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EMERGING COMMODITY EXCHANGES IN A GLOBALIZED ECONOMY

Definition of a Commodity Exchange

Commodity exchanges are defined in varying ways. In its most restricted sense, they are defined as centers where futures trade is organized - this is the sense in which the word normally is understood in developed countries. In a somewhat wider sense, it is taken to include any organized market place where trade (that is, transactions, not necessarily also the physical commodities) is centralized, that is, funnelled through one mechanism, allowing effective competition among buyers and among sellers - this definition would include auction-type exchanges, but not wholesale markets, where trade is localized, but effectively takes place through many non-related individual transactions between different permutations of buyers and sellers.

In rare cases (e.g. in Turkey), commodity exchanges is used in an even wider sense, including not just places where trade takes place, but also regional centers where all commodity transactions that have taken place in the region are registered.

Role of Commodity Exchanges

Exchanges can concentrate on the trade in futures and options contracts, as do most of the exchanges in western countries[1]; or they could primarily function as centers for facilitating physical trade - in both cases, they draw their primary strength from their capacity to act as a focal point for trade transactions, and to increase the security of these transactions.

Well-organized commodity exchanges form natural reference points for physical trade, and in this way, they help the price discovery process. If a commodity exchange manages to link different warehouses in the country, this allows trade to take place more efficiently.

Evolution of Commodity Exchanges

The shape of exchanges, including those that trade commodities, has changed drastically over years. The first big wave in the creation of exchanges goes back to the late 19th century with the development of national and international market places. The main rationale, was the reduction of transaction costs, the major potential for it lying in organizing a physical market place, where buyers and sellers could be sure of finding a ready market - one of the factors that led to the creation of the Chicago Board of Trade, over a century old and still one of the world's largest commodity exchanges, was that farmers coming to Chicago at times found no buyers, and had to dump their cereals unsold in Lake Michigan, adjoining the city. These “old” exchanges are located mainly in developed countries. However, a few were created in developing countries: Founded in 1854, the Buenos Aires Grain Exchange in Argentina, for example, is one of the oldest in the world.

There was a new wave starting in the 1980s, and getting reinforced in the 1990s, with the withdrawal of the government from direct interventions in agriculture and the

[1] There are also commodity exchanges of a more traditional kind, oriented towards physical trade in these countries, notably the French Rungis market for trade in fruits and vegetables, and the Dutch flower auction in Aalsmeer.

energy sector, in both developing countries and economies in transition. The liberalization of trade and reduction of government support to the agricultural sector created fertile ground for the creation of new commodity exchanges, and the further development of existing ones. This is what we call “emerging commodity exchanges”.

We're now seeing the onset of a third wave in the evolution of commodity exchanges, driven by technology rather than policy developments. Established traditional exchanges suddenly, and often to their surprise, find themselves coming under attack from cyberspace.

Whether those traditional exchanges are able to win back the lost ground remains to be seen, but they now seem convinced that the Internet is providing them not just with threats, but also with opportunities. This is equally true for commodity exchanges in developing countries: Technology has made it possible for them to offer new products at a lower cost. They now need to find the internal dynamism to grasp these possibilities.

Overview of Existing Commodity Exchanges in Developing Countries

Africa

Africa`s most active and important commodity exchange is the South African Futures Exchange (SAFEX). It was informally launched in 1987 and has evolved into one of the leading emerging markets. Last year, the Johannesburg Securities Exchange acquired it. SAFEX only traded financial futures and gold futures for a long time, but the creation of the Agricultural Markets Division (as of 2002, the Agricultural Derivatives Division) led to the introduction of a range of agricultural futures contracts for commodities, in which trade was liberalised, namely, white and yellow maize, bread milling wheat and sunflower seeds. SAFEX traded 30 million futures and option contracts in 2001, making it the world’s 14th largest exchange.

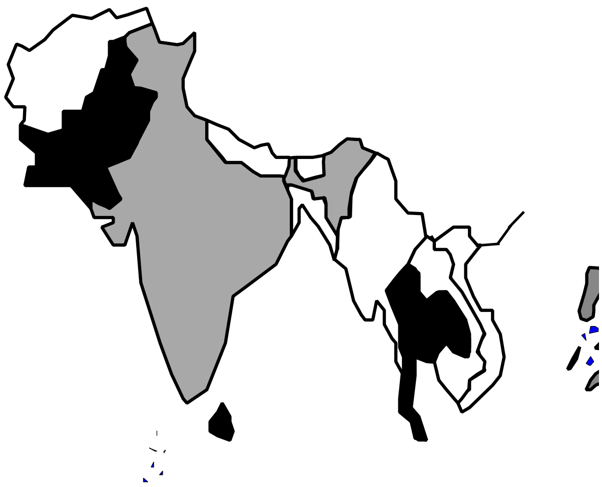
Maize contracts are also traded on new exchanges in **Zambia** and **Zimbabwe**. Farmers established the Zimbabwe Agricultural Commodity Exchange (ZIMACE) in 1994, in response to the gradual liberalization of state-controlled agricultural marketing. The Exchange conducts spot and forward transactions and mostly handles agriculture produce, in particularly maize, although the trading volumes of wheat contracts are steadily increasing.

The Zambia Agricultural Commodity Exchange (ACE), founded in 1994 conducts spot and forward transactions in wheat, maize and other agricultural products. The success of ACE led to the development of the Kapiri Commodity exchange in Zambia's central province and the Eastern Agricultural Commodity Exchange, in Zambia's eastern province. Both were launched in 1997. The **Kenya** Commodity Exchange (KACE) was set up in Nairobi in 1997, to provide the basic services of a commodity exchange. The products chiefly traded are agricultural, like cereals, dairy products and cotton. The Nairobi Coffee Exchange was set up in 1998 and equipped with an electronic trading system. The Exchange is intended to become the hub for coffee trading in eastern Africa. A futures trading system will be introduced in the near future. A number of other countries are looking into the possibility of introducing commodity exchanges.

In **Cote'Ivore,** plans for a cocoa exchange have been drafted, but have not yet been put into operation. The introduction of a commodity exchange trading in robusta coffee and cocoa was discussed during the liberalisation process but has not materialised yet. The liberalisation of external marketing of cocoa in **Ghana** might also lead to the emergence of a market, but the form that this exchange would take is not clear and considering the predominance of the LIFFE in futures trade in cocoa, it is likely that contracts for physical delivery and contracts based on warehouse receipts would be traded, rather than futures contracts. In **Egypt**, industry groups wish to revive the Alexandria Cotton Exchange, abolished by the Government in the 1950s.

Exchange initiatives in **Nigeria** and **Uganda** are focusing on both domestically traded and exported commodities, while in **Morocco**, private-sector groups have been looking at how domestic trade liberalisation would affect the introduction of contracts traded on a commodity exchange.

In the Middle East, a proposed exchange the **United Arab Emirates** would be internationally-oriented. The launch of a futures market on aluminium in Abu Dhabi the Saadiyat Financial Futures and Options Exchange – aluminium f.o.b. Jebel Ali – is now under serious consideration.



Asia

China's first commodity exchange was established in 1990 and at least forty had appeared by 1993, as China accelerated the transformation from a centrally planned to a market-oriented economy. The main commodities traded are agricultural staples such as wheat, corn and in particularly soybeans, which have long been considered strategically important by the Chinese government, both for economic development and political stability.

The country has faced serious regulatory problems, resulting in a fast-changing structure. In late 1994, a drastic decision was taken: more than half of China's exchanges were closed down or reverted to being wholesale markets, while only 15 restructured exchanges received formal government approval. At the beginning of 1999, the China Securities Regulatory Committee began a nationwide consolidation process which resulted in three commodity exchanges emerging; the Dalian Commodity Exchange (DCE), the Zhengzhou Commodity Exchange and the Shanghai futures Exchange, formed in 1999 after the merger of three exchanges: Shanghai Metal, Commodity, Cereals & Oils Exchanges. It currently trades three contracts: aluminium, copper and natural rubber and was the world's 30th largest exchange as of 2001.

In the Taiwan Province of China, the Taiwan Futures Exchange was launched in 1998 and traded almost 4 million contracts, thus becoming the world's 32nd largest exchange.

In 2001 the **Korea** Stock Exchange became the world's largest futures and options market, with an overall share of 27% of the global trading volume in 2001 and a 300% increase in volume from 2000. Since 1998, it has achieved a 1702% increase in its traded volumes. This is due to the introduction and immediate success of the KOSPI-200 futures contract launched in 1998. The smaller Korea Futures Exchange (KOFEX), founded in 1999, ranks as the world's 23rd largest exchange in 2001, with an increase of 285% in trading volume since last year. In **Thailand**, a government-driven project to start a commodity futures exchange in rice, rubber and a number of other commodities has been the subject of debate as of the early 1980s, but little progress has been made so far.

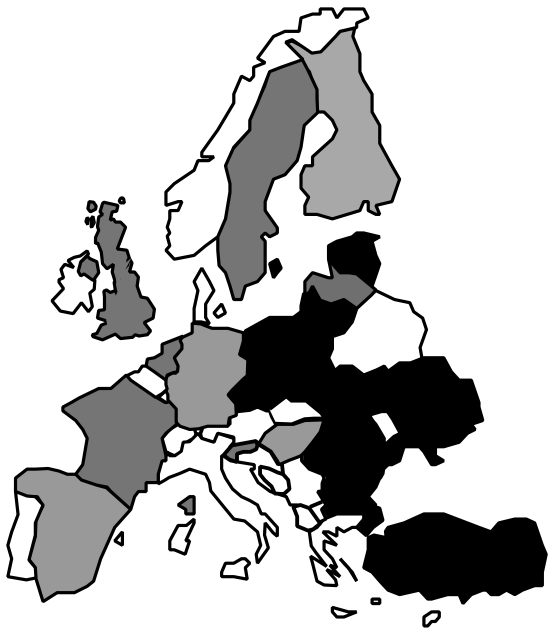
The creation of commodity exchanges has been considered in **the Islamic Republic of Iran** and **Kyrgyzstan.** These would be physical exchanges, to meet the needs of farmers, commodity traders and processors in the context of agricultural liberalisation.

Commodity futures markets have a long history in **India**. The first organised futures market, for various types of cotton, appeared in 1921. In the 1940s, trading in forward and futures contracts as well as options was either outlawed or rendered impossible through price controls. This situation remained until 1952, when the Government passed the Forward Contracts Regulation Act, which to this date controls all transferable forward contracts and futures. During the 1960s, the Indian Government either banned or suspended futures trading in several commodities. The Government policy slackened in the late 1970s and recommendations to revive futures trading in a wide range of commodities were made. With the full convertibility of the rupee, the ongoing process of economic liberalisation and the Indian economy's opening to the world market, the role of futures markets in India is being reconsidered. Most contracts being traded are unique in the world. Although some are clearly domestic-oriented, others (such as raw jute, pepper, and oilseeds) have the potential to become of regional or even international importance. Two of the better-known commodity exchanges are the Bombay Oilseeds and Oils Exchange, founded in 1950, and the International Peppers Futures Exchange, in 1997.

Private-sector groups in **Pakistan** have called for the re-establishment of a cotton exchange. A cotton exchange operated in Karachi until the 1930s. In **Sri Lanka**, the Government has been looking at the possibilities of an exchange for both domestically traded and export commodities, including tea.

Malaysia and **Singapore** have active commodity futures exchanges. **Malaysia** hosts one futures and options exchange, which holds the 46th place in the 2001 ranking of world futures exchanges by trading volume. **Singapore** is home to the Singapore Exchange (SGX), which was formed in 1999 by the merger of two well-established exchanges, the Stock Exchange of Singapore (SES) and Singapore International Monetary Exchange (SIMEX). SGX accounted for 31 million contracts in 2001 and was the world's 13th largest exchange in 2001.

In Philippines, the Manila International Futures Commodity Exchange, created in 1985, started trading in 1998, after being closed for two years. In **Indonesia**, the introduction of a commodity exchange has been under discussion since the early 1980s, and the institutional framework has been gradually developed in this respect to pave the way for an emerging market. A new project to launch the Jakarta Commodity Exchange has now emerged, in which the different commodities to be traded have been under discussion (cocoa, plywood, paper, rice, and rubber, sugar, soybeans and cotton).



Eastern Europe and the European Countries in the Commonwealth of Independent States

In Eastern Europe a hundred of vibrant markets existed over a century ago. They were repressed by Government intervention, and revival is very recent. In **Slovenia**, a new electronic exchange, the Exchange of Ljubljana started trading in 1995. It offers a range of currency futures contracts and two-grain futures contracts. Trade in all of these emerging futures exchanges and new futures contracts have been quite limited so far. However, in

Hungary, the Budapest Commodity Exchange, created in 1989, which trades in grains and livestock, has been quite successful and ranked in 2000 as the world's 37th commodity exchange, whereas the Budapest Stock Exchange was the world's largest 42nd. Other commodity exchanges, not trading futures contracts, have been created since 1990 in **Romania**, **Bulgaria**, **Lithuania** and **Estonia**.

Most of them focus on organising trade for immediate physical delivery. The Romanian Commodities Exchange, opened in 1992, trades in grains and oil by-products. However, in some markets, futures contracts are traded on foreign currencies (Euro, dollars, etc) as in the Sibiu Monetary Financial and Commodities Exchange, founded in 1997, and. In the Ukraine there has been a steady growth of commodity exchanges, with some 74 commodity exchanges and 16 Agricultural exchanges having emerged.

In the **Czech Republic**, there have been plans since 1994 to create a commodity exchange to trade precious and non-precious metals, fuels, minerals, ores, timber, paper products and construction materials - a range of products quite different from those normally introduced in countries with liberalised economies (where exchanges tend to focus on agricultural commodities). In **Poland,** the Warsaw Commodity Exchange, founded in 1995, deals in futures options in agriculture and currency. It is part of the Polish Commodity Exchange network, composed of 18 exchanges spread throughout the country.

At the beginning of this century, there were over a hundred commodity exchanges in **Russia**. The early 1990s saw an outburst of new exchanges - according to one estimate, more than 270 exchanges were created between 1990 and 1993. The most important one is the Inter-Republican Universal Commodity Exchange in Moscow. Several commodity futures contracts have been developed (the first one, an aluminium contract, was launched by the Moscow Commodity Exchange in late 1992), but trade has not been very active (market users concentrated on stock, currency and interest-rate futures). Several exchanges are reported to have plans to move from physical trading in commodities to futures trading. In **Kazakhstan**, the Kazakhstan Stock Exchange deals in a small number of futures contracts on foreign currencies.

Another country where exchanges have existed for a long time is **Turkey**. Around 20 of them have engaged in active commodity trade (others are called exchanges, but in fact, only act as centres for the registration of commodity trade transactions and tax-collecting purposes). The oldest, in Izmir, traces its origin back to 1891. These exchanges act as physical trading centres, to which ranges of commodities are brought for inspection and immediate sale. Some of these exchanges have been appraising the possibility of introducing more sophisticated forms of trade, based on warehouse receipts and even futures contracts (the Izmir Cotton Exchange now has an active futures contract on cotton). In 1997 the Istanbul Gold Futures and Options Exchange was launched to meet the demand for future gold products in Turkey and is the first derivatives market in Turkey.

Latin America

Latin America's largest and most important commodity exchange is the Bolsa de Mercadorias & Futuros, (BM&F) in **Brazil**. It has steadily held leading positions in the world's ranking because of its high trading volume. Although this exchange was only created in 1985, it was the 8th largest exchange by 2001, with 98 million contracts traded (in spite of the fact that trading in agricultural contracts can hardly be compared to the main commodity futures markets in New York and Chicago, although Brazil's coffee futures currently accounts for $5 billion worth of trade a day).

The Brazilian devaluation hit the trading volumes hard although BM&F`s decision to merge with Globex, the global trading alliance which includes the CME, the Singapore International Monetary Exchange and the Paris Bourse may help to re-ignite interest in the country's currency futures. There are also many other commodity exchanges operating in Brazil, spread throughout the country. They trade largely in commodities for immediate or forward delivery, but through an electronic network (which links most of the country's exchanges) they also make it possible to trade in futures contracts.

While **Argentina** has a long tradition in futures markets, their activities have from time to time been circumscribed by detailed government regulation, which has limited the use of exchange services. The national exchange network consists of 11 markets, which trade mostly in agricultural commodities including one of the world's oldest commodity futures exchanges, the Bolsa de Cereales dating back to 1854. Its futures market Mercado a Termino de Buenos Aires, founded in 1909, ranks as the world's 51st largest exchange.

Although **Mexico** is Latin America's second biggest economy, it has only recently introduced a futures exchange to its markets. The Mercado Mexicano de Derivados (Mexder) was launched in 1998 and claims to be the youngest exchange in the world.

The exchanges in **El Salvador**, **Honduras**, **Nicaragua**, **Costa Rica**, **Panama**, **Colombia**, **Ecuador**, **Peru** and **Bolivia** were mostly created in response to the liberalisation of domestic trade as a mechanism for the organisation of domestic commodity trade flows. The oldest of these, in Colombia, dates from 1973, and the Ecuador exchange dates from 1986, while all the others have been established since 1992. Most of the products traded are agricultural (with some processed products traded in a few countries), but the Government of Colombia is examining the possibility of introducing a commodity exchange for emeralds. The trading possibilities offered by the exchanges vary widely. Most provide a forum for trade in physical commodities, but some also enable forward trading. In Colombia, the exchange also trades the "credit" part of warehouse receipts and has arranged livestock securitization to improve rural financing.

A major private sector group in **Chile** proposed the creation of a commodity futures exchange in the late 1980s. The proposed exchange would trade in domestic food-grains and in fishmeal, but plans for it have not yet been finalised. Much progress towards the introduction of an exchange has been attained in the **Dominican Republic.** The introduction of warehouse receipt's trading for beans and coffee has been planned. In **Venezuela**, the Agricultural Exchange of Venezuela was created in 1998 and deals mostly in grain.

The Need to Change with Times

Exchanges have several strategic responses they can make to the changing trading environment: changing their organizational structure, cooperation, adopting new technologies, and so forth.

Virtually all established exchanges have been significantly reorganized in the past few years. The movement towards demutualization of the markets, intended to turn exchanges into independent enterprises, could undeniably be a factor in attracting new operators, including through unlocking the resources needed to create a more global trading network through which the exchanges can be easily accessed, even from developing countries.

Technological, legal, political, economic and organizational adjustments not only provide the potential for new types of contracts but can also facilitate participation by such actors as small-scale farmers, who otherwise might have been unable to benefit from the services offered by the exchanges.

Integration and Cooperation among Exchanges

Merger Mania

From time to time, futures exchanges pass through periods of consolidation. Most of the exchanges that existed in the United States in 1980, for example, were the result of the merger of two or more exchanges. The 1990s were a particularly busy period for mergers. Partly, this was the result of the increasingly competitive character of futures trade: electronic trading posed a threat to the existing open-outcry exchanges, and lead to the emergence of a dozen globalized exchanges, accounting for three quarters of the volume in futures traded.

Partly, mergers were also the result of regulatory pressure- this was the case, for example, in Japan and particularly, China. In Japan, several exchange mergers took place, from 17 exchanges in September 1993, the number went to 8 in 1997. In the United Kingdom, LIFFE merged with the London Commodity Exchange in September 1996 and now trades a range of soft commodity and agricultural contracts including futures and options on cocoa, robusta coffee, white sugar, grain and potatoes. In the United States, NYMEX, the world's premier energy futures exchange, merged in 1994 with COMEX which operates today as its subsidiary, and NYCE (created in 1870) and CSCE (founded in 1882) to merge and form in 1998 the "Board of Trade of the City of New York" (NYBT).

In Europe, the world's second largest exchange, Eurex, resulted from the merger of the German DTB Deutsche Terminbörse and the Swiss Exchange SOFFEX in the autumn of 1998. That year also bore witness to the creation of Euronext, a pan European "one company, three centres" structure merger between Amsterdam Exchanges (AEX), Brussels Exchanges (BXS) and Paris Bourse, which created the first totally integrated cross-border single currency derivatives market. In February of 2002, Portugal's Bolsa de Valores de Lisboa e Porto exchange merged with Euronext to become Euronext Lisbon.

In Latin America, the Bolsa de Mercadorias & Futuros (BM&F) became in 2001 a member of the Globex Alliance, looking ahead with other member exchanges to a less costly, more competent, stronger and united international marketplace. In Asia in 2001 the Malaysia Derivatives Exchange was created out of the merger of Commodity and Monetary Exchange of Malaysia (COMMEX) and Kuala Lumpur Options and Financial futures Exchange (KLOFFE).

Forms of cooperation among exchanges

Coordination and cooperation among exchanges can help to avoid past mistakes and to reduce the costs of introducing and trading contracts. Even if no immediate trading cooperation is foreseen, it is wise to already coordinate activities. This type of coordination already exist among emerging exchanges in the form of regional Associations, like the Association of Pan-American Commodity Exchanges created in 1993, with a membership of 10 countries, the International Association of the Exchanges of the CIS countries, created in 2000, with a membership of 18 members, the Association of Futures Markets (AFM) created in 1998, with a membership of 9 countries. However, communication between these Associations is still rare.

The most basic form of cooperation would be a regular discussion on plans. A next step would be to discuss contract specifications, in order to ensure that these specifications are of relevance to all parties concerned. Small changes in the planned contract design may help to make futures contracts easier to use to foreign entities. The quality of contract definitions, including in particular its delivery specifications and modalities, are of paramount importance for attracting not only regional, but also international participants. An existing contract can be made more useful to possible participants from other countries by adding new delivery locations.

A very logical step would be to cooperate in the undertaking of studies, sharing of know-how and the organization of regional training. This would avoid duplication of efforts and thus save money; it would also help to avoid that the same mistakes are repeated time and time again. Studies can be on the potential of new commodity futures contracts; on hardware and software systems to be used; on ways to reach joint objectives, e.g. attracting the region's investment funds; etc., etc. The sharing of know-how would allow, for instance, to spread experiences with the clearing of options, or experiences with promotional campaigns oriented at groups within the country such as plantations or end users - some exchanges may have had more success with this than others.

What should also be considered is cooperation in clearing arrangements. A strong clearinghouse is necessary to attract business, and the operation of clearing systems is often one of the largest costs of operating an exchange (at least, from the users' point of view - from the clearing members' point of view, it can be the most profitable part). In the United Kingdom, all exchanges are cleared by one central clearing house, which also clears some overseas exchanges. In the United States, as a cost-cutting measure, various exchanges have already decided to cooperate in their clearing arrangements, and in at least one case, have already merged their clearing houses. Efficient clearing arrangements increase participants' confidence in the exchange and consequently attract a high volume of trade, which is particularly important for emerging exchanges**.** The standardization of contracts, addition of delivery points and other cooperative efforts contribute to facilitate arbitration and thus improves both the stability and credibility of the exchanges, but the most far-reaching form of cooperation would be the creation of strong trading links between exchanges, through electronic means.

The Role of the Government

No market functions in a vacuum. In order to be efficient, the market needs an active, committed role of the government: a role of oversight, disciplining those who try to manipulate the markets to their own benefit and ensuring the sanctity of contracts; and an enabling role, providing the necessary legal and regulatory framework, even part of the infrastructural framework without which market actors cannot function properly. Markets need the government - the only problem is that over regulation should be avoided.

Over regulation normally results from a lack of understanding on the functioning and purpose of commodity exchanges. Commodity exchanges, if they function well, are but an image of physical markets. Supply and demand conditions on the physical market, which otherwise would be known only to a small number of well-placed companies, are made visible, for all to see, through the functioning of the futures market. If supply/demand conditions are bad, from the government's point of view, the exchange may be the messenger that brings the bad news, but should not be blamed for this.

The relation between commodity exchanges and the government need not be one of adversaries. Insufficient understanding of the role and usefulness of commodity exchanges can indeed lead to policies that hurt the exchanges and their users. But exchanges cannot do without the government, without a framework, which can only be created by the government. Governments need to police the exchanges so that direct and indirect users can rest assured, that indeed, the exchanges serve the public rather than a particular private interest, and they need to facilitate - or rather, enable - the functioning of exchanges through the provision of an appropriate legal and regulatory framework. Taking into account the large potential benefit of commodity exchanges for a country's economy, governments can also facilitate the growth of emerging exchanges by providing targeted support.

Conclusion

The process of further consolidation is likely, but the way it will be done is unclear: new mergers, strategic partnerships using a common platform, bankruptcies of exchanges, or new players displacing the existing ones.