continue to provide a significant boost to farm income stability and growth. These centers have demonstrated their potential to be drivers of innovation, markets integration, planting and marketing options, institutional development, capital investment, credit, and producer know-how. As technology speeds commodity exchange growth, more financial product innovation is possible in areas of risk not covered by traditional grain contracts – such as weather[21] and yields.

33. Market liberalization is critical for the continued growth of commodity exchanges and derivatives markets. Widespread government interventions in the rice market, for example, helps explain the existence of only one liquid market (CBOT) for price management. Also, potential protectionist measures such as sudden export and import restrictions would impede the price discovery and risk transfer functions of the newly developed markets.

34. The individual exchanges will need to be watchful in monitoring the activities on their exchanges in order to maintain participant confidence in their organization. Recent history demonstrates that exchanges taking a comprehensive approach to exchange operation – clearing, regulation, surveillance, promotion, business organization, connectivity, platform and product development – have thrived where others have failed. The continued involvement of the public and private sectors with the exchanges will also be key to their future growth and success.

[20] "The commodity exchange environment in Russia," Alexander Belozertsev, The World's Commodity Exchanges, UNCTAD, 2006.

[21] The DCE (China) has submitted a proposal for a weather index contract.

IV. DERIVATIVES TRADING GLOSSARY OF BASIC TERMS

Clearing

The procedure by which an organization – usually called the Clearinghouse – assumes the role of buyer and seller to all transactions in a particular market.

Clearinghouse

The central counterparty that guarantees the financial performance of a derivatives market. Standard measures for financial performance include a Guaranty fund (contributed by its members), lines of credit, and margins. The Clearinghouse is a neutral party: its long and short positions always net to zero. A clearinghouse may be a separate custodial entity (such as a bank) or a division of the exchange.

Clearing Member

A member, shareholder or other entity that pledges to protect the clearinghouse against the default of other members. Clearing members are accountable for the trading activities of their customers; they retain the right to liquidate open positions held by any customer that fails to deposit sufficient margins.

Customer

An individual or entity that has a trading agreement and account with a Clearing Member for the purpose of transacting in derivatives instruments.

Default

The failure of a clearing member to perform its obligation to the Clearinghouse. Default occurs when a member fails to deposit sufficient margins or fails to make or take deliveries in accordance with exchange regulation.

Delivery

The process of tendering and delivering a physical commodity under the terms and conditions of the futures contract and other markets regulation. In most derivatives markets, the clearing member *short* initiates the deliver process by tendering warehouse receipts or other allowable instruments (i.e., shipping certificates) to the Clearinghouse in satisfaction of its open sales contracts. The Clearinghouse in turn assigns the deliveries to the *long* holding the oldest purchase contracts. Delivery is completed with the transfer of ownership and final payment.

Derivatives instruments

Any financial instrument (e.g., futures, options, swaps) derived from an underlying asset, security or event. Derivatives include contracts based on commodities, currencies, bonds, equities, financial indices, and natural phenomena such as weather (e.g., a temperature index). Derivatives instruments in most cases are the proprietary products of an exchange.

Derivatives market

Any market transacting in derivatives instruments. The primary purpose of a derivatives market is to transfer risk to another party.

Forwards

Bi-lateral transactions that specify the delivery of physical commodity to a particular location at a forward time period.

Futures

Contractual agreements to buy and sell a commodity for delivery (or cash settlement) at a later date at a price determined in the market at the time of the transaction. Futures contracts are serial, i.e., listed in sequential intervals (normally by months) and are standardized in terms of quantity, quality, and expiration. Unlike forwards, futures contracts undergo a clearing process by the exchange clearinghouse.

Futures exchange

Any market transacting in futures contracts. Many futures exchanges transact in other derivatives such as options or swaps. The terms futures exchange and derivatives market are often used interchangeably.

Hedge

The temporary purchase or sale of derivatives to offset a change of valuation of an underlying asset. A maize warehouse performs a short hedge by selling an amount of maize futures equivalent to its inventories. Similarly a wheat miller performs a long hedge by buying wheat futures in advance of purchasing cash wheat requirements. Hedges are liquidated when the cash transaction is completed.

Long

A holder of futures, options or swaps purchase agreements.

Margin

A performance bond deposited with the Clearinghouse by a clearing member. Margins include "initial margins" that are deposited in advance of trading and "maintenance margins" that fluctuate with the valuation of the open positions maintained by the member. Initial margins vary among the various markets, but are usually less than 10 percent of the notional value of the contract. For example, the initial margin for the purchase or sale of one maize contract at the Chicago Board of Trade (CBOT) is approximately US $ 1,370 for a contract valued at approximately US $ 20,000 (127 metric tonne contract size priced at US $ 157.50 per tonne). During times of high price volatility, exchanges often raise margin levels to guard against default.

Notional amount

The aggregate value of transactions (called volume) or open interest represented by the number of contracts multiplied by the contracts' value. The notional volume of 100 wheat contracts (each valued, for example, at US $ 25,000) would be US $ 2,500,000.

Open interest

The number of open contracts held between buyers and sellers at any one time. One thousand (1000) purchase contracts offset by 1000 sales contracts would constitute an open interest of 1000. The number of purchases and sales contracts is always equal.

Option

The right but not the obligation to buy or sell an underlying futures contract at a specified price (called the strike price). Call options grant the right to buy and put options grant the right to sell. The price at which the right is granted is called the option premium.

Over the Counter Market (OTC)

A market in which buyers and sellers engage in bi-lateral transactions. OTC markets are less regulated than derivatives markets.

Short

A holder of futures, options or swaps sales agreements.

Swap

The exchange of a sequence of cash flows that derive from two different financial instruments or assets. An exchange of a “fixed” for a “floating” interest rate agreement is an example of a swap. Swaps trade as bi-lateral agreements in the over the-counter-market and as derivatives on regulated exchanges.