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**COMMODITY EXCHANGES AND WAREHOUSE
RECEIPTS – CAN THEY IMPROVE THE
PERFORMANCE OF AFRICAN GRAIN MARKETS?**

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SUMMARY

This paper considers the potential role of commodity exchanges in the improvement of grain marketing in southern African countries other than the Republic of South Africa (RSA). These are countries with largely liberalised but weak marketing and input supply systems characterised by high seasonal price variability, low price transparency and inadequate rewards for good quality. The successful experience with the South African Futures Exchange (SAFEX) is reviewed, as is that of smaller "cash" exchanges in other countries.

The main conclusions to emerge are that few if any countries can meet the necessary pre-conditions for establishing a futures and options exchange, and that for most countries, while cash exchanges are more feasible, available evidence suggests that it will be not be easy to establish them. Nonetheless, South Africa provides valuable insights for countries "north of the border". There are certain characteristics of the South African system which, if emulated, would allow these countries to greatly improve the performance of their own marketing systems, i.e.:

- Improved transport and logistics,
- A free market, with minimal intervention in trade and financial flows, and open to foreign investors
- Low transactions costs
- Sizeable rural infrastructure and merchants trusted to store produce on behalf of others
- Easy access to trade finance through a system of warehouse receipts characterised by integrity

There are various measures which countries can take to lower transactions costs and make it easier to invest in agribusiness, particularly:

- removal of internal and external trade constraints, particularly ad hoc forms of intervention
- privatisation of Government stores
- introduction of recognised grain quality standards
- improvement of systems of dispute settlement, particularly through the use of arbitration, and
- better crop forecasting and market information

Warehouse receipts systems have a particularly important role to play by facilitating trade financing, by allowing produce to be standardised and traded by description, by aiding contract enforcement, and by making it considerably easier to create viable commodity exchanges. The main conclusion of this paper is therefore that, along with the above-mentioned measures, countries "north of the border" should seek to institute systems of warehouse receipts with a high level of integrity and international prestige. These should be seen

as a route to the creation of more efficient trading systems, involving cash commodity exchanges or otherwise.

INTRODUCTION

This paper was prepared for an AFMESA/FAO Meeting in Pretoria, Nov. 2-6, 1998. During this meeting participants from various southern African countries studied the recently liberalised South African grain market, and particularly the South African Futures Exchange (SAFEX), with a view to drawing lessons for their own countries.

The paper is based on findings from DFID-funded research into strategies for the development of warehousing services in developing countries throughout Sub-Saharan Africa. One of the main issues to be considered is the place of commodity exchanges in this process, in particular the following questions:

- Are commodity exchanges appropriate in the context of most African countries?
- Which type of commodity exchange is most appropriate?
- Should they be developed before, after or at the same time as warehouse receipt systems?

These questions are considered in relation to the recent development of futures contracting through SAFEX.

The paper presupposes some knowledge of the chronology of grain market reform in South Africa, and of the functioning of a futures and options exchange, both of which were explained during the meeting and during the visit to SAFEX. It is important that the reader appreciates the difference between a "cash" exchange, where the trading is in physical commodities, and a "futures and options" exchange, where trading is in standardised claims on commodities, such that "longs" and "shorts" can easily be offset against each other. For this reason most contracts traded on a futures and options exchanges do not result in physical delivery.

Historically the development of commodity exchanges has followed a sequence, starting from an informal meeting place to do business, through the trading of physical goods on a cash market, to futures markets where only a small proportion of the produce traded is physically delivered. It is important to note that the establishment of viable futures and options contracts requires a very large number of buyers and sellers, including speculators with no interest in the physical trade.

BOX 1: TYPES OF COMMODITY EXCHANGES

- 1) "Coffee shop"
- 2) Cash exchange – for spot trading
 - with samples being presented as a basis for negotiation
 - with produce being traded on the basis of standard specifications
- 3) Cash exchange – for spot and forward trading
- 4) Futures and options exchange

Later in this paper we refer to the experiences of Zimbabwe, Zambia and Uganda. These three countries have been seeking to start with cash exchanges, with the possibility of eventually instituting futures contracts. By contrast, South Africa started by trading futures contracts. In the early stages these had much in common with cash forward contracts, because a very high proportion went through to delivery. However, the percentage going to delivery has fallen steadily from about 40% in December 1996 to about 12% in September 1998.

The paper starts with a review of the main issues facing grain marketing systems "north of the border", i.e. in countries other than South Africa. This is followed by discussions of the achievements of SAFEX and of the experiences of other "cash" exchanges, and of their relevance to the countries of the Region. Finally we attempt to distil some key guiding principles and action points for the development of grain marketing systems north of the border.

CHALLENGES FACING AFRICAN GRAIN MARKETING SYSTEMS

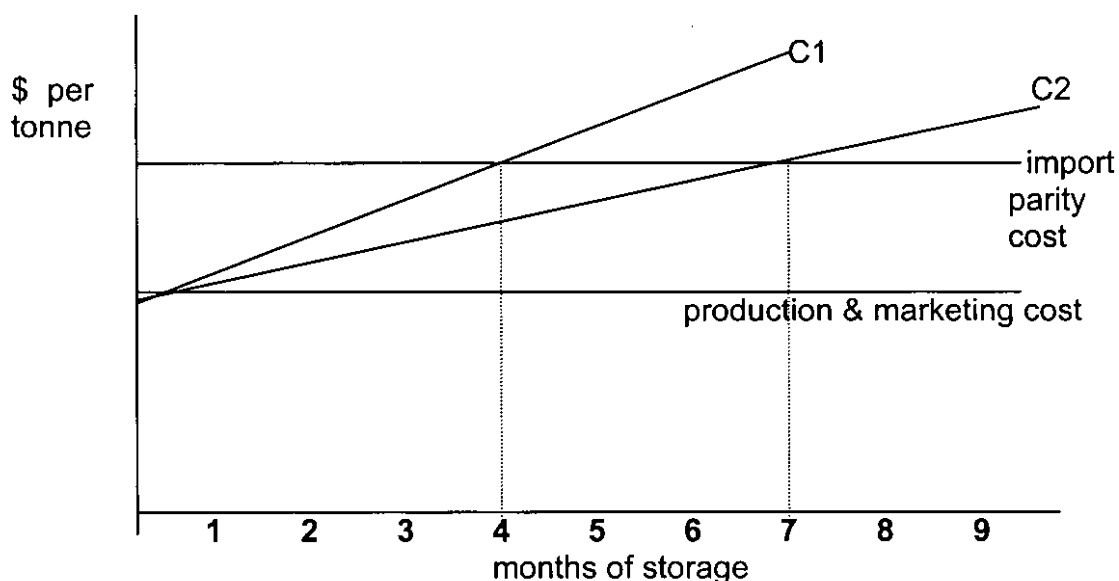
Most African grain marketing systems are largely liberalised, and the State is generally less involved in marketing than in Eastern Europe. However, there are serious problems to be addressed, notably:

- (a) high seasonal price variability. In recent years wholesale maize prices in producing areas of Ghana, Zambia, Tanzania and Uganda, have typically been rising to 70% or more of prices at harvest time, while carry costs - i.e. the costs of storage and financing - are typically less than 25% (figures are in real terms).
- (b) a low level of price transparency, with farmers often not knowing how to price their grain when dealing with bush buyers.
- (c) undifferentiated prices at the farm-gate level, providing inadequate rewards for higher grain quality.
- (d) poorly operating input supply systems. There is little credit for smallholders except where inputs are supplied through (often

unsustainable) public schemes. Fears of default and subsidised public supplies drive private companies to seek cash or barter terms.

The problem posed by high carry costs is illustrated in Figure 1. This shows that in a situation of high carry costs (C1), the cost of domestic grain rises to import parity price within only 4 months of harvest, whereas with lower carry costs (C2), this point is only reached within 7 months. Under C1, the country is attracting imports for four months longer than under C2. Alternatively, under scenario C1 consumers will simply have to pay a much higher price for domestically produced grain.

FIGURE 1: IMPACT OF CARRY COSTS ON INCENTIVES TO IMPORT



Given these problems, we can say that **most Southern African countries need to radically improve their grain marketing systems.**

SOUTH AFRICA'S GRAIN MARKETING SYSTEM AND THE ROLE OF SAFEX

RSA's commercial grain sector is largely free of the above-mentioned problems. Only two full years after the abolition of the Maize Board, available time series price data are too short to make definitive judgements about the level of seasonal price fluctuations. However according to trade opinion, lean season prices of grain to commercial users, involving both spot and forward purchases, are about 25% higher than they are at harvest time, that is to say they more closely approximate carry costs than in the other countries of the Region.

The buffering of seasonal price fluctuations may be partly attributed to inertia within the co-operative sector that carries out most inter-seasonal storage.

Due to their historical role in grain storage, some co-operatives will store even in the absence of price incentives.

However, part of the success also appears to be due to the South African Futures Exchange (SAFEX), whose monthly turnover in maize futures contracts in September 1998 - 68,953 contracts of 100 tonnes - is equivalent to about 87% of the country's annual average maize production between 1995 and 1997. Moreover the trend is steeply upwards, 9,684 contracts were sold in September 1998, four times the figure for September 1997² - see Figure 2. A fully-developed market provides a near-perfect bridge between financial markets and commodity markets, attracting speculative investors seeking short-term gains. When these investors perceive the returns to be greater than alternative short-term investments (in bank deposits, bonds, shares etc.), they will purchase them and go on purchasing up to the point where they see no further gain. The cumulative effect of many speculators entering a market place in this way is to drive down the returns on speculation, and thereby flatten the seasonal carry-structure.

A futures market can also attract bank finance for storage of grain. If the bank lends against warehouse receipts, and the debtor defaults, the debt can be easily liquidated by selling it on the exchange. Banks are more reluctant to lend against a commodity for which there is no transparent system of price-discovery. The exchange also allows borrowers to hedge their position, and this makes them a less risky proposition for the bank.

Price transparency is such that farmers can contract to sell to primary buyers in terms of exchange prices. Take for example the case of a farmer who in November decides to make a forward sale to his primary buyer, with delivery taking place the next June. His buyer may offer him a forward price, which will be the relevant futures price on SAFEX, less an allowance for "basis" at the time of delivery. Basis covers:

- transport and handling costs between the point of delivery and the exchange
- any quality premium or discount between the grade offered by the farmer and that quoted on the exchange
- taxes and duties (if applicable), and
- the primary buyer's gross margin

A farmer's risk is limited to movements in the basis, the level of which is constrained by competitive factors.

On the face of it, these advantages provide powerful arguments for other African countries to establish exchanges along the lines of SAFEX. South Africa's achievement, in moving from a highly subsidised State-control system to a fully liberalised system open to the winds of World competition, is really

² We appear to be witnessing a pattern that is familiar among successful futures contracts - the volume traded climbs steeply and ultimately reaches a level which is many times the physical volume of the commodity traded. With the yellow maize contract on the Chicago Board of Trade (CBOT), the volume traded is about 15 times the volume of US physical production.

very impressive. However the circumstances of most countries are so different as to make this example, at best, only partly applicable.

SPECIAL CIRCUMSTANCES SURROUNDING THE SOUTH AFRICAN EXAMPLE

These differences are listed in Box 2.

BOX 2: CONTRASTING FEATURES OF THE SOUTH AFRICAN GRAIN TRADE AND THAT OF OTHER AFRICAN COUNTRIES

- A high level of marketed production
- Well-functioning transport and logistics, and low *basis risk*
- High level of integration into world markets
- Strong rural intermediaries, with accredited storage function
- High level of involvement of multinationals
- A relatively strong banking sector, open to outside entrants
- A pre-existing financial futures market
- A consistently supportive policy framework, with a low level of Government intervention in the market

We now discuss these features in turn:

A high level of marketed production. South Africa's cereal production oscillates around 11 million tonnes per annum, which is small compared to the World's leading producers, but is large by African standards.

Country	Average production 1995 - 1997, millions of tonnes
China	439
USA	319
India	218

Source: FAO Production Yearbook, 1997

The only Sub-Saharan countries with production comparable with South Africa are Nigeria, whose average production for 1995 - 1997 was 21 million tonnes, and Ethiopia's with 10.5 million tonnes. Sudan, Tanzania, Kenya, Madagascar are within the range of 2.5 to 4.5 million tonnes over the same period, but for all the other countries the figures are below 2.5 million tonnes. With highly mechanised commercial agriculture, South Africa moreover distinguishes itself by a low percentage of on-farm consumption of the principal grains, maize and wheat, so that most grain is marketed. Alone

among African countries, South Africa is a significant supplier of grains to the World market.

Well functioning transport and logistics, and low basis risks. Most South African silos are linked to the national rail system, and efficient port handling facilities allow grain to be shipped in and out quickly and cheaply through Durban, depending upon whether the country is in surplus or deficit. While the lack of a river and lake transportation system place South Africa at a disadvantage to the USA and Canada, its logistical network is in a different league from the rest of Africa, which suffers from poor roads and railways, and congested and inefficient ports.

South African grain production is concentrated in a limited geographical area about 600 km across and centred on Johannesburg. Together with the good road and rail connections, this minimises the basis risk involved in SAFEX transactions. Hedgers are not greatly concerned that their risk-management strategies will be upset by adverse movements in transport costs. As the following two examples show, basis risks are an important constraint in the establishment and usage of futures contracts:

- Brazil, a much larger producer of grains and oilseeds, has the fourth largest futures market in the World, the *Bolsa de Mercadorias e Futuros*. Notwithstanding this, it has made very limited headway in the agricultural field. The volume of trade in its contracts for soybeans and maize represent less than 5% of the volume of production. One of the explanations advanced for this is the large distances involved in trade and consequently high basis risks.
- A Mexican Government agency has succeeded in selling maize options to local farmers, backed by options taken out on the Chicago Board of Trade (CBOT). In this case the excellent transport links between Mexico and the USA minimise basis risk and have facilitated the use of a remote futures and options exchange.

Strong rural intermediaries, with a widely respected role in grain storage. Outside of the communal areas, South Africa's agriculture is highly mechanised, and is served by a network of local grain enterprises, mainly co-operatives (and former co-operatives) which were for decades nurtured with public support. So far these have survived liberalisation and they continue supplying inputs to farmers on credit, and market their produce. They also have a major role in storing for non-members including trading companies, millers and others, and their warehouse receipts are widely accepted as collateral by the banks. Above all SAFEX has expressed its confidence in these warehouses, and has registered a total of 130 sites as delivery points. According to SAFEX, the availability of many delivery points has encouraged long position holders and thereby stimulated interest in the exchange (Gravelet-Blondin, 1998).

While Zimbabwe constitutes something of an exception, Zimbabwe's and other countries' rural intermediaries are relatively weak. Parastatals are in

retreat but have yet to be replaced by a network of strong and stable rurally-based companies. There is little or no credit for smallholders to produce maize. A study carried out in Tanzania in 1993 showed that most grain sold in Dar es Salaam was supplied by small point to point traders who purchased directly from farmers, using their own funds (MDB, 1992).

Warehouse receipt systems are still in their infancy, and for the most part consist of international inspection companies acting as collateral managers for the largest trading and milling companies, sometimes themselves multinationals. The cost of such services is however generally unaffordable to any but the largest local players. In rural areas and most major towns, there are no warehouses offering to store on behalf of multiple depositors, as do the South African co-operatives. Apart from creating an un-level playing-field in trade finance, this means that there are no ready-made delivery points to serve the purposes of newly established commodity exchanges.

High level of involvement of multinational companies. During the early 1990s, multinational grain traders have moved into South Africa more than in other African countries. A list of the major players sounds curiously like the leading trade houses engaged in any major producing country, e.g. Glencore, Cargill, Louis Dreyfus, Continental Grain, Nidera. These companies have brought South Africa much needed liquidity at a time when the State was withdrawing from the market.

International grain companies are also involved in other countries of the region, but to a much lesser extent than in South Africa. By and large these countries are considered small, high risk and high margin markets. The risks stem mainly from political factors, particularly uncertainties over future policies and the application of those policies that already exist (it often being claimed that there is corruption). In such countries, only a few multinationals are involved, often for the purpose of supplying food-aid donors or making shipments between countries in surplus and deficit. Such companies do not invest in buying stations, storage facilities or processing plant, but they typically engage in trading in collaboration with a strong and well-connected local company. It is these combinations which have ready access to dollar financing and a privileged position in the market.

A relatively strong banking sector wishing to lend for agriculture. Under the Government-controlled regime, South Africa's private banks were not involved in the financing of agricultural commodity trade. However before this trade was liberalised, they were already heavily involved in SAFEX, where as "clearing members" they underwrote the trading in financial futures contracts. The creation of an Agricultural Marketing Division (AMD) at the end of 1995 allowed them to extend this service to the trading in commodity futures.

AMD also helped the banks develop clientele within the agricultural sector. It was easier to lend for storage and trade as price risks could be hedged through the exchange – for this purpose the banks have themselves created in-house brokerages. At the same time SAFEX created a relatively

transparent mechanism through which the stocks of defaulting debtors could be sold.

Foreign banks have also become heavily involved in trade financing, often through their multinational clients.

Again there is a major contrast in neighbouring countries. Until recently Tanzania's and Mozambique's banking sectors have been State-owned, with adverse consequences for their professional capabilities and efficiency. With few exceptions banks have been seeking to get out of agricultural financing, which has been generally seen as a Government-mandated activity involving high risks and low returns.

A consistently supportive policy framework, with a low level of Government intervention in the market. The transition in South Africa's grain marketing policies from the Apartheid era to present is quite remarkable. Previously the entire system of internal and international trade was controlled by the Maize Board. Prices were fixed with a view to protecting domestic producers, and exports were subsidised through a system of levies. Now there are no subsidies and prices are allowed to vary in response to domestic and international supply and demand.

The policy framework has been more or less ideal for the establishment of futures contracts. Participants in the market are faced with price risks due to market volatility, and therefore need to hedge their positions. At the same time they face little in the form of political risks - e.g. withholding of trading licenses, sudden imposition of import or export controls, sudden decisions to import food aid - which will upset market expectations. Outside investors are welcome and appear to face a level playing field in their dealings with Government.

Countries north of the border have also gone far to liberalise their grain marketing systems, and the reduction in Government procurement is evident in the spatial differentiation of prices and high seasonal price variability. This is in contrast with certain countries of Eastern Europe (e.g. Poland and Russia), where despite an official commitment to liberalisation, Government intervention has prevented the emergence of a strong seasonal carry structure.

However, in most countries north of the border, Government intervention continues in rather unpredictable fashion. Two important producers (Zimbabwe and Malawi) have maintained a high level of parastatal procurement, but in most countries, Governments have intervened in an *ad hoc* manner in the area of international trade. Sometimes this has been through the selective provision of import or export licences, and sometimes direct Government intervention in the trade in the commodity concerned.

This situation is inimical to the development of futures exchanges. To successfully establish such an exchange would require several countries to form a trading block free from discretionary intervention by Governments.

Given the political sensitivity of grain trading matters, and the interests involved, this seems inconceivable in the near to medium term. The situation is also inimical to the development of links with SAFEX. The purpose of developing such links would be to hedge price risks, but Government intervention creates large political and basis risks that cannot be hedged through this medium.

“CASH” COMMODITY EXCHANGES IN AFRICA

Three countries have sought to create cash exchanges for spot trading and forward delivery, with variable results.

In 1994, *Zimbabwe* established the first exchange in Africa, ZIMACE, which trades in cash contracts for spot and forward delivery by open outcry. The volumes traded expanded steadily since its foundation and during the period of April to mid November 1998, a total of 186,000 tonnes of maize and wheat (the principal commodities) were traded, up from 66,000 tonnes during the same period in 1997. A total of 350,000 tonnes of maize were traded in the last full marketing year (April 1997 to March 1998), i.e. about 13% of the country's maize production³.

While the exchange has successfully established itself as an important trade channel, many players still by-pass it. Notably, ZIMACE's annual report for 1997 complains of major players failing to use the exchange, while making use of the price information it generated as a reference point in trading outside the exchange. Spot trading had predominated and levels of forward contracting remained very limited. ZIMACE's expansion has also been limited by the high level of Government intervention in the domestic grain market, and Government control over imports and exports. This has created a climate of uncertainty where farmers are reluctant to plant, and price setting becomes hazardous.

The Agricultural Commodity Exchange (ACE), in *Zambia*, is owned by the Zambian National Farmers' Union and a South African investor. It is basically a brokerage operation which posts information on its trades for public consumption, thereby fulfilling one of the important functions of an exchange, that of increasing price transparency. Much of its operation is concerned with the auctioning of donor supplies of fertiliser and some Government maize imports. Zambia's major trade houses make very limited use of its services.

In 1996, the author suggested expanding the exchange, to include traders and millers as shareholders, while creating a network of exchange-linked warehouses where goods could be deposited prior to sale (Coulter *et al*, 1996). The purpose of the latter was to enable the exchange to eliminate risks of non-performance by farmers and other remote and/or unproven suppliers. The initiative was to be promoted by the private sector, with

³ Source: ZIMACE, as reported by Colin Poulton, Wye College, UK.

Government and donors acting in a facilitative role. It was argued that the private sector needed to take such an initiative in order to create a more politically defensible system that would encourage farmers to produce more grain; this in turn would forestall policy reversals at Government level.

Various players in the private trade, the farmers' union (ZNFU) and Government pursued the idea enthusiastically, and the EU funded a feasibility study. Eventually however, there was insufficient support from the private trading sector to ensure implementation. Leading members of the trade had already established their supply networks, and according to certain informed local commentators, were "making too much money to be interested in an expanded ACE". If the exchange were successful, it was argued, the increased price transparency would adversely affect their interests. Moreover, it was stated that political circumstances in Zambia had attracted players seeking to maximise profits over the short term, and arguments of enlightened self-interest carried little weight.

In *Uganda*, various parties have been collaborating with a view to establishing a local cash exchange. A pre-feasibility study was carried out in 1997, in which it was assumed that the exchange would quickly generate a volume of 300,000 tonnes of maize, out of a total marketed crop of around 650,000 tonnes per annum. Given the progress achieved by ZIMACE after four years, this seemed quite an ambitious target. A significant subsidy would moreover be needed to break even in the first year.

To enhance viability it would be necessary to trade a variety of other crops. Most favourable results could be obtained if the principal cash crop, coffee were included. Getting support from the coffee industry would not prove simple however, as it is increasingly dominated by vertically integrated international companies with limited interest in the exchange concept. The viability of coffee trading through the exchange would be greatly enhanced if a system of regulated warehouses could be instituted, with a central register of stocks in different locations. A draft warehousing law had yet to be enacted.

A recent and detailed study provides more reason for optimism about this project (Anon, 1998). It contains an investment plan including donor money which is to be put up alongside equity from seatholders (who have the right to appoint brokers) and shareholders. The purpose of the donor capital is to provide necessary technical and physical inputs, and to provide local investors and stakeholders with the confidence that the exchange will last for 3 to 5 years.

Conservative estimates are made regarding the volumes of produce traded, for example under a "most likely scenario", it is assumed that 10,806 tonnes of maize are traded in the first year and 52, 536 tonnes in the fifth. The nature and source of demand for exchange services is analysed carefully, as are the competitive pressures that the exchange will face – it being suggested that some stronger traders will see the exchange as a threat and therefore boycott it. There is provision for the creation of an exchange warehouse, so

that goods can be accurately graded and warehouse receipts used as a mechanism for delivery.

The financial analysis shows that the exchange requires a high level of donor subsidy to break even, US \$855,000 including interest foregone, but excluding technical assistance missions. Donor capital accounts for 95% of initial capital and is still 85% by year 5⁴. The break-even level, without paying interest on donor capital inputs, is reached in the third year of operation, when the exchange transacts commission business of just over US \$51 million. The exchange is also crucially dependent on one commodity, coffee, which accounts for 57% of commission revenue – suggesting that it would be very difficult to launch an exchanges dependent entirely on grains and oilseeds

Given the effects on market efficiency and the indirect effects on production, exports and consumer prices, the high level of donor support can be justified on economic cost-benefit grounds. However the project illustrates the difficulty in creating commodity exchanges in countries such as Uganda. While considerable effort is being devoted to generating local commitment, the degree of donor subsidy could pose risks for its sustainability. Hopefully it will be successful and provide a model to be replicated elsewhere.

These initiatives, and other experiences from Eastern Europe and Latin America, suggest certain generalisations that might be relevant to the establishment of cash exchanges in African countries:

- The success rate in new exchanges is quite low. Two examples can be cited: (a) the Former Soviet Union has experienced multiple failures among exchanges which have emerged since the end of communism; (b) Brazil, a country producing over four times as much grain as South Africa, has 28 cash exchanges – however all of these survive by auctioning Government stocks and related products, but so far they have not developed a significant role with private grain.
- Lack of success can largely be attributed to the divergent interests in the trading community, some seeing themselves as having more to gain than others
- Prospects for success are best where much or most of the grain is produced on large-scale commercial farms – e.g. Zimbabwe
- Prospects are best where the exchange can be linked to a reliable delivery mechanism, involving reliable warehousing services. This can be used to standardise produce and ensure that sellers perform on their contracts, as envisaged in the Zambian and Ugandan cases above.

⁴ Total seatholder equity at the end of the first year of operation is less than US \$20,000 whereas seatholders wishing to participate in the expanded Zambian exchange were asked to put up US \$20,000 each.

SO WHAT IS IT FEASIBLE TO DO “NORTH OF THE BORDER”?

Due to the foregoing differences, it is most unlikely that viable futures exchanges will be organised in most other African countries. A few countries may eventually succeed due to the size of their internal markets (e.g. Ethiopia or Nigeria), or because they are able to organise effective trading blocks. It may be possible to organise cash exchanges but experience to date indicates that the task will not be simple, particularly in markets dominated by a small number of large players.

Nonetheless there is much to be learnt from the South African success, by understanding the fundamental characteristics of the system developed in that country Some of these characteristics can be reproduced elsewhere in r Africa. So one should seek to identify what countries can do in the near future in the light of South African experience, but without seeking to reproduce it in its entirety.

BOX 3: WHAT CHARACTERISTICS OF THE SOUTH AFRICAN SYSTEM CAN BE APPLIED NORTH OF THE BORDER?

- Improved transport and logistics
- A free market, with minimal intervention in trade and financial flows, and open to foreign investors
- Low transactions costs, i.e. costs of measuring the attributes of goods, finding and screening contracting parties, monitoring their activities during a contract, and enforcing the contract if they renege in any way
- Strong rural merchants trusted to store produce
- A system of warehouse receipts characterised by integrity

To develop these characteristics, the following sorts of measures are needed:

- Make it easier to invest in agribusiness, particularly by:
 - removing internal and external constraints, particularly ad hoc forms of intervention by governments
 - privatising Government/ parastatal stores
 - standardising grain quality
 - improving systems of dispute settlement, particularly through the use of arbitration (arbitration systems have recently been established by trade bodies in RSA).
- Improve crop forecasting and market information
- Make the trade more liquid, particularly:
 - make warehouse receipts first class collateral
 - generalise their use and thereby facilitate trading by specification
- Where possible, forge links with established and successful exchanges

Some of these measures are easier to implement than are others. For example, ad hoc market intervention is based on powerful political motives and can only be eliminated if there is unusually strong leadership. Effective warehouse receipts systems can be implemented, but again this requires strong leadership to prevent politicisation and ensure integrity (see Coulter, 1998).

Warehouse receipts are important because they can facilitate improvements in other areas, notably standardisation of quality, improvement of contract enforcement and trade financing. As we have seen from the case of SAFEX and the proposed Ugandan exchange, it is much easier to establish cash or futures commodity exchanges if they can be linked to trusted warehousing systems.

The main conclusion of this paper is therefore that, along with the other above-mentioned measures, countries “north of the border” should seek to institute systems of warehouse receipts with a high level of integrity and international prestige. These should be seen as a route to the creation of more efficient trading systems, involving cash commodity exchanges or otherwise. Box 4 shows some of the main elements to be considered in organising a warehouse receipt system.

BOX 4: TYPICAL ELEMENTS IN THE ORGANISATION OF A SUCCESSFUL WAREHOUSE RECEIPT SYSTEM

- A sound legal framework
- Open access to depositors, i.e. non-discrimination
- Strict oversight, by either a public sector institution or body representing broad sectoral interests, and involving:
 - registration of warehouses
 - Inspection of stocks – quantitative and qualitative
- Warehouses must meet requirements for:
 - Capital adequacy
 - Management and professional capacity
 - Insurance of store and stock
 - Insurance or bonding against illegal actions by the warehouse operator
- Standardised documentation
- Grading standards enforced by certified graders

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