Agricultural Commodity Exchanges in Latin America and the Caribbean
March 17, 2011

Dear Colleagues:

After falling sharply during the global financial crisis—in the second half of 2008—food and oil prices have resumed their upward trend. International food prices have risen almost to the levels of 2008 and some commodities like maize have reached record highs. Virtually all the commodity that matter for LAC countries are partaking in this strong wave of price increases. Moreover, the rate of price increases has accelerated in the last three to four months, with food price indices reaching roughly the same level as at their previous peak, in 2008.

This increase in food prices presents some great challenges for some LAC countries, in particular in the Caribbean, but it also presents a great opportunity, as many LAC countries are net food exporters and are a food source for other Regions in the world. It is within this context that we are launching the Sustainable Development Occasional Paper Series on Food Prices. We hope that this will contribute to add to the knowledge and exchange of innovative experiences in food policy and programs in LAC.

The Occasional Paper Series on Food Prices is expected to include country-specific as well as regional analytical work related to food, logistics, and agriculture policy, and will seek to learn from the 2007-2008 food price crisis and put forward innovative concepts for improving the efficiency of food markets and for reducing the vulnerability to exogenous shocks in the food production and trade in the LAC Region. The series starts with papers on: (i) the impact evaluation of the 2008 food price subsidy on the rice sector of Haiti, (ii) an analysis of the transmission of international food prices to domestic markets in Central America, (iii) an assessment of the conditions for developing agricultural commodity exchanges in LAC, (iv) a policy guidance for improving logistics and transport efficiency in the context of food prices, and (v) an analysis on logistics and grains in Argentina.

We hope to continue publishing more papers soon to provide additional input to the debate as we take on the challenges and opportunities of the new dynamics in international food markets in the Region and elsewhere.

Sincerely,

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INTRODUCTION

1. A commodity exchange is a goods and/or financial market where different groups of participants trade commodities and commodity-linked contracts, with the underlying objective of transferring exposure to commodity price risks (UNCTAD). A commodity exchange that only trades goods is known as a physical or “cash/forward” market, while the exchange that trades price derivatives is known as financial or “futures/options” market (see Glossary for detailed definitions). Some agriculture commodity exchanges have both. Agricultural commodity exchanges date as far back as the early 18th century. Modern exchanges, notably the Chicago Board of Trade (CBOT) was created in 1848, recently merged with the Chicago Mercantile Exchange (CME), is one of the oldest and most successful futures exchanges worldwide.

2. Today several agricultural commodity exchanges exist throughout the Latin America and Caribbean (LAC) Region. They facilitate trade and financial products in countries whose economies have a relatively large share of primary and secondary agricultural activities or either account for auctions on substantial food imports. This report looks at the current development of agricultural commodity exchanges in the LAC Region and offers public policy recommendations that can foster the development of such exchange markets.

CURRENT SITUATION of AGRICULTURAL COMMODITY EXCHANGES in LAC

3. Agricultural commodity exchanges have long existed in the LAC region. In fact, the region is home to one of the world’s oldest grain cash-commodity exchanges and chambers of commerce, such as Bolsa de Cereales de Buenos Aires (1856) and “Bolsa de Comercio de Rosario” (1884), both in Argentina and their affiliated futures exchanges (MATba and Rofex, respectively). The region has since seen a steady increase in the establishment of exchanges, and in the last two decades exchanges have spread throughout the region. The “Bolsa de Mercadorias & Futuras” (BM&F) of Brazil stands out as one of the most successful cases in the region. Created in 1985, the exchange had 122 million futures and option contracts in 1997 (UNCTAD report, 1998), and in 2008 BM&F was ranked 12th globally for the number of futures traded and/or cleared (Ferreira Lamas, 2008). Today, there are at least 10 countries in the LAC Region (Figure 1) with at least one functioning agricultural commodity exchange. Tables 3 and 4 in the Appendix give a detailed status of agriculture commodity exchanges in the LAC Region.
The development of agricultural commodity exchanges in LAC has been accelerated by several macro-level factors, such as:

1. Trade liberalization
2. Market-oriented pro-agricultural policies

Trade Liberalization:

- Liberalization of agricultural trade has led LAC countries to develop agricultural commodity exchanges. Liberalization of trade, especially in agricultural commodities, and overall growth in international trade in LAC opened new opportunities and challenges for the development of the agricultural sector in LAC (see Figure 2 for the evolution of Agriculture Tariffs and Food Import Values). Bilateral and multilateral trade agreements among countries in the region, as well as internationally, with the US and the EU, required setting up organized and secure ways of buying and exchanging agricultural goods across borders with reduced transaction cost. An increase in international demand and supply of agriculture commodities and overall growth in international trade in LAC opened new opportunities and challenges for the development of the agricultural sector in LAC (see Figure 2 for the evolution of Agriculture Tariffs and Food Import Values). Bilateral and multilateral trade agreements among countries in the region, as well as internationally, with the US and the EU, required setting up organized and secure ways of buying and exchanging agricultural goods across borders with reduced transaction cost. An increase in international demand and supply of agriculture commodities

**FIGURE 1: SIZE OF COMMODITY EXCHANGES IN THE LAC REGION, 2007-2008**

**FIGURE 2: EVOLUTION OF AGRICULTURE TARIFFS IN LAC VS. IMPORT VALUE (1989-2009)**

Source: Ferreira Lamas (2008) and WDI (2007)
has created the need in many LAC countries to develop agricultural commodity exchanges in order to improve the legal/regulatory framework around purchase/sales contracts, facilitating agriculture credit and trade financing, providing standardization quality control mechanisms, and in some countries, expanding the tax revenue base by facilitating tax payments and registration of trade.

MARKET-ORIENTED PRO-AGRICULTURE SECTOR POLICIES:

6. An increase in pro-agriculture public policies has likely had an impact on the development of commodity exchanges in LAC. However, it is not sure that agriculture support policies have been market-oriented. Since the mid-1980s the LAC Region has seen a reduction of the anti-agricultural policy bias. The relative support to the agriculture sector, vis-à-vis other sectors, went from being negative to neutral or slightly positive in certain cases as measured by the Nominal Rate of Assistance\(^1\) or NRA (see Figure 3). As openness to trade has increased since the 1980s as well, this is evidence that countries in LAC have been dedicating a relatively higher level of fiscal resources to the agriculture sector. This increase in pro-agriculture public policies has likely had an impact on the development of growth of commodity exchanges in the Region; however, the increase in NRA does not ensure that agricultural support policies have been market-oriented.

7. Public policies that distort prices (not market-oriented) inhibit the development of commodity exchanges. In order for trade through commodity exchange to grow, the increase in pro-agriculture policies must also be market-oriented. Indeed, in LAC, some of the new policy measures implemented during the past decades in support to the agriculture sector have been: (i) decoupled payments to farmers, and (ii) the increase in investments in agriculture public goods and services (such as R&D, SPS systems, rural infrastructure, etc.). These policy measures require additional fiscal resources but are non-distortive in nature, meaning that they do not have a direct effect on farmer’s production decisions. The increase in the NRA of most LAC countries, the degree of market-orientation of agriculture policies from country to country. For instance, the BMF of Brazil (which is the BNA (Bolsa Nacional Agropecuaria) of Colombia) went through a slower development pace. Other countries, notably Mexico and Uruguay, do not have an agricultural commodity exchanges. Both Mexico and Uruguay, for instance rely on neighboring exchanges (the USA and Argentina markets respectively) for price information and hedging, although physical distance to existing exchanges is not a factor for the development of new markets (as seen in the section below). Although there still is uncertainty about the precise conditions for a commodity exchange to develop and grow, the experience from LAC country cases show that there is room for further development and growth of agricultural commodity exchanges.

8. Agricultural commodities exchanges have developed to different degrees, because, despite the fact that the above mentioned macro-level factors are common to most LAC countries, the degree of market-orientation of agriculture policies from country to country. For instance, the BMF of Brazil (which is the BNA (Bolsa Nacional Agropecuaria) of Colombia) went through a slower development pace. Other countries, notably Mexico and Uruguay, do not have an agricultural commodity exchanges. Both Mexico and Uruguay, for instance rely on neighboring exchanges (the USA and Argentina markets respectively) for price information and hedging, although physical distance to existing exchanges is not a factor for the development of new markets (as seen in the section below). Although there still is uncertainty about the precise conditions for a commodity exchange to develop and grow, the experience from LAC country cases show that there is room for further development and growth of agricultural commodity exchanges.

9. There are pre-conditions that are important for the success of agricultural commodity exchanges. Heterogeneity in activity and success levels among agricultural commodity exchanges in LAC suggests that, besides the macro-level agriculture policy factors (trade and farmer support), there are other requirements or pre-conditions, some unique to the specific countries, that determine the success of agricultural commodity exchanges. These requirements or pre-conditions are drawn from experiences observed throughout the LAC Region and are not meant to be an exhaustive list. However, they could be extrapolated to other regions. The typology of pre-conditions is drawn from Euna Shim (2006) and sheds light over market failures that need to be overcome in order for the exchanges to develop. These pre-conditions apply for agricultural commodity exchanges that trade futures/options and all (except one) also applies for cash/forward-only exchanges. We have identified the pre-condition that’s not crucial for cash/forward-only exchanges.

MARKET SIZE, MARKET LIQUIDITY AND MINIMUM VOLUME OF CONTRACTS

10. For agricultural commodity exchanges, market size and a high minimum volume of trade are crucial for its long-term viability. With a small market size and a small volume of exchanges, there is no guarantee that farmers or buyers will match in the market. Often the reduced number of agriculture businesses (i.e. the situation of monopsonies) makes it impossible for any actor to benefit in trading through standard contracts or from making the price of financial or physical products public.

11. A large number of traded contracts are crucial for reduced price volatility. This pre-condition is very pertinent for financial exchanges with agricultural commodity futures and options contracts as well as for exchanges with physical or cash/forward contracts. Market liquidity in this context means that the agriculture commodity to be exchanged needs to have the ability to be sold and bought without causing a significant movement in its price and with minimum loss of value. In other words, there needs to be a big enough number of contracts being traded for physical commodities (or financial products) so that there is competition for buying, selling, and keeping long or short open positions, so that price volatility is reduced due to the law of large numbers. Furthermore, when an exchange is liquid, it allows market participants to switch positions and holdings easily and immediately. A threshold minimum level of liquidity is often required to attract investors/intermediaries to an exchange. The absolute amount of the threshold depends on the size of the agriculture commodity and the financial market.

INSTITUTIONAL AND REGULATORY FRAMEWORK

12. A set of clear and transparent rules that govern or act as reference points for market participants and potential entrants are essential for all agricultural commodity exchanges. Lack of transparent rules governing entrants, for instance, has often stifled competition in some countries. Regulations about membership procedures and limits, or minimum capital and trade requirements, should be negotiated by participants and made public. Furthermore, exchanges may attract both local and interna-

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\(^{1}\) The Nominal Rate of Assistance (NRA) measures the % increase in revenue to farmers as a result of public policies and programs (included payments decoupled from production).

**FIGURE 3: NOMINAL RATE OF ASSISTANCE (NRA - UNWEIGHTED) FOR AGRICULTURE PRODUCTS IN LAC COUNTRIES**

Source: Anderson and Valdes, 2008

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8 Agricultural Commodity Exchanges in Latin America and the Caribbean

9 Agricultural Commodity Exchanges in Latin America and the Caribbean
However an important incentive for

12. Agribusinesses are a key role in promoting the development of agricultural commodity exchanges, as they are the main beneficiaries. Supermarkets, processing and trading plants, food exporters/importers, agricultural input suppliers, and farmers must see the benefits of trading through the exchange rather than outside the exchange. Some of the elements that agribusinesses consider for deciding whether to support or not trading through the exchange are (the list is not exhaustive): (i) the tax benefits; (ii) the benefits from having a publicly known reference price; (iii) the benefits from a third party quality control mechanism; (iv) in some cases the quality standards, controls and grades agreed to be traded through the exchange; and (v) the arbitration mechanism. For example, farmers of maize in Mexico benefit from a Government guarantee scheme (Programa Ingreso Objetivo) that provides a minimum farm income, so price guarantee schemes will make private price hedging instruments associated with commodity exchanges irrelevant.

13. Entry rules and public sector intervention also play a key role in promoting the development of agricultural commodity exchanges. However, transparency in the regulatory and institutional framework is not always enough. So even when the rules are clear, they need to encourage access of private sector actors (brokers, intermediaries, traders) in order to promote participation and trading through the exchange rather than outside the exchange. An example of over-strict entry rules are excessive capital requirements for brokers or capping the number of intermediaries trading through the exchange. On the other hand, an example of promotion of agricultural exchanges has been the tax incentives provided by Governments for agribusinesses that traded through the exchange.

FINANCIAL INTERMEDIARIES (*1)

14. Financial intermediaries are important to share the credit risk. Financial intermediaries may include banks, brokers, traders, etc. (See Glossary for details). Exchanges that trade financial instruments (futures/options) act as clearancehouses clearing and settling contracts between market participants, reducing the risk of counterparty default. By acting as the counterparty to every trade, the exchange transfers risk from one commercial party to another, performing a credit counterparty risk management function for the market. All trades going through the exchange are backed financially by the exchange itself or by its own or an independent clearancehouse and this is often a key reason for establishing a financial commodity exchange. When there are enough buyers and sellers in the market doing multiple transactions with each other, the cost of trying to manage credit exposure to multiple counterparties, on multiple transactions, becomes very high. Thus, the clearancehouse function ensures that the counterparty credit risk is shared/absorbed by all. Therefore, financial intermediaries need to be of a large enough number and have the willingness to use such clearancehouse.

15. Financial intermediaries are not crucial for cash-forward exchanges. However an important incentive for buyers and sellers of agriculture commodities in cash exchanges have been the easier access to credit and trade financing by using warehouse receipts and other instruments.

STANDARDIZED BUT DIFFERENTIATED CONTRACTS

17. Most of the agriculture commodities traded through exchanges need to have a commonly agreed set of objectively measured standards (grading). The inability of standardizing agriculture products through common and objective grading and quality control measures, can hinder the development of agriculture commodity exchanges. Agriculture commodities need to have a set of easily measured standard criteria to assess the quality of the product in order to have a reference price assigned to it that represents the product’s quality. However, it should be noted that, besides the case of some highly developed cash-markets, there is no impediment for buyers and sellers for filling non-standard bilateral contracts with the exchanges, tailored to their respective needs, though subject to the laboratory’s quality controls and/or commodity exchange arbitration by delivery time.

18. The differentiation of contracts is crucial to avoid competition and to lower basis risk. Because international agricultural commodity exchanges already carry a wide variety of standard agriculture commodity contracts, futures exchanges in LAC will struggle if they offer the same contracts, in particular for commodities whose prices are highly correlated with international markets. In other words, why would an agriculture commodity exchange develop, for example in Mexico or Uruguay, if local agribusinesses can just trade or hedge through the Chicago Board of Trade (CBOT) or through the Buenos Aires or Rosario Exchanges respectively? Special efforts have to be made to differentiate contracts to avoid competition and to lower basis risk. Basis risk can be driven by differences in the commodity standards (contracts) and/or policy factors such as trade barriers, capital controls and/or price control/distortion policies that have an impact in the price correlation and transmission between markets. For instance, the Unwashed Arabica Coffee contract offered through the B&B-MF is quite successful, and it is slightly different from its washed counterpart offered on the New York Board of Trade (NYBOT). Sometimes differentiation will mean offering the same contracts at different times or contract-months of the year.

1 Basis risk here is defined by the difference in price movements between the international market (i.e. CBOT) and the domestic market that would trade such commodity. If the basis risk is low, agribusinesses would not see the need to develop a local commodity exchange, and would thus use the international market to trade/hedge. In many cases exporters and arbitrageurs would go long buying cash, forward or futures contracts in one market and, simultaneously or at a latter time, would sell or go short in the delivery market.
Argentina
Buenos Aires (BBO) and Rosario (ROFEX) are LAC’s largest agricultural commodity exchanges. The de-mitiza is the largest grain futures exchange, followed by Rosfair.

Peru
Lima (LIMA) and BPP were cash markets. Est.1998, authorization cancelled in 1999.

Panama
BMLS (BMSA) is a cash market. Est.1987

Nicaragua
BNSSA (BNSSA) is a cash and forward market. Est.1993

CBOT (Included CBOT) is a cash and futures/option market. Est.1848

TABLE 1: CASES OF AGRICULTURAL COMMODITY EXCHANGES IN LAC COUNTRIES

<table>
<thead>
<tr>
<th>Country</th>
<th>Agricultural Commodity Exchanges</th>
<th>Liquidity</th>
<th>Differentiated products</th>
<th>Committed actors</th>
<th>Institution and regulations</th>
<th>Financial intermediaries</th>
<th>Market size and volume of trade</th>
<th>Market-oriented government policies</th>
</tr>
</thead>
</table>
| Argentina | Buenos Aires (BBO) and Rosario (ROFEX) | Very liquid exchanges, trading over US$9 billion in cash/forward and futures and options. Not affected much by competition from other exchanges. Main product traded: Soybean meal, sunflower. Many mills, supermarkets, wholesalers, agribusinesses and exporters. Private ports are crucial for the exchanges in Rosario and Bahia Blanca. Regulations up to international standard, because of long history with exchanges. Market is self-regulated. Many exchanges throughout the country, allowing many participants. Introduction of financial derivative in early 2000s, boosted the commodity sector. Large market size and large volumes of trade. In 2005, ROFEX traded over 11 million contracts.

Publix, and BPL were cash markets. Est.1993, high capital has limited the market.

Hard yellow corn is main contract. Supermarket and household users still not fully integrated in the system. Regulations are stringent and similar for regularization for the stock exchange. Few brokers, but the last commodity exchange was fully owned by the stock exchange. Market size was low, but the exchange has not been able to grow, mainly due to stringent regulations. The is limited government support schemes for agricultural producers.

Lime is a cash market. Est.1987

Has variety of agricultural products: Yellow corn, rice, tomato sauce, pork, other. Exporters and importers are major players since the government authorized the exchange as a channel to distribute tariff–quota packages. Many agro-industrial firms are shareholders. Low mandates from the exchange, but if it is self-regulated and run efficiently. The Exchange attracts most of the major banks in the country and has many brokers. Market size is relatively small but it imported close to 100% of raw agrofood products. Between 1999 and 2008 the trade volume was worth US$644.2 million.

Small or no public price intervention policies.

Nicaragua
BNSSA is a cash market. Est.1993

Main products: rice, live cattle, beef, beans, sorghum, coffee, milk, other dairy products, agrochemicals, etc. Has a variety of major players, including agribusinesses, agro-processors, agro-food, small and large agro-processing firms. Privately owned and self-regulated. Product quality very high. The exchange has many quality-scale handlers. Has many brokers, major banks, and other financial service firms as participants. Started very small but expanded very quickly, filing and clearing up to US$514.2 million worth of contracts between 2007 and 2008.

Market size is relatively small but it expanded very quickly, filling and clearing up to US$514.2 million worth of contracts between 2007 and 2008.

No price support schemes or government interventions to use the exchange.

Nicaragua
BNSSA is a cash market. Est.1993

Has a variety of agro-food products: Soybeans, sunflower, rice, cotton, coffee, beans. Since the government authorized the exchange as a channel to distribute tariff–quota packages. Many agro-industrial firms are shareholders. Low mandates from the exchange, but if it is self-regulated and run efficiently. The Exchange attracts most of the major banks in the country and has many brokers. Market size is relatively small but it imports close to 100% of raw agrofood products. Between 1999 and 2008 the trade volume was worth US$644.2 million.

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V CONCLUSIONS AND POLICY RECOMMENDATIONS

21. The agriculture sector in LAC is heterogeneous and so is the level of the instruments and policies for the development and growth of their agriculture commodity exchanges. The development of such exchanges faces different challenges and opportunities that should be addressed on a case-by-case basis. However, a country-by-country analysis has yielded important experiences and lessons learnt in terms of some of the observed pre-conditions needed for these markets to develop further. Given that these pre-conditions either require no public support or for the public sector to provide an enabling environment so that private financial and agribusinesses can operate through the commodity exchange, the question becomes whether Governments can proactively put in place policies or programs that can complement the existing pre-conditions for developing the agriculture exchange markets in LAC.

22. Based on the country experiences in the LAC region, there are indeed some basic policies, which are not necessarily the case in the United States or the European Union, which can complement the actions and policies that can accompany actions for creating a friendly business environment for developing agricultural commodity exchanges. These complementary policies must be a marginal incentive for the private sector, and not the main driver of the establishment or development of the exchange. Agricultural commodity exchanges that have relied solely on public sector support or trades have not been sustainable in LAC. However, several LAC countries have shown success in the use of complementary public policies and programs that accompany short and long-term private sector efforts mentioned in the next few paragraphs.

23. Promotion of standardized and independent quality control services. Some of LAC’s Exchanges use standard contracts for reducing transaction costs. Governments can help by promoting the use of lab testing and quality control services within the exchange. In some cases, such as in Colombia and El Salvador, the public sector has mandated for public sector purchasing contracts for food reserves or food aid and other supplies or international food or fertilizers donations to be traded through the commodity exchange to create the initial conditions (and liquidity) for crowding-in in the private agribusiness sector into trading and using the exchange and its independent quality control service.

24. Incentives to trading through the exchange. Some farmers (especially small-scale farmers), and buyers may not necessarily see the benefit of trading through the local agriculture commodity exchanges. In many countries in LAC, farmers and agribusinesses operate in the “informal” market. However, some governments have used tax waivers or tax reductions for agribusinesses that trade through the exchange. This has proven successful in Nicaragua for allowing farmers and traders to operate in the formal market and for the Government to expand its tax base and monitor the development of the agriculture sector. Other countries, as Argentina, have used subsidized credit lines for those farmers or agribusinesses obtaining coverage of options or futures through the local exchange.

25. Facilitation and Information Management. In countries with new and not fully developed commodity exchanges the government can be an important coordinator among major parties, like farmers, agribusinesses, agro-processing...
plants, etc. Coordination could involve bringing participants together to agree on trading rules and frameworks, gathering and sharing information about prices, volumes and number of contracts provides important statistics for farmers, buyers and traders about market opportunities and trends. Panama and Nicaragua are concrete examples of such market coordination.

26. Promotion and Education for Improving Agriculture Trading and Risk Management Practices. Potential users of the exchange must be willing to use the exchange price and the commodity exchange services as the reference for physical trading. Therefore, a large education and communications effort is genuinely required to start-off such a process and obtain appropriate buy-in and support to establish or to further develop commodity exchanges. The private-agribusiness and financial sector may not be able to undertake such effort by itself, and so there’s a clear role of the public sector in promoting such markets. This promotion and education effort could be coupled with research in the area of agricultural trade to enhance the development and instruments traded through the exchange. Argentina and Brazil have been quite successful at pooling private and public sector efforts for educating agribusinesses about the use of new market instruments through the exchange.

27. The above public policy recommendations should fit and be prioritized within a larger agriculture competitiveness and risk management agenda. Broader reductions in transactions costs for trade in agriculture products (infrastructure, communications, legal frameworks, etc.) and policies that increase the basis risk between international (or neighboring) and domestic markets could have larger impacts in the agriculture sector growth and competitiveness. Also, discontinuing public policies and programs that discourage the use of agriculture price hedging instruments (such as price controls or minimum price guarantee schemes) can result in the development of agriculture commodity exchanges, as it was the case in Brazil, and could be the future of domestic markets in Mexico. Finally, public-private partnerships for piloting new agriculture trading schemes or futures/options contracts for new agriculture commodities could help accelerate the development of such exchanges. The Argentinean and Brazilian Agriculture Commodity Exchanges have partnered in the past to develop new physical or financial instruments for the agriculture sector by pilot testing contracts.

GLOSSARY

TABLE 2: NAMES OF EXCHANGES IN THE LAC

<table>
<thead>
<tr>
<th>Code</th>
<th>Exchange Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGROBOLSA</td>
<td>Bolsa de Productos y Servicios S.A., Tegucigalpa, Honduras</td>
<td></td>
</tr>
<tr>
<td>BAGSA</td>
<td>Bolsa Agropecuaria de Nicaragua S.A., Managua, Nicaragua</td>
<td></td>
</tr>
<tr>
<td>BAISA</td>
<td>Bolsa Nacional de Productos S.A., Panamá</td>
<td></td>
</tr>
<tr>
<td>BCBA</td>
<td>Bolsa de Cereales de Buenos Aires, Argentina</td>
<td></td>
</tr>
<tr>
<td>BCR</td>
<td>Bolsa de Comercio de Rosario, Rosario, Argentina</td>
<td></td>
</tr>
<tr>
<td>BM</td>
<td>Bolsa de Cereais de Sao Paulo, Sao Paulo, Brazil</td>
<td></td>
</tr>
<tr>
<td>BCSP</td>
<td>Bolsa de Cereais de Sao Paulo, Sao Paulo, Brazil</td>
<td></td>
</tr>
<tr>
<td>BM&amp;F</td>
<td>Bolsa de Mercadorias e Futuros, Sao Paulo, Brazil</td>
<td></td>
</tr>
<tr>
<td>BNA/BMC</td>
<td>Bolsa Mercantil de Colombia S.A., Bogotá [formerly Bolsa Nacional Agropecuaria]</td>
<td></td>
</tr>
<tr>
<td>BOLCOMER</td>
<td>Bolsa de Comercio de Costa Rica [formerly Bolsa de Productos - BOLPRO]</td>
<td></td>
</tr>
<tr>
<td>BOLPRAVEN</td>
<td>Bolsa de Productos e Insumos de Venezuela S.A., Caracas, Venezuela</td>
<td></td>
</tr>
<tr>
<td>BOLPROES</td>
<td>Bolsa de Productos de El Salvador S.A., San Salvador, El Salvador</td>
<td></td>
</tr>
<tr>
<td>BPC</td>
<td>Bolsa de Productos de Chile S.A., Santiago de Chile</td>
<td></td>
</tr>
<tr>
<td>BPP/BPL</td>
<td>Bolsa de Productos del Peru S.A., later Bolsa de Productos de Lima S.A.</td>
<td></td>
</tr>
<tr>
<td>MATba</td>
<td>Mercado a Término de Buenos Aires S.A., Argentina</td>
<td></td>
</tr>
<tr>
<td>ROFEX</td>
<td>Mercado a Término de Rosario S.A. or Rosario Futures Exchange, Rosario, Argentina</td>
<td></td>
</tr>
</tbody>
</table>
ACTORS OF AGRICULTURE COMMODITY EXCHANGES

Agriculture Commodity Exchanges often have a diverse group of market actors:

- Producers, consumers, and processors. Most of these actors participate on the exchange through trade houses or brokerage firms. In some markets, such as soft commodities, consumers and processors are much more active than producers, because market access is not always available for producers, many of whom are in developing countries. All of these actors use the exchange instruments for the purposes of hedging price risk which is a component of their physical trading.

- Trade houses. Although this activity has been consolidating over the past 10 years, there are a number of international, multi-commodity trade houses using the exchanges to manage physical and financial exposure of trading operations worldwide. Generally trade houses will focus on a category of commodities, such as metals, soft commodities, or grains.

- Brokerage houses. These are financial institutions, also called commission houses, which act as market intermediaries and make profits based on fixed commissions. Most brokerage houses are active on more than one exchange. This business is based on relationships with other market participants such as producers, consumers, processors, funds and investors. International banks with commodity lending portfolios may also have a commodity brokerage division which is designed to both mitigate the risk of the lending and earn profits from market-making activity.

- Managed funds and Institutional Investors. The expansion of market capital seeking opportunities for return on a diverse portfolio of risk has contributed to a high level of “fund” business in the commodity exchanges. Funds are generally run by professional money managers. Institutional investors can be pension and insurance funds, which consider commodity futures markets as a risk-diversifying alternative to other investments. Both fund managers and institutional investors follow technical trading signals to guide their activity in the market, and do not focus on fundamentals as much as other actors. Since they are often following similar technical signals, they can go in and out of the market at the same time, and in large volumes.


### TABLE 3: TYPE AND DESCRIPTION OF CONTRACTS USED IN LAC AGRICULTURAL COMMODITY EXCHANGES

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Description</th>
<th>Characteristics</th>
<th>Use</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Futures (Present in Brazil and Argentina)</td>
<td>An agreement to purchase or sell a specific commodity on a specified future date at a preset price</td>
<td>Initial cash transfer required for margin payments</td>
<td>Hedging price risk</td>
<td>Main users include: commodity processors, small firms, exporters/Importers. Selling options common among agricultural businesses, wholesalers, etc.</td>
</tr>
<tr>
<td></td>
<td>Requires clearing house or counter party to clear contract</td>
<td>An initial position can easily and quickly be closed or reversed</td>
<td>Designed to directly deal with credit risk arising from lock-in price and obtaining forward cover. Also good for short-term financing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contracts are standardized</td>
<td>Physical delivery is not required</td>
<td>Hedging price risk.</td>
<td></td>
</tr>
<tr>
<td>Options (Present in Brazil and Argentina)</td>
<td>The right to purchase or sell a futures contract or a specific commodity on or before a specified date at a present price.</td>
<td>Initial cash transfer (premium) from the buyer to the seller of an option, representing the cost of the option. Buyer faces the seller’s credit risk unless the contract is exchange-traded.</td>
<td>Used for hedging future price risk.</td>
<td>Main users include: fund managers, processors, small firms, exporters.</td>
</tr>
<tr>
<td></td>
<td>Requires clearing house or counter party to clear contract (except for OTCs)</td>
<td>Commodity options are mostly exercisable into a futures contract on the commodity rather than the physical commodity itself.</td>
<td>Obtaining short-term finance.</td>
<td></td>
</tr>
<tr>
<td>Exchange-Traded Swaps (Only in Brazil)</td>
<td>An agreement to exchange specific cash flow at specified intervals. Transaction often made directly with a bank or large trading company.</td>
<td>Initial cash transfer and variation margin payments may be required.</td>
<td>Hedging to lock-in future prices for a long period.</td>
<td>Mainly used by exporters and agricultural businesses associated with financial dealers.</td>
</tr>
<tr>
<td></td>
<td>Contracts are tailor-made, to meet specific hedging needs.</td>
<td>Two sided credit risk involved. Physical delivery not expected.</td>
<td></td>
<td>Some larger scale farmers also may use this contract for long-term price competitiveness.</td>
</tr>
</tbody>
</table>

Source: UNCTAD report 1998
Agricultural Commodity Exchanges in Latin America and the Caribbean

Repos on invoices and receivables [factoring] issued by prime agro
Managing Rice and Corn Agreements. Main contracts: rice, cattle,
Bolsa de Productos y Mercaderías S.A. [BOLPROMER], formerly
Auctions of tax-free imported products, such as corn, rice, pork
Bolsa de Productos y Servicios S.A. [AGROBOLSA]
Bolsa de Productos e Insumos Agropecuarios de Venezuela S.A. [BOLPRAEV]

TABLE 4. LAC COMMODITY AND FUTURES EXCHANGES - STATUS OCTOBER 2008

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>Bolsa de Cereales de Buenos Aires</td>
<td>Boards of Trade &amp; cash-commodity markets, all cereals and oilseeds, advisory services, price dissemination</td>
</tr>
<tr>
<td>Bolivia</td>
<td>Bolsa de Cereales de Bolivia</td>
<td>Rice &amp; other cereals, wines &amp; regional products, all type of contracts</td>
</tr>
<tr>
<td>Colombia</td>
<td>Borsa de Commodity Exchange</td>
<td>Futures &amp; Options Exchanges: soybeans, corn, wheat, sunflower, other, and financials Pesos/USD, Euro, Gold, etc.</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Bolsa de Cereal del Pacífico</td>
<td>Buenos Aires Wholesale Fruit &amp; Vegetables Market</td>
</tr>
<tr>
<td>Ecuador</td>
<td>Bolsa de Cereales de la Provincia de Guayas</td>
<td>Greater Buenos Aires slaughter-cattle market</td>
</tr>
<tr>
<td>Brazil</td>
<td>Bolsa de Cereais de São Paulo</td>
<td>Cash &amp; Futures markets on securities, commodities and financials, Depository for all rural financial instruments, Clearing &amp; payment system</td>
</tr>
<tr>
<td>Chile</td>
<td>Bolsa de Cereales de Chile</td>
<td>Cash &amp; Futures exchange serves Greater Sao Paulo City and Region. Privates and CONAB's government purchases, mostly through market mechanisms</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>Bolsa de Cereales de el Distrito Nacional</td>
<td>Some projects for the creation of a Commodity Exchange in the City of Santo Domingo. Buenos Aires Agropecuaria del Oriente [CAO]</td>
</tr>
<tr>
<td>El Salvador</td>
<td>Bolsa de Cereales de El Salvador</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
<tr>
<td>Guatemala</td>
<td>Bolsa de Cereales de Guatemala</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
<tr>
<td>Honduras</td>
<td>Bolsa de Cereales de Honduras</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>Bolsa de Cereales de Nicaragua</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
<tr>
<td>Panamá</td>
<td>Bolsa de Cereales de Panamá</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
<tr>
<td>Peru</td>
<td>Bolsa de Cereales de Perú</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
<tr>
<td>Venezuela</td>
<td>Bolsa de Cereales de Venezuela</td>
<td>Trading on Rice and Corn exports to Andean countries</td>
</tr>
</tbody>
</table>

TABLE 5: CURRENT STATUS OF THE MAIN AGRICULTURE COMMODITY EXCHANGES IN LAC (2009-2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>AGG- GDP Billion USD</th>
<th>Main domestic productions</th>
<th>Main Imports food products</th>
<th>Main Products Exch. traded</th>
<th>2007 # contracts or USD ($)</th>
<th>2007/2008 million MT</th>
<th>Exchanges &amp; Active members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>101.7</td>
<td>Wheat, beans</td>
<td>Coffee, Live coffee, corn</td>
<td>BBM: 3.8 million C. $ 477 billion</td>
<td>BBM 25,676 Ag. Fin. contracts</td>
<td>BMF 193</td>
<td>BMF 240</td>
</tr>
<tr>
<td>Argentina</td>
<td>500.0</td>
<td>Soybean wheat, corn, sunflower, sorghum, cotton, coffee, dairy products</td>
<td>Soybean wheat, corn, sunflower</td>
<td>372.192 contracts</td>
<td>51.7 Million MT</td>
<td>MATBA 83</td>
<td>ROFEX 95</td>
</tr>
<tr>
<td>Colombia</td>
<td>3.8</td>
<td>Wheat, yellow and white corn, other food</td>
<td>Potato, rice, white corn, poultry, milk, soy, live cattle, palm oil</td>
<td>$ 4 billion [2006]</td>
<td>n/a</td>
<td>BNA 31</td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>18.5</td>
<td>Wheat, corn, various foods</td>
<td>Hard yellow corn</td>
<td>$ 1 million</td>
<td>n/a</td>
<td>BPP 5</td>
<td></td>
</tr>
<tr>
<td>Venezuela</td>
<td>12.7</td>
<td>Yellow corn, beef, milk, eggs, other foods</td>
<td>Sorghum various</td>
<td>n/a</td>
<td>n/a</td>
<td>BOLVARMA 14</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>11.2</td>
<td>Wheat, rice, dairy products, barley, tobacco, fruits, vegetables</td>
<td>Wheat, corn, beef</td>
<td>$ 400 million</td>
<td>n/a</td>
<td>BPC 12</td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td>4.5</td>
<td>Rice, yellow corn, food</td>
<td>Rice, white corn, sorghum</td>
<td>$ 30 million</td>
<td>131,000 MT</td>
<td>AGROBOLSA 4 Non-active</td>
<td></td>
</tr>
<tr>
<td>El Salvador</td>
<td>4.5</td>
<td>Beef, dairy products, yellow corn, wheat, various foods</td>
<td>Rice, corn, sorghum, red beans</td>
<td>$ 18.7 million</td>
<td>n/a</td>
<td>BOLPRES 6</td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>27.0</td>
<td>Coffee, bananas, sugar cane, sugar, cotton, rice, corn, sesame, beef, veal, pork, poultry, dairy products, shrimp, chicken, peanuts</td>
<td>Live cattle, beef, rice, seeds, coffee, dairy products others</td>
<td>$ 514.2 million</td>
<td>n/a</td>
<td>BAGSA 30</td>
<td></td>
</tr>
<tr>
<td>Panama</td>
<td>2.3</td>
<td>Financial services, inactive since 2002</td>
<td>Bananas, rice, white corn, coffee, sugar, vegetable, livestock, fruits, sorghum</td>
<td>$ 150.7 million</td>
<td>1.37 Million MT</td>
<td>BAJA 21</td>
<td></td>
</tr>
</tbody>
</table>

BIBLIOGRAPHY

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