

Value Chains
& Trade



STUDY ON APPROPRIATE WAREHOUSING AND COLLATERAL MANAGEMENT SYSTEMS IN SUB-SAHARAN AFRICA

VOLUME I - KEY FINDINGS



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Prepared for

Agence Française de Développement (AFD)
Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA)
International Fund for Agricultural Development (IFAD)

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Foreword

Farmers throughout the developing world face considerable challenges in accessing finance, and this can often influence their decision-making. For instance, even if they know they should not sell soon after harvest, when prices are typically low, they are often forced to sell because they need the cash to meet their family basic needs.

These challenges must be addressed with financing solutions tailored to the different actors of the agricultural value chain. Warehouse receipt financing enables the post-harvest part of the value chain to function more efficiently and is a potentially useful tool for helping farmers access to funding. This is the core subject of this report. If farmers have access to warehouse receipt finance, it gives them flexibility in timing their sales. Instead of selling their crops to meet immediate cash-flow needs, they can store them and pledge them as collateral for a loan, and postpone selling to a later date when prices are supposed to be higher.

From the financier's perspective, warehouse receipts, when used as collateral, can facilitate lending to farmers. Warehouse receipt finance also makes it possible for processors to fund the stock they need for their operations throughout the year and for exporters to optimise the timing of their expected sales. In addition, it gives international banks a way of bringing loans to customers at interest rates that tend to be lower than those offered by local banks.

Warehouse receipt finance is a far ancient financing technique that has been found on Mesopotamian clay tablets. It played an important role in the financing of agriculture and agricultural processing in the USA and Europe. It is widely used across the developing world - but mostly for the financing of import and export operations. In recent years, there has been much effort by governments (supported by their development partners) to extend its use to national food value chains. This has proved difficult, partly because local financiers - the most logical candidates for financing national and regional trade flows - are usually unfamiliar with this approach and are wary of the political, legal and regulatory conditions that surround its use.

In late 2013, the Agence Française de Développement (AFD), the Technical Centre for Agricultural and Rural Cooperation (CTA) and the International Fund for Agricultural Development (IFAD) issued a tender for a study to review the scope for warehouse receipt finance in Africa and help formulate policies and strategies for its expansion. The Platform for Agricultural Risk Management

(PARM), funded by the European Commission, Italian Development Cooperation, IFAD and AFD, and hosted by IFAD, also contributed to finance this study.

A large, multidisciplinary team investigated the situation on the ground in nine African countries (Burkina Faso, Cameroon, Côte d'Ivoire, Ghana, Madagascar, Mozambique, Niger, Senegal and Uganda), identified bottlenecks to the wider use of various forms of warehouse receipt finance and formulated proposals for action. The team consisted of practitioners, including international and local experts from legal, banking and warehouse management backgrounds from the nine countries. This publication aims to be a standard reference document on warehouse receipt finance in Africa for many years to come.

The authors of the report focus on four main types of finance:

- **Type A: Community inventory credit** for smallholder farmers, often supported by microfinance institutions (MFIs), which re-finance their operations with commercial banks. Stocks are normally held under a double-padlock arrangement in community stores or domestic buildings, with the keys to one lock held by the producers' organisation (PO) or group of farmers, and the other by the MFI.
- **Type B: Private warehouses.** Financing against commodities stored in a *private* warehouse under the control and responsibility of a collateral manager (CM). This can include a *field warehouse*, where the goods are held in the borrower's store, which is temporarily leased to the CM.
- **Type C: Public warehouses.** Financing against commodities stored in a *public* warehouse. This is a warehouse that is open to depositors from the general public; it does not mean that the warehouse belongs to the State; indeed most public warehouses are privately owned.
- **Type D: Lending against the security of current or future production.** In this case, the funding agencies lend against a documented security representing current or future production, such as the *Cedulas de Produtos Rural* (agricultural bonds) popularised in Brazil.

All these forms are well adapted for certain purposes. In many ways, they complement each other.

AFD, CTA and IFAD/PARM hope that this publication will inspire action on the ground by policy-makers to remove obstacles and create an enhancing

regulatory environment; by banks to use opportunities created by the use of warehouse receipt systems; by farmers and other stakeholders in agriculture to become better prepared to use innovative financing mechanisms; and by development partners to give warehouse receipt finance its proper place in their agricultural development programmes. As the discussions in this publication show, warehouse receipt finance is feasible in Africa, and its strengths are already recognised by a number of agricultural lenders and borrowers. The time is ripe to create the conditions for up-scaling this approach and democratising access to this tested financing tool for agricultural growers and companies.

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Glossary (entities)

AFD	Agence Française de Développement
APCC	The Cotton Producers Association of Cameroon
BMM	Mozambique Commodity Exchange
BOM	Banco Oportunidade de Moçambique
Brizoua-Bi	Bilé-Aka, Brizoua-Bi & Associés
CCOM	Caixas Comunitárias de Operadores de Moçambique
CMS	Crédit Mutuel du Sénégal
CSBF	Banking and Finance Supervision Commission
CTA	Technical Centre for Agricultural and Rural Cooperation ACP-EU
ECX	Ethiopia Commodity Exchange
eWRS	electronic warehouse receipt system
FAO	Food and Agriculture Organization of the United Nations
FCPA	Fund for the Marketing of Agricultural Products, Madagascar
FCPB	Fédération des Caisses Populaires du Burkina
FEPA-B	Fédération des Producteurs et Productrices Agricoles du Burkina Faso
GCV	Grenier Communautaire Villageois
GCX	Ghana Commodity Exchange
GGC	Ghana Grains Council
IFAD	International Fund for Agricultural Development
J Coulter	J Coulter Consulting Ltd
MTI	Ministry of Trade and Industry of Ghana
OHADA	Organisation pour l'Harmonisation en Afrique du Droit des Affaires (Organisation for the Harmonisation of Business Law in Africa)
ONCC	Coffee and Cocoa Board of Cameroon
P4P	Purchase for Progress pilot (of the World Food Programme)
PADMIR	Programme d'Appui à la Décentralisation en Milieu Rural in Cameroon
PAFIR	Rural Finance and Support Programme, Cameroon
PAPSA	Projet d'Amélioration de la Productivité et de la Sécurité Alimentaire
PICOFA	Programme d'Investissement Communautaire pour la Fertilité Agricole, Burkina Faso
RCCM	Registre du Commerce et du Crédit Mobilier (Registry of Movable Collateral)
S&W	Sullivan & Worcester UK LLP
SAFEX	South African Futures Exchange
SONAGESS	Société Nationale de la Gestion des Stocks de Sécurité (parastatal enterprise in Burkina Faso handling basic foods)

TWLB	Tanzanian Warehouse Licensing Board
UGCPA-BM	L'Union des Groupements pour la Commercialisation des Produits Agricoles de la Boucle du Mouhoun
Weinco	Wienco (Ghana) Limited (established in 1979 and jointly owned by Dutch and Ghanaian Shareholders)
WFP	World Food Programme

Glossary (other defined terms)

Act	Uganda's Warehouse Receipt System Act 2006
CBSG	community-based savings and credit groups, Mozambique
CI	Côte d'Ivoire
CM	collateral manager
CMA	collateral management agreement
Commingle	Where a commodity/grain of the same type, variety and grade (where appropriate) deposited by two or more depositors are held together in storage so that any part of the common deposit may be issued in delivery against a warehouse receipt irrespective of the original depositor
Consortium	J Coulter Consulting Ltd and Sullivan & Worcester UK LLP
DVP	delivery-versus-payment
e-Receipt	electronic warehouse receipt
eWRS	electronic warehouse receipt system
FOQ guarantee	full out-turn of quality guarantee
Funding agencies	Agence Française de Développement (AFD), the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA) and the International Fund for Agricultural Development (IFAD)
GIC	Common Interest Group, Cameroon
Identity-preserved commodities	Specific commodities held in storage or tracked in shipment so that they remain attributable to a specific depositor to prevent loss through commingling
Legal country reports	legal consultants' reports on individual subject countries
LRP	local and regional procurement (as applied to food aid agencies like WFP)
MFI	microfinance institution
MGA	mutual guarantee association
MGS	mutual guarantee scheme

MIS, SIM or SIMA	agricultural market information services (which exist in most African countries)
NGO	non-governmental organisation
Pledge form	a document which serves as confirmation that the relevant pledge agreement has been successfully registered with the RCCM
PO	producer organisation
Securities Act	OHADA Uniform Act on Securities dated 15 December 2010
SMA	stock monitoring agreement
SM	stock monitoring
SME	small and medium enterprise
Study	a study commissioned by the funding agencies into warehousing and collateral management systems in sub-Saharan Africa
Subject countries	Burkina Faso, Niger, Senegal, Ghana, Cote d'Ivoire, Madagascar, Cameroon, Mozambique and Uganda
Technical country reports	technical reports by consultants working in individual subject countries
Treaty	the OHADA treaty which was signed at Port Louis, Mauritius 17 October 1993 and entered into force 18 September 1995
Type	the different forms of warehouse financing referred to in this report
Uniform Acts	the acts enacted for the adoption of common rules as provided for in Article 1 of the OHADA treaty
WR	warehouse receipt
WR/CM	warehouse receipting and collateral management
WRF	warehouse receipt finance
WRS	warehouse receipt system

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Rates of exchange

Euro/US dollar	€1 = US\$ 1.36
Euro/West African Franc (FCFA)	€1 = FCFA 656
US dollar/West African Franc (FCFA)	US\$ 1 = FCFA 482





PART A: Summary



1

Introduction

The aim of this study is to foster the emergence of warehouse operators and collateral managers who can provide storage and collateral management services that will facilitate access to warehouse receipt finance (and other forms of commodity-based finance) in favour of smallholder farmers. The subject countries targeted are: Burkina Faso, Cameroon, Côte d'Ivoire, Ghana, Madagascar, Mozambique, Niger, Senegal and Uganda. The analysis comprises legal and institutional due diligence with the aim of both identifying obstacles and making recommendations that can be operationalised in the subject countries and, possibly, in member countries of the francophone Treaty on the Harmonisation of Business Law in Africa (OHADA). The authors focus on four main financing types, as follows:

- (a) **Type A: Community inventory credit for smallholder farmers**, often supported by microfinance institutions (MFIs) which refinance their operations with commercial banks. Stocks are normally held under a double-padlock arrangement in community stores or domestic buildings, with the keys to one lock being held by the producer organisation (PO) or group of farmers and the other by the MFI.
- (b) **Type B: Private warehouses**. Financing against commodities stored in a private warehouse under the control and responsibility of a collateral manager (CM). This can include a field warehouse, where the goods are held in the borrower's store which is temporarily leased to the CM under a tripartite collateral management agreement (CMA).
- (c) **Type C: Public warehouses**. Financing against commodities stored in a public warehouse. This means a warehouse open to depositors from the general public; it does not mean that the warehouse belongs to the State; indeed most public warehouses are privately owned. In practice however, we may find a variation on this type, where the company operating the

warehouse is the only depositor and does not receive deposits from the general public.

- (d) **Type D: Lending against the security of current or future production.** In this case the funding agencies have in mind lending against a documentary security representing current or future production, such as the *Cedulas de Produtos Rurais* (agricultural bonds) popularised in Brazil.



The aim of this study is to foster the emergence of warehouse operators and collateral managers who can provide storage and collateral management services that will facilitate access to warehouse receipt finance in favour of smallholder farmers

In addition to the above, there are also two *non-focus types*, being financing: (a) with a third party carrying out stock monitoring on the financier's behalf (under stock monitoring agreements or SMAs) and; (b) where the financier does the surveillance of the goods itself. These types are normally carried out in conditions of relative security, where the borrower enjoys considerable trust with the financier, or where the financier has strong non-legal means of enforcing its rights over the borrower. Stock monitoring is closely allied to Type B financing (private warehouses), since the monitors are normally the same inspection companies that

act as collateral managers and sometimes combining both services within a single contract.

The above typology is approximate. In practice, there is overlap among the different types. For this reason, the reader should consider the report as a whole rather than focusing on a particular type.

Local technical consultants were contracted to produce country reports in each of the subject countries and these are presented in Volume II of this report. Legal consultants were contracted in Ghana, Côte d'Ivoire, Uganda, Mozambique, and Madagascar¹ and reviews of applicable laws and regulations in each of the subject countries are presented in Volume III.

1 The Madagascar legal consultant has expertise across the OHADA region including in Burkina Faso, Cameroon, Côte d'Ivoire, Niger and Senegal.

2 Type A financing: Community inventory credit

The authors start the report with this type because it is firmly focused on farmers who are at the base of the value chain. It is a highly decentralised type of financing, practised primarily in Madagascar, under the name of *Greniers Communautaires Villageois* (GCVs) and in a few countries of francophone West Africa, as *warrantage communautaire* (henceforth *warrantage c.*). As currently practised, this type of financing allows farmers to hold back their crop to meet lean season food requirements and to sell surplus food at higher prices and thereby avoid overselling their crop at harvest time. In the majority of cases, stocks are held *identity-preserved* with bags marked in the name of individual depositors/farmers and once loans are repaid, each depositor/farmer is individually responsible for disposing of the product. Reported repayment rates are normally close to 100%.

The degree of seasonal price variability for coarse grains (maize, millet, etc.) and legumes varies widely from country to country but the variability is generally much higher than in the Republic of South Africa - the African country with the most highly developed marketing system and where average seasonal price increases for maize are below 20%. This difference suggests that there is significant scope for price stabilisation in the subject countries.

The GCVs are Madagascar's singular achievement in commodity-collateralised lending, with annual deposits of the order of 100,000 to 120,000 t per annum (typically 1-2 t per depositor) and on an upward trend. Over 90% of the tonnage is paddy rice; much of the rest is milled rice, while cloves and coffee are also significant in value terms. GCVs account for over 40% of the loan portfolio of two major MFI networks, which have been built up largely around this lending product. GCVs have taken off with other MFIs; they account for 25% of the portfolio of a leading more urban-based network.

The product is not without risks, due to government intervention in rice markets and the lending practices of some MFIs, with one network recently reported to have declared bankruptcy. At the same time, lack of knowledge of post-harvest handling and pest control is considerably slowing diversification towards other crops. Addressing the knowledge problem presents an important opportunity to the participating MFIs. There is currently a move towards more centralised purpose-built and rented stores. This presents potential challenges for the MFIs and the refinancing banks but it also provides an opportunity to develop a national warehousing profession, with public warehouses (Type C operations) and an appropriate regulatory structure.

Warrantage c. was developed in Niger from 1988/89, and after 10 years it accounted for financing of about 5,000 t of varied commodities including grains, oilseeds, legumes and dehydrated horticultural products belonging to around 12,500 depositors. Since then, the volume of lending appears to have stagnated due to poor harvests, financial difficulties with one of the key lenders, the inflexibility of the double padlock system, a leading PO (Mooriben Federation) adopting another financing model, the end of FAO technical support and a shortage of warehouses. Warrantage c. has also been tried with Niger's major export crop, onions, so far unsuccessfully. The approach has subsequently been introduced to other West African countries including Burkina Faso, where in 2013 it accounted for about 3,400 t of commodities belonging to 4,021 producers, and Senegal, where an initial pilot was not continued.

There are two basic models of *warrantage c.*: a *decentralised model*, where the FI finances an individual PO along the lines set out above, and a *centralised model*, where a second or higher tier organisation (a union or a federation) coordinates several grassroots POs and represents them vis-à-vis financial institutions. The MFI delegates much of its supervisory role to the union or federation, which holds the key to its padlock on its behalf. While the centralised model may not always be advantageous, it can simplify relationships with the financial institutions, reduce the costs of credit and increase the chances of institutional viability. There is a third, more commercial approach that involves the collective marketing of stored produce, sometimes with a collateral management company handling the storage and supporting the collective effort with input supply and brokerage services. With this approach Type A begins transitioning to Types B and C.

Warrantage c. is found to have some strong elements of sustainability: local appropriation, strong peer pressure among borrowers, accountability with the lender, a forced savings aspect (which makes it easier to handle widely varying

seasonal price movements), decentralised management and no requirement for costly collateral managers or insurance cover. However, certain features detract from its sustainability, notably: the inflexibility of the product (a largely fixed calendar for depositing, borrowing and reimbursement); the shortage of effective MFIs present in the area where the farmers live (in contrast to many areas of Madagascar); dependency on outside support to build warehouses; a need for continuous and sustained educational inputs; government actions that upset market fundamentals and cause depositors to lose money; and limited ability of small producers to play the market.

Nevertheless, the positive externalities of *warrantage c.* may justify further external support: because farmers can hold food stocks back in rural areas, the population is made more resilient in face of crises, and it can be a stepping stone towards more market-oriented forms of organisation. However, continued large scale expenditure in promoting the tool can only be justified where there are prospects for large-scale and sustained adoption.

In the case of Mozambique, opportunities for community inventory credit are limited by various factors, notably the poor state of microfinance provision (compounded by the polluting effect of government subsidised *loans* which impose no sanctions on defaulters), and the management capacity of POs. Nevertheless, the study has led to the formation of a working group that is planning to pilot an inventory credit scheme with a few market-oriented groups. Some initiatives in Cameroon are noted and the Cameroon country report proposes promoting the activity with the IFAD-backed PADMIR project.

The practical elements of *warrantage c.* (notably the procedures, trust and peer pressure) contribute much more to collateral security than the legal framework does, for which reason the legal regime is not a high priority in encouraging this type of financing in its most decentralised form. However, as Type A financing takes on characteristics of Types B and C, the legal considerations for these types become more relevant. There is a particular need for regulatory scrutiny in Madagascar, given the importance of GCVs to the lending portfolio of MFI networks.



3 Type B financing: Private warehouses

Type B financing is carried out in all subject countries except Madagascar, where financiers prefer to do the surveillance themselves.

Most of the activity is focused on import and export of commodities. It is concentrated near the ports, although there is a more patchy service in up-country areas and landlocked countries, typically in support of processing of agricultural products. With some exceptions, smallholder farmers do not make much use of private warehousing services, primarily because the POs representing them tend to lack the means to hire a collateral manager (typically costing upwards of US\$ 1,000 per month), and/or they do not enjoy the confidence of financiers, while their remote location poses a challenge to financiers and collateral managers. However, the healthy use of CMAs and SMAs is important to farmers as they are a key element in the supply chain for agricultural commodities on which they depend. The service is disproportionately used by local African exporters and it helps level the playing field vis-à-vis multinational companies which can source cheap funds offshore.

The collateral managers include a mixture of international inspection/credit management and logistics companies and an increasing number of local operators. Some inspection companies and countries have been badly affected by warehousing frauds, and this situation has driven up the cost of professional indemnity insurance and caused some companies to withdraw from the business or to concentrate on the less risky inspection and stock monitoring services.

Providing that collateral managers perform correctly, financiers do not normally have problems with financing against CMAs. They know their customers and usually the commodity off-takers. Prices tend to be tied up in structured transactions with invoices and letters of credit, and there is access to accurate market information for most exported commodities - with the

notable exception of cashew. However, the prospect of working with up-country operations, with relatively unknown clients lacking off-taker agreements gives financiers much more anxiety; they will tend to insist on other collateral, such as real estate or personal guarantees. This requirement is partly a function of the risks involved and partly a function of the financiers' lack of experience of, and preparedness for, working with players in local value chains, as opposed to with international traders of commodities with which they do most of their commodity lending business. If financiers wish to enter this market, they need to develop new internal capabilities such as analysing historical price trends, variable haircutting, monitoring domestic market price movements, marking-to-market and margin calls. However, given the small scale of the prospective market and financiers' apprehensions, few have invested in these.

This paper considers the role of CMAs and SMAs with two export crops, cocoa and cotton. A review of Ivorian and Cameroonian experiences with cocoa show there is an important debate about the most appropriate strategy for value chain development in countries that have liberalised their export markets: that is, whether producer cooperatives should seek to develop downstream marketing, making use of warehouse receipt financing, or whether they should focus on linking up with international buyers under contract farming arrangements. Cameroon has just negotiated a € 30 million international line of credit that seems more aligned with the first of these options, and it is suggested that the funding agencies seek to monitor performance over time.

The biggest constraint to up-country financing with local staples and feed ingredients is the atomisation of production and the lack of scale economies which tends to make the employment of a collateral manager quite onerous. Notwithstanding these constraints, certain collateral managers in landlocked countries (e.g. Burkina Faso and Uganda) have attempted to bring their

“ Certain collateral managers in landlocked countries have attempted to bring their services closer to farmers and/or small-scale processors services closer to farmers and/or small-scale processors. In Burkina Faso, there is now a national consensus around the importance of *warrantage* c. and collateral management, and three new collateral managers (some established by domestic and regional banks) have developed innovative forms of lending for producers, small-scale processing and the rice value chain. The Burkina Faso country report posits that there is considerable potential for further development, but this rapid expansion is not without risk. As in most countries, the shortage of suitable storage infrastructure is a major constraining factor.

There are two key areas where the legal regime could be improved: (1) regulation of collateral management; and (2) removal of barriers to taking security over commodity. These barriers include the requirement to pay *ad valorem* stamp duty on security documents, difficulties with the registration of security interests, and onerous formalities to taking security interests (particularly in Mozambique). Côte d'Ivoire is the only country to have attempted to regulate collateral managers, but these laws only apply to the four leading export commodities (cocoa, coffee, cotton and cashew). Collateral managers must satisfy financial requirements, but these appear too lenient to deter unsuitable applicants.



4 Type C financing: Public warehouses

Type C financing is only relevant in countries that have supported, or are considering supporting, the establishment of public warehouses. As of this publication, these countries include Côte d'Ivoire, Ghana, Mozambique, Senegal and Uganda. Public warehouses also serve as delivery locations for commodity exchanges and they are vital to the establishment of these exchanges.

Uganda is the only country to date to have passed enabling legislation for public warehousing. Uganda has also installed an electronic warehouse receipt system (eWRS) linked to the same server used by the South African system of grain silo certificates. An attempt to implement the system with grains (mainly maize) saw the licensing of five warehouses, the involvement of four banks, and the depositing of about 22,600 t from 2008 to 2013. However, this was far from the volume required to cover costs of most warehouses and of the regulatory authority. Notwithstanding these issues, at least two warehouses remain operational; one of them reports working with 162 POs representing 10,000 farmers and handling 8,000 t of maize per season including both outright purchases and storage for third parties. However, the regulatory system is not presently operational.

In Ghana, a novel private sector membership body called the Ghana Grains Council (GGC) has, since the end of 2012, sought to run a regulated WRS for its paid-up members. Some 29,500 t have been deposited of which 6,900 t have been financed, all of it through a company called CCH under a repurchase (Repo) scheme, which channels funds from the financiers. CCH's strong involvement is related to the incipient nature of the scheme, so it is difficult to draw conclusions at this stage about the longer term attractiveness of Repo financing for direct lending by the banks. The real challenge for CCH, and one to which the promoter is committed, is to develop the Repo into a short-term financial instrument for sale to institutional investors, which can thereby radically reduce the cost of warehouse financing in Ghana.

However, the major event in the Ghanaian maize value-chain is a contract farming scheme for maize that is promoted by the input suppliers YARA and Weirco (the main depositor under the GGC WRS) and which, along with other intensification initiatives, has massively increased maize surpluses in northern Ghana. At the same time, the Ghanaian Government is preparing legislation for a regulated WRS and commodity exchange (GCX), with the Ministry of Trade promoting the exchange with eight x 10,000 t linked warehouses with the firm Eleni and a group of international and domestic investors, with a view to start trading maize in 2015.

Côte d'Ivoire has drafted a WR Bill and it plans to pilot the system with a single crop, probably cashews, starting in 2015. The Government of Mozambique has already established a commodity exchange (BMM) and has drafted a



Those seeking to establish a regulated system face the choice of going for legislation or creating the system out of contractual arrangements between the relevant parties

Warehouse Receipt Bill. BMM is in the process of assuming responsibility for 39 new silos with a capacity of approximately 200,000 t of grain, but as of this publication, the enterprise appears far from functional. The approach is very much government-driven, in contrast with the case in Côte d'Ivoire, where there have been incremental moves toward the establishment of a public warehousing system and a commodity exchange, with much more consultation of relevant stakeholders. However, the drafting of

a new WRS law could provide the opportunity to engage government seriously about the legal and institutional framework for different kinds of warehouse receipting in Mozambique, including CMAs and SMAs.

The Madagascar country report recommends building on the trend towards central MFI-controlled warehouses (as opposed to home-based GCVs) and developing a national warehousing profession, with an appropriate regulatory structure. Indeed, Madagascar probably presents one of the strongest opportunities for public warehousing in the nine countries surveyed, depending on the willingness of the MFIs and their ability to reach out to government, banks and other value-chain players.

Those seeking to establish a regulated system face the choice of going for legislation (following the examples of Tanzania, Uganda and Ethiopia) or creating the system out of contractual arrangements between the relevant parties (following the examples of South Africa and, so far, by the Ghana Grains Council). Both routes are likely to be difficult. The contractual route requires

industry motivation, available finance and a high level of stakeholder cohesion that is difficult to achieve, at least with domestic food commodities, given the relatively atomised nature of production, distribution, and even processing in sub-Saharan Africa (excluding South Africa). With a voluntary system, there is also a legal risk of claims from third parties outside of the system, though this has not prevented successful implementation in South Africa. The legislative route is also difficult, as illustrated by the case of Uganda, where the local and international project sponsors did not share a cohesive view of what they were trying to achieve. There are also risks that the regulatory agency will be underfunded and/or poorly managed, or that governments will focus on short-term political objectives and thereby alienate private players.

Another option is the Ethiopia Commodity Exchange (ECX) route and variants on it which have been widely promoted with governments around Africa. By getting the governments enthusiastically involved and enlisting the large-scale support of aid donors, international financial institutions, banks and investment funds, the promoters seek to create the critical mass whereby regulatory obstacles are quickly overcome, and the exchange and its linked public warehousing system takes off fast. However, there are some potential snags, notably: difficulty in translating Ethiopian conditions to other countries in sub-Saharan Africa; that domestically-consumed field crops like maize and soybeans cannot be effectively *mandated* through the exchange as they were in Ethiopia (scope for evasion is infinite); in the case of Ghana, it is unclear how the exchange will reach break-even; the approach may appeal to short-term and interventionist motives in governments and prove counter-productive; and prestigious, flagship projects can snuff out debate about pros and cons.

The authors consider the case for implementing WRS legislation across the whole OHADA region, but they conclude that it will be a difficult task, because it would require unanimity among voting countries. Individual Member States could, however, legislate in respect of warehouse receipts as part of a possessory pledge over stocks.



5 Type D financing: Lending against the security of current or future production

It would not be realistic to expect financiers to take security over paper (like the Brazilian agricultural bonds) in most African countries, given that there are so many cases where they are unwilling to finance against the security of possessory collateral held in warehouses. The small scale of most agricultural producers and the weakness of cooperatives also make this a challenging type. However, there may be scope for testing such a product with commercial rubber producers in Côte d'Ivoire, an industry where financiers are already lending to producers on the security of the crop.



6 Conclusion

Warehouse receipting and collateral management are not a panacea; they are tools that can be used in the development of agricultural value chains, alongside or in combination with a range of other tools. Table 1 outlines key pros and cons of the different approaches reviewed.

Scale factors are vital to the success of all kinds of WR/CM initiatives. In the case of Type B and Type C operations, need for scale is due to the high fixed costs of operating/collaterally managing warehouses, to which regulatory frameworks may result in additional costs. Type A warehouses have low overheads, and, providing they can access a financier, they can be run on a much smaller scale in rural communities. However, given the high expenditure on promoting the tool, its use can only be economically justified if there are prospects for sustained adoption by large numbers of communities.

Economic factors, including both demand and scalability, are fundamental to the success of warehousing and collateral management initiatives, and these factors are sometimes overlooked at the time of project design. This was the case with the regulated WRS in Uganda, where there was a lack of clarity at the project design stage. Economic factors also adversely affected the rice pilot in the Senegal River valley where the government had to deal with a long-standing political *hot-potato*, that is, the trade-off between supporting domestic production and of ensuring low-cost rice to the urban population.

Table 1: Key pros and cons of financing types

Type	Pros	Cons	Main subject countries using it to date
A	<ul style="list-style-type: none"> • Low scale, direct farmer involvement • High accountability and repayment • Improved management of home economy/<i>forced savings</i> • Possible stepping stone to market-oriented approach 	<ul style="list-style-type: none"> • Inflexible product with fixed calendar • Dependency on project support, specially for warehouse construction • Producers lack of market knowledge 	<ul style="list-style-type: none"> • Madagascar, • Burkina Faso and Niger
B	<ul style="list-style-type: none"> • Important component of key value chains supporting millions of families • Spontaneous activity, not dependent on governments or donors 	<ul style="list-style-type: none"> • Economies of scale - high fixed costs per site/ inaccessible to most rural clients • Vulnerable to fraud in some countries 	<ul style="list-style-type: none"> • All countries except Madagascar
C	<ul style="list-style-type: none"> • Open, contestable system, allowing public access • Facilitates price discovery, trading and development of commodity exchanges 	<ul style="list-style-type: none"> • Requires regulation or self-regulation, either of which is difficult • Economies of scale in operation and regulation of warehouses • High initial cost of external support 	<ul style="list-style-type: none"> • Uganda, Ghana

Other key success factors include: (1) the vision and leadership of promoters; (2) private sector involvement and initiative; (3) the scope to modify approaches based on experience; and (4) the role of government, particularly whether it is supportive or otherwise. Addressing these factors is largely about *process*, and for this reason the funding agencies may need to provide patient long-term support, often for upwards of a decade, if they want to get results. They also need to move away from the current project-based approaches towards a programme-based approach which will provide them with a thematic repository of information upon which they can draw.

There is a widespread need for capacity building of financiers, collateral managers, producers and others, and there is a shortage of warehouse capacity as noted throughout the subject countries. In the case of the Sahelian countries

(particularly Burkina Faso), it is necessary to carefully evaluate different approaches to more downstream marketing, involving (a) development of service cooperatives and (b) outreach by financiers and collateral managers, in terms of their respective potential, limits and complementarity, with a view to optimising the support strategy. In terms of typology, these approaches cover the transition from Type A to Types B and C financing.



7 Recommendations

Strategic recommendation to establish a joint *Agricultural Commodity Programme*

The three funding agencies should continue their partnership by establishing this joint programme, with a view towards developing commodity-collateralised funding and related value-chain innovations in Africa. The roles of the programme would be to: provide independent analyses and backstopping for the funding agencies; provide capacity building through training, mentoring and workshops; help CMs to develop their own systems of capacity certification; develop and test a robust model for partially subsidised funding of warehouse construction; leverage the efforts of leading international companies and other relevant international programmes (not least the World Food Programme); support specific country initiatives; and learn lessons and feed them back into the public domain. In supporting warehouse construction, it is important that warehouses are effectively utilised and do not become white elephants. For this reason, beneficiaries should pay a substantial part of the cost and obtain clear ownership.

The programme should have its own governance, staff, budget and a set of rules and operating procedures that will allow it to focus on the subject area long-term, with the ability to launch, review and curtail initiatives. These conditions should allow it to assist and monitor local initiatives around the continent flexibly and as opportunity presents.

Legal and regulatory recommendations

With regard to warehouse regulation and taking account of the limitations of the alternative approaches described above (legislated, voluntary and ECX-inspired), the authors advocate a gradual approach led by local stakeholders, leading to legislation. Where the necessary support or infrastructure to

developing a regulated system are lacking, steps should be taken to improve the security regime: (1) by ensuring creditors can easily take effective, enforceable security over stored commodity by other means (e.g., by removing stamp duty and registration fees); and (2) by improving the functionality of collateral registers and/or by abolishing the requirement to register.

In the case of the OHADA region, it is probably best to start by introducing suitable national legislation in one or two individual countries, and then use this experience to frame legislation for the entire region. Côte d'Ivoire may be a good place to start, given the scale of existing collateral management activity, the regulatory experience, the impetus to establish public warehousing, the positive approach of government and broad stakeholder involvement.

Near-term initiatives

The funding agencies should approach the Malagasy MFIs and key financiers involved in refinancing GCV lending with a view to establishing a programme to: (1) make improvements in price-risk management; (2) develop a national warehousing profession and regulatory structure; (3) improve post-harvest handling and funding of commodities other than paddy; and (4) promote more supportive public policies for rice marketing.

In the case of Burkina Faso, there should be an in-depth multidisciplinary assessment of approaches leading to the design of a multi-component support project, which may include: expert mentoring of players; a challenge fund for capacity building/business development; schemes to develop and enforce professional standards; peer-based mutual guarantee schemes; and support

for warehouse construction. The funding agencies should also contribute to discussions about warehouse legislation and regulation.



A priority is to improve collateral registries, enforcement systems and other legal aspects so as to complement planned warehouse legislation

In Niger, priority should be given to an updated inventory of warehouse lending and more in-depth analysis of certain cases. In both Ghana and Côte d'Ivoire, a priority is to improve collateral registries, enforcement systems and other legal

aspects so as to complement planned warehouse legislation. The funding agencies should also investigate the scope for technical support to the planned warehousing pilot. In Mozambique, they should offer backstopping support to the pilot planned by the newly formed WRS working group, and they should also seek to engage government on the legal framework for warehouse receipting.

The funding agencies should investigate the scope for a pilot initiative, probably in Malawi, for the coordination of WR/CM with local and regional procurement of food (by the World Food Programme).

Further initiatives

A long-term engagement with Sahelian countries is proposed with a view to developing national strategies for WR/CM and their implementation. Recommendations are also made for Ghana, Cameroon, Ghana and Senegal.





PART B: Report



1 Introduction

1.1 Background to the assignment

This report in three volumes has been prepared by J Coulter Consulting Ltd. (J Coulter) and Sullivan & Worcester UK LLP (S&W), together the authors of this report who have respectively led the technical and legal sides of the work. They have prepared the report for Agence Française de Développement (AFD), the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA) and the International Fund for Agricultural Development (IFAD) (together, the funding agencies).

The authors have prepared this report in fulfilment of a study commissioned by the funding agencies into warehousing and collateral management systems in sub-Saharan Africa (the study), following terms of reference (TOR) provided by the funding agencies (see Annex 1). The purpose of the study is to promote access to finance through warehouse receipt finance (and other forms of commodity-based finance) in favour of smallholder farmers in the subject countries. The objective is to foster the emergence of warehouse operators and collateral managers (CMs) who can provide the necessary storage and collateral management services.

The subject countries targeted in the study are Burkina Faso, Cameroon, Ghana, Côte d'Ivoire, Madagascar, Mozambique, Niger, Senegal and Uganda. The analysis was to comprise both legal and institutional due diligence; its aim was to identify obstacles and make recommendations that could be operationalised in the subject countries and, possibly, in member countries of the Treaty on the Harmonisation of Business Law in Africa (OHADA). OHADA is composed of 17 francophone countries of West and Central Africa, five of which are subject countries.

1.2 Methodology

Typology

Based on desk research and initial field research, the authors decided to focus on the following four financing types (the financing types), as follows.

- (a) **Type A: Community inventory credit** for small farmers, known as *warrantage communautaire* (*warrantage c.*) in francophone West Africa and *Greniers Communautaires Villageois* (GCVs) in Madagascar.
- (b) **Type B: Private warehouses.** Financing against commodities stored in a *private* warehouse under the control and responsibility of a collateral manager (CM). This type can include *field warehouses*, where the goods are held in the borrower's store which is temporarily leased to the CM.
- (c) **Type C: Public warehouses.** Financing against commodities stored in a *public* warehouse, which is a warehouse open to depositors from the general public. It does not mean that the warehouse belongs to the State; indeed, most public warehouses are privately owned. In practice however, we may find a variation on this type, where the company operating the warehouse is the only depositor, and does not receive deposits from the general public, either because other parties are not interested in depositing or because the operator wants sole access.²
- (d) **Type D: Lending against the security of current or future production.** This type involves lending against a documentary security representing current or future production, such as the *Cedulas de Produtos Rurais* (agricultural bonds) popularised in Brazil.³

Further information on typology of Types A, B and C is provided respectively in Section 3.1, 4.1 and 5.1 of this Volume and in Annex 3 of Volume III of this report.

The authors also refer to *non-focus types*, which include financing: (1) with a third party carrying out stock monitoring on lender's behalf (stock monitoring agreements or SMAs); and (2) with the lender who may carry out its own

2 While this negates the public aspect of the public warehouse, the authors include it in Type C rather than Type B because the stock is not under the permanent control of an independent collateral manager. An agribusiness operating such a warehouse needs to enjoy a very high level of confidence with its financiers, who are also likely to trust it to handle the stock of third parties.

3 See Rutten, 2012, Annex 10.

surveillance without employing a stock monitor. These types are of importance in commodity-collateralised financing, but they are normally carried out in conditions of relative security, where the borrower enjoys considerable trust with the financier, or where the financier has strong non-legal means of enforcing its rights over the borrower. These situations do not normally call for novel institutional devices or legal reform, and for this reason the study does not focus on them. However, the reader should note that stock monitoring is closely allied to Type B financing (private warehouses), since the monitors are normally the same inspection companies that act as CMs in Type B financing arrangements above. Indeed, CMs sometimes provide clients with a mixture of stock monitoring and collateral management services within the same value chain (e.g., monitoring stocks of agricultural inputs, raw commodities and primary processing in up-country locations, and collaterally managing export-ready products in the ports).



If properly implemented, WR/CM can contribute greatly to the development of efficient agricultural value chains

Fieldwork and report preparation

Annex 2 shows the composition of the study team.

The lead author, J. Coulter, commissioned local technical consultants to prepare technical country reports, or to assist in the preparation of same, in the nine subject countries. The main challenge was to produce a report that answered the terms of reference while *seeing the wood from the trees*, (i.e., focusing on important issues within the TOR). For this reason, the author of each country study was first asked to do deskwork to identify the main types practiced and/or of relevance in his/her country, and then focus on these in preparing the study in line with the TOR. The named authors are individually responsible for the content of the respective country studies.

J Coulter mentored local technical consultants as they went about their work, drawing upon his prior working experience in eight of the nine subject countries. In the case of Madagascar, he carried out fieldwork in the capital and central highlands and led the process of report preparation. He also carried out fieldwork in Côte d'Ivoire and Ghana, building on the prior work of technical consultants in those countries.

S&W contracted legal consultants in Ghana, Côte d'Ivoire, Uganda, Mozambique and Madagascar. The Madagascar-based firm has expertise

across the OHADA region, including Burkina Faso, Cameroon, Côte d'Ivoire, Nigeria and Senegal.

The technical country reports contain brief summaries of the legal consultants' relevant findings, after which the technical authors add their own comments in relation to the local legal systems. The reader should refer to the country reports in Volume III, Section B (legal country reports), and this report for the legal analysis as approved by the local legal consultants.

This report is a synthesis of the technical country studies, key findings of the interim report and further inputs by the legal team which consisted of S&W and an additional legal consultant they hired in Côte d'Ivoire.

Structure of the report

The main contents of the three volumes are as follows:

- (a) **Volume I: overall findings, conclusions and recommendations**, which draw on and references the findings in Volume II and III
- (b) **Volume II: technical country reports** on each of the nine subject countries
- (c) **Volume III: a review of applicable laws and regulations**, containing: Section A, an overview including a matrix summarising the legal findings in each of the subject countries; Section B, containing legal country reports on each of the nine subject countries; and Section C, which includes further information on typology (Annex 2) and an overview of legal concepts (Annex 3). Readers unfamiliar with the legal concepts and distinctions discussed in this report might find that Annex 3 provides a useful reference point.

Volume I starts with an outline of the distribution of different types of warehousing and collateral management between countries. This information is followed by four sections dealing respectively with Types A (community inventory credit), B (private warehouses), C (public warehouses) and D (lending against the security of current or future production). Section 7 provides conclusions. Section 8 offers recommendations. This is followed by a bibliography, the terms of reference (Annex 1), a legal annex (Annex 2), details of authors and consultants (Annex 3) and a discussion of mutual guarantee schemes (Annex 4).

1.3 The place of warehouse receipts and collateral management (WR/CM) in the development of agricultural value chains

WR/CM is not a panacea or a magic ingredient. They are tools that can be used in the development of agricultural value chains, alongside or in combination with a range of other tools, such as:

- (a) improving farmers' access to inputs, equipment, or advisory services to increase agricultural productivity
- (b) developing transport infrastructure and improvement in transport efficiency
- (c) better trade policies and better enforcement of those that exist
- (d) investing in storage and crop handling infrastructure
- (e) improving crop forecasting and market information systems
- (f) cooperative (bottom-up) development
- (g) vertical (top-down) integration by marketers and processors, often multinationals, including contract farming
- (h) development of commodity standardisation, including grading systems
- (i) commodity exchanges (including auctions and simple online trading platforms with clearing and settlement systems).

In some cases, farmers stand to gain much more from programmes to increase agricultural productivity than by tinkering with markets that operate tolerably well and can easily absorb production increases. Improvements in transport infrastructure often have the highest pay-off, opening up entire regions to commercially-oriented production. Effective contract farming can sometimes be a key driver of rural development (see Section 4.6.2, with regard to West African cocoa and Section 5.3.1 with regard to maize in Ghana). However, one attraction of WR/CM is that it is often complementary with the other tools and increases their effectiveness, as shown in the following examples.

- (a) Investments in storage infrastructure are more profitable if the stock held there can easily be collateralised for financing and if a remote buyer can be assured of the quality of the product it can source sight unseen.
- (b) Professional warehouse operators can facilitate commodity standardisation. Governments often try to institute grading systems for basic food commodities, but they find that the grades sit on the shelf because there are no expert parties willing and equipped to apply them in practice.
- (c) A professional warehouse operator can help smallholder producer organisations (POs)/coops improve the marketability of their crops by cleaning, grading, packaging, storing and collaterally managing them, and helping them connect with buyers.
- (d) A processing company or an exporter may find warehouse receipts a useful device for developing its up-country supply chain. If the company can count on trusted collateral managers, it will find it easy to collateralise its stocks and thereby finance further procurement. Alternatively, the company may pay its suppliers against the transfer of warehouse receipts that provide them with good title to the goods.
- (e) Public sector buyers (like food reserves or food relief agencies) or price support agencies can outsource their cleaning, grading and storage operations to warehouses certified for this purpose and thereby: (1) reduce their up-front investment in food storage and handling; and (2) achieve higher levels of logistical efficiency by avoiding the cost of shipping the goods in and out of their own storage facilities. Public sector agencies make use of warehouse receipt systems in many various countries, including the United States, Brazil and India.
- (f) Commodity exchanges require registered warehouses which can act as delivery locations (i.e., places where sellers can deliver goods against contractual specifications). These warehouses are vital in the context of smallholder production and the relatively atomised marketing structures which prevail in most of sub-Saharan Africa. In order to manage performance risk (i.e., the risk that sellers, particularly smallholder farmers, will default on contracts), a collateral manager/warehouse operator will normally need to act as a guarantor, holding the stock while it is under offer through the exchange. The absence

of such arrangements largely explains why various past exchange initiatives in Zambia, Kenya, Uganda and Nigeria have failed.

Despite these benefits, the different types of WR/CM vary greatly in the degree to which they complement the other tools. Being largely concerned with local self-sufficiency, Type A operations are less integrated with other parts of the value-chain than Type B and Type C operations.

In summary, WR/CM is not a panacea and, as shown later in this report, implementation sometimes proves challenging, but if properly implemented WR/CM can contribute greatly to the development of efficient agricultural value chains.



2 Warehousing and collateral management activities by country

Type B (private warehouses) can be found in all countries except Madagascar. It is concentrated in coastal countries, particularly around the ports of Dakar (Senegal), Abidjan and San Pedro (Côte d'Ivoire), Accra/Tema and Takoradi (Ghana), Douala (Cameroon), Maputo/Matola, Beira and Nacala (Mozambique). However, there is a significant level of service provision in up-country areas of the same countries and landlocked countries.

In Madagascar, banks have opted to carry out the surveillance themselves rather than employing CMs and they occasionally employ stock monitors. There was however an official attempt to introduce Type B to the country with the aim of reactivating the collection and storage of agricultural products in 2002, after a political crisis had left the domestic rice market in disarray. Government, acting with the support of USAID, established the Fund for the Marketing of Agricultural Products (FCPA) and sought to get banks involved in financing rural aggregators. However, the scheme eventually got politicised and mismanaged; the overall impact was small and it was closed down in 2009.

“ The leading sub-Saharan examples of public warehousing in Africa are in the Republic of South Africa, Ethiopia, and Tanzania

Type C (public warehouses) is at an incipient stage of development. Both Uganda and Ghana have attempted to establish regulated systems of public warehousing for grains, while Côte d'Ivoire and Mozambique are seeking to establish such a system. The leading sub-Saharan examples of public warehousing in Africa are in the Republic of South Africa (for maize, wheat, soybeans and sunflower), Ethiopia (where warehouses serve mainly as delivery locations for the Ethiopian Commodity Exchange - ECX), and Tanzania (principally cashew and coffee). None of these are subject countries.

Type A (community-based inventory credit) has gone furthest in Madagascar, where it is used overwhelmingly for storage of paddy rice; but it has also made considerable progress in Niger, Burkina Faso and Senegal where it is used with a wider variety of crops.

Type D (lending against the security of current or future production) products like the Brazilian agricultural bonds are unknown in the subject countries. However, banks were found to lend against the security of rubber crops in Côte d'Ivoire.

It is important to note that the typology is inexact and there are cases of overlap. One can envisage various variants on conventional Type A financing, such as:

- (a) transition to Type B, where a lender holding stock jointly with a PO (i.e., a cooperative, farmer association or other kind of registered or unregistered farmer group) under a dual padlock arrangement starts employing a CM which takes full control of, and responsibility for, the warehoused goods
- (b) transition to Type C, where the PO starts running the warehouse on its own without the involvement of the financier or a CM and takes deposits from the public.

One can also envisage variants on Type C. For example, a microfinance institution (MFI) or a PO runs a warehouse and opens it up to deposits by its members but not to the public at large. Operators of Type C warehouses may or may not trade the commodities they store, there being a classic dichotomy between agricultural warehouse operators in the USA and Canada, which provide crop handling and storage services to third parties as an adjunct to their trading activities and general warehousing companies in Latin America, which are generally barred from trading in the type of commodities they store. One may also find cases where the operator of the warehouse is the only party depositing in the warehouse; this is currently the case with the Ghana Grains Council (GGC) scheme described in Section 5.3.1, though it is envisaged that they will open up to the public in the future.

3 Community inventory credit (Type A)

3.1 Introduction

Type A is a highly decentralised type of financing, practised primarily in Madagascar, under the name of *Greniers Communautaires Villageois* (GCVs) and in a few countries of francophone West Africa, under the name of *warrantage communautaire* (*warrantage c.*), which the authors translate as *community inventory credit*. As currently practised, this type of financing allows farmers to hold back their crop to meet lean season food requirements and to sell surplus food at higher prices, and thereby avoid overselling their crop at harvest time.

Type A is usually supported by MFIs that are capable of penetrating rural areas and working with smallholder farmers on a local basis. In this model, a producer organisation (PO) or a group of smallholder farmers stores the members' commodity in a domestic building or a small warehouse under the control of the organisation or group. The product of different farmers is normally not mixed, but it is identity-preserved and marked with the name of each individual owner. While the product is serving as loan collateral, it is secured by way of a double-padlock arrangement: the PO or group holds the key to one lock and the MFI to the other. In practice, however, the MFI may sometimes hand its key to a third-party agent (e.g., a federation of POs).

An analysis of this type of arrangement suggests that the practical elements are of far greater significance than the legal framework. The financier may not have any security interest over the commodity in this scenario, but instead relies on the fact that access to the warehouse can only (lawfully) be gained when both the financier (or its agent) and the borrower are present to unlock the padlocks. The financier may have contractual rights which it could enforce over the commodity, but, in reality, the cost of enforcement is likely to be prohibitive.

The success of Type A appears to rely on: (1) seasonal price patterns that allow farmers to realise financial gains in most years; (2) the implementation of procedures that are effective and well understood by the parties involved; and (3) trust and peer pressure between the borrowers whose individual assets are directly at stake and who wish to maintain a good credit record with the financing MFI. As such, implementing a legal regime might not be high priority when encouraging this type of financing.

3.2 Seasonal price patterns for food crops in subject countries

Table 2 shows information the country authors have presented on seasonal price variability.

Table 2: Evidence of seasonal price increases

Country	Crop	Average increase (%)	Observations
Burkina Faso	Maize	30-43	SONAGESS producer prices, av. 2004/05 to 2012/13; 6-8 months storage.
	Sorghum	24-34	
	Millet	14-28	
	Cowpeas	37-60	
	In-shell groundnuts	31-51	
	Milled rice	13-19	
Niger	Millet	24-38	SIMA prices, av. 2003/04 to 2012/13; 6-8 months storage.
	Cowpeas	37-58	
	In-shell groundnuts	17-29	
Ghana - Techiman	Maize	22	ESOKO prices, av. increase from September to June for 3 years to 2012/13. Indicates massive fall in price variability since 1990s when average increase was circa 100%.
Ghana - Tamale	Maize	31	Av. ESOKO prices, av. increase from November to June for 3 years to 2012/13.

Country	Crop	Average increase (%)	Observations
Madagascar (farm household level)	Paddy rice	44	Bouquet <i>et al.</i> , 2009: average realisation of 188 GCVs, approx. 6 months storage 2003-2007.
	Milled rice - urban	25	Jenn-Treyer, O., 2008.
	Milled rice - Tana	19	Carimantrand, 2011; av. for 1992-2009.
Mozambique	Maize	85-90	Tschirley <i>et al.</i> , 2013: SIMA data, av. 2001-2011 for major markets in production areas
Republic of South Africa	Maize (spot price)	< 20	Tschirley <i>et al.</i> (2013).

These figures need to be considered with care, because:

- (a) They apply to crops that are not standardised in terms of characteristics, moisture, defects, foreign matter, etc. This is notably the case with maize produced in zones relatively close to the equator (e.g., Uganda, southern half of Ghana), much of which is traded with moisture content 5% or more above the level at which it is safe for seasonal storage.
- (b) Prices are for urban locations, except for paddy in Madagascar, where detailed research was carried out into the actual price increased realised by farmers, using GCVs. In the absence of empirical data elsewhere, one may speculate that percentage seasonal price increases are higher at farm level than at urban level.⁴
- (c) Figures are not altogether comparable, as they refer to different storage periods, different numbers of years, different types of urban markets (some closer to farmers than others), etc. Some prices (notably for Burkina Faso and Niger) are averages of a set of markets, which causes some smoothing such that figures for seasonal price increases are less than in many locations.
- (d) The figures do not show the large year-to-year variability in seasonal price increases. As exemplified in Table 10 of the Burkina Faso country

4 The reasoning for this conclusion is as follows: (a) in the equation $\text{Incr. \%} = 100 \times (\text{lean season price} - \text{harvest price}) / (\text{harvest price})$, the denominator is generally lower in rural areas; and (b) some surplus producing rural areas run short in the lean season, leading to reversal of the price gradient between rural and urban areas.

report (Volume II), prices occasionally fall rather than rise, while in other years prices may rise two or more times the average.

- (e) The figures are in current prices, but this does not take account of inflation that has been relatively high outside of the West African Franc zone and the Republic of South Africa.
- (f) The reader should also note the *leveraging effect* of borrowing. If a farmer borrows 70% of the value of the crop at harvest time, he/she is only investing 30% of his/her own funds in the stored commodity, and this greatly amplifies year-to-year variation in return on capital employed.
- (g) Notwithstanding all these qualifications, one can make some interesting observations on the basis of these figures:
- (h) The Republic of South Africa, with average seasonal increases in spot price not more than 20% for maize, can be taken as a good practice example. The country has a very strong marketing system, with excellent market infrastructure, crop forecasting, market information, WRS and a futures exchange which players use to hedge their positions.
- (i) Neighbouring Mozambique, by contrast, has been exhibiting an exceptionally high seasonal price increase for maize, averaging 85%-90% over an 11-year period.
- (j) Limited (3-year) data from Ghana show that seasonal price increases for maize have greatly moderated in this country since the 1990s, which demonstrates that situations like that in Mozambique can change radically over time.
- (k) Seasonal price increases for millet, a major staple in Sahelian countries, are relatively moderate, in the range of 14% to 38%, probably reflecting high levels of on-farm storage. Unlike the case with maize, un-threshed millet and sorghum are not highly pest-susceptible and can be stored for several years. Notwithstanding estimated interest charges and handling costs in the range of 14% to 22%⁵, millet is one of the main commodities stored with *warrantage c.* in Niger and it suggests that motivations other

5 These calculations assume a storage period of 6 months, interest rates between 1.1% and 2.5% per month + credit arrangement fee 1% + monthly storage charge FCFA 100 per 100 kg bag (est. 1% of product value at time of storage) per month. As we shall see later, some groups in Burkina Faso pay collateral managers to store at FCFA 200 per bag.

than price speculation are at play in attracting farmers to this product. The report returns to this theme later in Section 3.4.5.

- (l) Seasonal price increases for cowpeas in Sahelian countries are much higher than for cereals. This increase likely reflects cowpeas's high susceptibility to storage pests (beetles), but it also offers major returns to farmers who employ effective pest-control techniques. Groundnuts are one of the leading crops stored in Niger, but given the surprisingly divergent figures for Burkina Faso and Niger, it is difficult to draw clear conclusions about the profitability of storage.
- (m) Seasonal price variations for milled rice are moderate, and this reflects the importance of international (as opposed to domestic) market forces in the formation of prices for this crop of which all African countries are net importers. Notwithstanding, seasonal price variability for paddy rice in Madagascar has been sufficiently high at farm level to make the GCV product highly attractive to farmers.

3.3 The GCV system in Madagascar

The GCVs are Madagascar's singular achievement in commodity-collateralised lending. It is a microfinance-linked product that allows farmers and others to store crops (overwhelmingly paddy rice) locally, both for home consumption and for sale. The GVC system was originally promoted as the main product of the CECAM mutual microfinance networks, but it has been such a success that a range of other mutual and non-mutual networks have taken it up.

The GVC system was conceived as a means of getting product held in PO stores, but in practice, the dominant arrangement has been home storage. There are tens of thousands of home-based GCVs, each holding the stock of a few depositors, often from the same family, with an average of 1-2 t per depositor, under a dual padlock arrangement. Assisted by an AFD guarantee, the commercial banks refinance the MFIs for about 60 bn Ariary (approximately €18.5 million) per annum.

There is currently a move towards the establishment of more centralised purpose-built and rented stores. This movement is prompted by: (1) concern over the security of loan collateral held in home stores; (2) the time and expense in overseeing large numbers of small household stores; and (3) the willingness of donors to fund the construction of grain stores.

There are no consolidated statistics on GCVs, but available information suggests that deposits are between 100,000 and 120,000 t per annum and on a strongly upward trend. Over 90% of the tonnage is paddy rice; much of the rest is milled rice, while cloves and coffee are also significant in value terms. There have been attempts to diversify the products stored to include vanilla, maize, groundnuts, beans, cloves, coffee and cinnamon. However, there have been some significant failures, notably with vanilla (it proved difficult to handle the product correctly and forecast price movements) and maize (due to lack of knowledge about post-harvest handling and pest control). Repayment rates are around 99%, although up to 5% of repayments are being made beyond their due date.

The success of the GCV approach is evident in terms of: (1) food security; (2) enhanced livelihoods of rural people; (3) a dynamic effect on the development of MFI services; and (4) seasonal price stability for rice. The success can in large measure be attributed to two Malagasy mutual microfinance networks which have a strong rural presence and have built themselves up around the GCV product which represents over 40% of their lending portfolio. GCVs represent 25% of the portfolio of another leading more urban-based network. At the same time, the ease of home storage and relatively predictable price variations of paddy rice (*vis-à-vis* other crops) has made it relatively easy to roll out the product. The system is highly decentralised which minimises costs of transporting grain and contributes to local food security. It encourages members to invest in their home stores and to take responsibility for managing stocks under the supervision of the MFIs. There are, however, some difficulties, including: (1) rigidity of the product which does not always meet borrowers' needs; (2) limited storage capacity and physical insecurity in farmers' homes; and (3) borrowers sometimes being poorly informed or using borrowed funds poorly.

In addition to these drawbacks, high dependency on the GCV product makes some MFIs vulnerable to (1) unforeseen upsets in market fundamentals and (2) competition from other providers. The quest for market share seems to induce risky behaviour, most notably with one network providing 100% loan-to-value on commodities with highly volatile prices. In August 2014, the authors learned that this network had become bankrupt as a result of its investment in a company dealing in these commodities. Risks have been compounded by the fact that the government regulator responsible for risk assessment (CSBF) is underfunded and is only assessing the MFIs as institutions and not their flagship GCV product.

Government intervention in the rice market, as a means of regulation and/or political manipulation, represents a significant threat to the GCV product and MFIs dependent on it. It has sometimes upset market fundamentals and caused borrowers to lose money, but to date it has not caused serious damage to the system. The threats of physical insecurity and fraud are mainly associated with home-based GCVs; however experience from the African Continent and with the Malagasy government/donor-promoted FCPA suggest that such risks may increase as more products are held in central locations. The threat of fraud will require MFIs to develop in-house skills in store management and pest control, the capability to commingle and grade products of different depositors, clearer lines of authority and responsibility, greater transparency and equity in pricing of services, and the ability to transfer titles to buyers (using transferable warehouse receipts).

“ Government intervention in the rice market represents a significant threat to the GCV product and MFIs dependent on it

The achievements with GCV lending suggest that MFIs have two major opportunities. The first is to greatly increase financing of storage of commodities other than paddy rice (notably maize, pulses, potatoes and dried cassava); but doing so will require MFIs to overcome technical storage issues which they have hitherto largely left to the borrower/depositors. The second opportunity involves building on the trend toward more centralised storage and developing a national warehousing profession, with an appropriate regulatory structure. With their track record to date, the MFIs could be prime movers in establishing such a system, but they will need to reach out to government, banks and other value-chain players. Any regulatory structure should be able to sustain itself through levies on licensed warehouse systems and internalise the cost of all due diligence and risk assessment, so as not to depend on government budgetary allocations.

MFIs and agricultural sector players will also need strong advocacy in rice marketing policy so as to prevent sudden changes in import policies that cause producers using GCVs to lose money, as happened in 2013. Coupled with the development of regulatory, risk management and advocacy functions, AFD should seek to gradually phase out its portfolio guarantees.

3.4 Community inventory credit (*warrantage c.*) in francophone West Africa

3.4.1 Outline of the model

Community inventory credit was initially developed in Niger under the auspices of two FAO projects (*Projet Intrants* and *Projet IARBIC*⁶), in the decade starting 1998/99. The model has since been introduced in other West African countries, including Burkina Faso and Senegal. Producers have been encouraged to use the technique with non-perishable crops, including grains, oilseeds, legumes and in some cases, dehydrated horticultural products like paprika and hibiscus, taking advantage of seasonal price variations, as this allows them to realise a profit in most years. Farmers have also experimented with onions, a more perishable crop, of which Niger produces several hundred thousand tons for export throughout West Africa and which exhibits very large and regular seasonal price increases averaging over 100% of harvest prices.

At the risk of some simplification, the system works as follows. A PO, which usually has upward of 20 members and is in possession of a warehouse, stores agricultural products under a double padlock system, and pledges them to



Producers have been encouraged to use the technique with non-perishable crops, taking advantage of seasonal price variations, as this allows them to realise a profit in most years

a financial institution, normally an MFI, in exchange for a loan which is granted at a loan-to-value rate usually between 70% and 80%, based on the current market price. The MFI can use local market information systems to check price levels. The grain bags are normally marked with the name of each PO member, and there is a committee responsible for store hygiene and operations, including quality and pest control. The PO and the MFI have keys for separate locks, such that the store cannot be opened without

their both being present. Regular (typically monthly) checks are carried out to control for pests and risks of theft, fire and other hazards.

The PO is responsible for distributing the loan proceeds among the depositing members who are encouraged to invest the proceeds in off-season income-generating activities, such as livestock rearing or fattening, horticulture, or petty trade. The storage period is typically 5-7 months, at the end of which the committee collects individual farmers' repayments on behalf of the MFI, so the store can be opened in the presence of both. This is the moment of

6 <http://www.iarbic.net/>

the *dénouement du crédit* after which each farmer takes the grain either for his/her household consumption, for sale on the open market, or for other purposes (e.g., gifts, barter, in-kind payment for labour). The farmers sometimes market their products collectively, but they normally opt to sell individually at their own convenience.

A key disadvantage of this form of warehouse lending is its inflexibility. Loans can only be advanced when the MFI has certified that the producers have constituted their stock; this may take many weeks during which some of them are getting impatient. There is no warehouse operator or CM (which would prove very costly), and once a loan has been advanced against the stock, the store is only opened a few times a year for the purpose of monitoring product quality and destocking after repayment. POs and MFIs have sought to make the product more flexible (e.g., by using guarantee funds to allow advances unsecured by stocks, and by increasing the number of pledging and unpledging/destocking events), but security considerations and cost factors constrain the scope for such innovation.

The warehouses used in this activity typically have capacity in the range of 10 to 80 t. POs have usually acquired them through some past and present project assistance (e.g., in the establishment of *cereal banks* or input stores, or projects promoting *warrantage c.*), sometimes making an in-kind or cash contribution to the work. Sometimes they rent private stores as well. A further constraint on the development of this activity is the dependence on donors continuing to build warehouses.

Two basic models of *warrantage c.* can be identified, both a *decentralised model*, where the financial institution finances an individual PO along the lines set out above, and a *centralised model*, where a second or higher tier organisation (a union or a federation) coordinates several grassroots POs and represents them vis-à-vis the financial institutions. In this case the MFI delegates much of its supervisory role to the union or federation and it holds the second key on its behalf.

3.4.2 Progress in Niger

The latest figures for the overall level of lending date from 2009, showing that it had increased from FCFA 2 million in 1998/99 to nearly FCFA 600 million in 2008/09. There was a hiatus in 2003/04 when lending halved from the previous year to reach a trough of FCFA 120 millions, after which the value increased approximately five-fold. The 2008/09 figure was equivalent to about 5,000 t of commodities which, while significant, only represented 0.1% of relevant

national production and only a small proportion of what farmers (particularly larger producers) would store at home. About 125 POs were involved, some of these being unions or federations representing larger numbers of grassroots POs and there were 12,500 *pratiquants* (i.e., individual depositors).

Men tended to dominate the activity, but women took a leading role with some crops, notably groundnuts and bambara beans. Notwithstanding considerable efforts to include women in the activity, land ownership and traditional gender roles limit women's involvement in the activity. However, the leading producer federation (Fédération Mooriben) found that women outnumbered men as depositors (62% women to 38% men).

There were about 10 lenders, of which three *direct credit MFIs* came to dominate the scene, given the generally dismal performance of mutual MFIs (savings and loans cooperatives) established in Niger since the 1990s. The rural microfinance sector is clearly quite weak in Niger and the rural population is overwhelmingly unbanked.

The development of direct credit MFIs enabled the activity to recover from the hiatus of 2003/04. They carry out a range of lending in rural areas, refinancing their operations with the commercial banks at about 1% interest per month, on lending at 2.25 to 2.50% per month. The effective interest rate was somewhat higher as borrowers were required to put up a security deposit, typically 10% of the loan value, and there was an administration charge of 1%. The level of reimbursement was near to 100%.

Since 2009, there has been no attempt to consolidate information on deposits or financing, and only one of the three leading financiers has provided up-to-date disaggregated information. However, information obtained from various sources suggests that values have stagnated since 2008/09. This stagnation can be attributed to a combination of factors: poor harvests; the financial crisis of one of the direct credit MFIs (Taanadi); the inflexibility of the double padlock system; the leading producer organisation (Mooriben Federation) adopting a new financing model; the end of the FAO support with its promotional, capacity-building and trouble-shooting activities; and a shortage of warehouses.

Two of the three direct credit MFIs (Asusu S.A. and Coopec-Kokari) have maintained or slightly increased their level of funding. Asusu is represented in all the regions of Niger, and it lends to both individual decentralised POs and centralised structures. It is seeking to introduce new products, including a storage credit facility for large traders. Coopec-Kokari is not only providing

warrantage c., but it advances up to 50% of the same, which the borrower uses to constitute stocks under the dual key arrangement to serve as collateral for the lending.

The Mooriben Federation is the leading PO in Niger. It is composed of 27 unions representing 1,500 grassroots POs with 62,584 members, of which 61.3% are women. In 2009, it was (along with the Cigaba Union of Konkorido, and the Fédération Sa) a prime exponent of the *centralised approach to warrantage c.*, and it accounted for about 20% of borrowing. Since then it has entered into a special arrangement with a new government-owned agricultural bank (BAGRI) which provides seasonal production credit and post-harvest marketing credit on the basis of Mooriben's track record and guarantee funds that Mooriben has deposited with BAGRI. Consequently, Mooriben has had little need for *warrantage c.* facilities, and its members can get credit as soon as they have deposited their stock in the warehouse. This situation suggests a level of market maturity that allows Mooriben to deal with the banks on more flexible terms than are available under the *warrantage c.* model. Its success will depend on the strength of this complex and multi-tiered organisation's governance and management.

One of the stars of Nigerian *warrantage c.* in 2009 was the Cigaba Union of Konkorido, whose value of loans peaked at FCFA 85 million (€ 130,000) in 2005/06 and FCFA 81 million in 2008/09 (€ 123,000). Cigaba Union had incorporated some strong practices, notably:

- (a) the rental of many privately owned warehouses - as opposed to waiting on support from a development project
- (b) fixing a low loan-to-value rate for credits (e.g., 50%) in years of high harvest-time prices - an eminently sensible approach to risk management.

Since 2009, stored volumes have greatly diminished in part as a result of internal splits within the Union, poor weather, and to problems with the financing MFI (Taanadi). However, the latest information suggests this organisation is recovering.

There have been various attempts to introduce *warrantage c.* with onions, but these have so far failed, due to the high risks involved with this perishable product. It is possible to store the product successfully if certain preconditions are met regarding production and post-production techniques (including quasi-organic production and moderate watering), storage facilities, management

and the presence of financial institutions willing to carry out regular quality monitoring under the dual-key arrangement. However, these preconditions have so far eluded promoters and practitioners, particularly the monitoring part.

3.4.3 Progress in Burkina Faso

Key initiatives to introduce *warrantage c.* into the south-western region of Burkina Faso date from around 2004/05, and over the last 3 years, the country has seen considerable growth in this activity. Yameogo (2013) reports that in 2012/2013 133 grassroots POs practiced *warrantage c.*, involving 4,021 producers in 28 out of 45 provinces. Loans had been provided for FCFA 216 millions (€ 330,000), mainly by FCPB, against the security of 3,429 t of grain (mainly maize but also sorghum, millet, rice and fonio), 705 t of oilseeds (groundnuts, sesame and soybeans) and 238 t of legumes (cowpeas and bambara nuts).⁷

Warrantage c. is mainly financed by the single dominant MFI, the *Fédération des Caisses Populaires du Burkina* (FCPB), and Coris Bank, which started financing in 2014. FCPB's resources come from member savings, rather than bank refinancing, and its interest rates are remarkably cheap (10-15%) by standards of rural financing in Africa, including neighbouring Niger, which like Burkina Faso enjoys the monetary stability of the Franc zone.

The centralised model can presently be seen in the Tentièta Union of Dissin and COPSA-C of Founzan. The decentralised model has mainly been promoted under two large projects, PICOFA and PAPSA, implemented by government with the support respectively of IFAD and the World Bank.

One of Burkina's three collateral management companies also got involved in *warrantage c.*, working at about 15 storage sites round the country, in partnership with POs and two different MFIs. The company delivers warehouse receipts to the depositing individuals or groups so that they can obtain credit from the MFI, while it also supplies inputs and searches for markets. However, recent information from one of this company's sites suggests it is taking on too many roles and there is some lack of clarity over responsibilities.

The first experiences in Burkina Faso have had a strong food security orientation and the stored products are normally kept for household consumption or to be sold individually. In contrast, the FEPA-B organisation has adopted a more commercial approach, promoting collective marketing of stored products and

7 A workshop in July of the same year gave slightly different but generally compatible figures: 117 POs representing 5,868 people (about 75% men), depositing 35,417 bags of commodities, and borrowing FCFA 262 million.

it seeks to establish a national public warehousing system under the control of producer federations. However, the volume of commodities it is pledging is at present quite limited (about 5% of the national total in July 2013), and it is not clear how it will marshal the resources to undertake such a venture.

3.4.4 Experience in Senegal

The Senegal technical country report discusses two inventory credit schemes. The first was organised in the late 1990s by the *Crédit Mutuel du Sénégal* (CMS), a large MFI with nationwide representation. CMS acted as both financier and warehouse operator; and CMS members were encouraged to deposit in the warehouses. However, the activity was carried out without due regard to the elemental precautions for success and it failed due to poor warehouse management and security, a low level of repayment, and lack of a sense of appropriation by the producers *who spent most of their time dreaming up ways of circumventing the system*. This disappointing experience is somewhat surprising, given the considerable success CMS and other mutual MFIs have had in the provision of relatively unsecured production credit (*crédit de campagne*).

Inspired by the Nigerian experience, a pilot was implemented with maize and millet in Kaolack region (central Senegal), within the framework of an EU project. The participating farmers achieved average net margins of 24%, but the scheme stopped functioning at the end of the project. The unwillingness of the MFI to continue providing finance without continued project funding for logistical support raises a question about the sustainability of this initiative. The volume of grain handled was very small (30 t in three villages), and the investment of project funds in promoting could only be justified if it could be greatly scaled up - but there is no sign that this is going to happen.

3.4.5 Motivational factors

The popularity of *warrantage c.* can be attributed to the multiple functions the activity fulfils at the level of rural households. It allows farmers to save their harvests, put them beyond social pressures, to obtain off-season credit, and to market their crops at a higher price.

Farmers use *warrantage c.* primarily to improve the way they manage their agricultural products, and thereby improve their cash flow. It prevents them selling off much of their products at harvest time when prices are lowest, while the inventory loans allow them to meet their social and financial commitments and engage in revenue-generating activities. After repayment of the credit, they can sell the stock or hold it back for family consumption during the lean season when prices are relatively high. If a member cannot repay his/her loan,

the PO can sell the bags concerned, in agreement with the MFI, in order to reimburse the debt. Other advantages include: a reduction in indebtedness in the lean season; an increase in the ability to finance production in the following season (as a result of generating off-season revenue and revenue from selling redeemed stock in the lean season); the role of the activity in strengthening POs; and diversification of the rural portfolio of the MFIs that are financing the activity.

One of the most notable findings is the importance farmers in Niger and Burkina Faso place upon the *forced savings* aspect. While *warrantage c.* is a somewhat inflexible product, it does allow farmers to put their stock beyond the reach of family, friends and other pressures to contribute to all sorts of social events. This removal makes the product more robust. As noted in Section 3.2, average seasonal price rises for staple grains in Sahelian countries are not particularly high by African standards and they are extremely variable from year to year. Flat or falling prices (sometimes resulting from the distribution of food aid or sales *à prix modéré*) are clearly a demotivating factor. However, farmers may still find benefit in the savings aspect and the ability to hold stock until it is most needed later in the year, and this makes them less likely to stop using *warrantage c.*

3.4.6 Pros and cons

The Burkina Faso technical country report finds that *the centralised model is generally preferable* to the decentralised model, as it simplifies relationships with the financial institutions, reduces costs of credit (as the financial institutions discount their rates when the federative organisation takes over monitoring activities), and increases the chances of institutional viability. The grassroot POs promoted under the PICOFA and PAPSA projects lack higher level structures which would help them sort out problems after the end of project assistance (e.g., delays on the MFI side, failure to obtain suitable grain bags).

The Burkina country report goes on to suggest that the centralised model could gradually evolve into a national system that offers producers storage services, input supplies and collective marketing. Notwithstanding, centralisation can have its downsides, and it may work well where the MFI (such as Asusu SA in Niger) is proactive in reaching out to grassroot POs.

The main strengths of *warrantage c.*, both centralised and decentralised, are the strong local demand; the versatility of the product (savings, credit and marketing); its simplicity and adaptability to the local environment; the diverse forms of motivation (including the forced-savings aspect which makes it more

robust in the face of market uncertainty); and its success in terms of credit repayment (100%). The main weaknesses of *warrantage c.* are: its dependency on donors for storage infrastructure; poor storage practices - (e.g., overfilling stores and misuse of phosphine-based fumigants, particularly noted in Burkina Faso); and a rather thin microfinance sector (particularly in the case of Niger).

The approach of the *Fédération des Caisses Populaires du Burkina* (FCPB), which dominates microfinance in rural Burkina and is represented in all but one department, can be seen as both a source of strength and weakness. On the positive side, its local branches are the main financiers of *warrantage c.* in Burkina Faso. However, it could be argued that unlike the situation with the mutual MFIs in Madagascar, its approach to community inventory credit has been somewhat passive, largely one of responding to approaches from projects and NGOs, and that it might be missing an opportunity to proactively use it as a tool in developing its rural clientele. The product represents a very small part (about 1%) of its agricultural lending portfolio, very low compared to rates of 40% or more of the total lending portfolio in some Malagasy institutions. However, the underlying differences in crops, price variability, and other factors may explain a large part of this difference. At the same time FCPB's perspective on things is quite different from that of the Malagasy MFIs⁸.



The centralised model is generally preferable to the decentralised model

The main opportunities with *warrantage c.* lie in the favourable consensus among relevant players (government, POs, financial institutions, donors/IFIs, and NGOs), and the appearance of new financiers (MFIs and banks). The main threats are price risks (given irregular seasonal price rises) and market interventions by the parastatal institutions (e.g., SONAGESS in Burkina Faso) that can affect the profitability, and even the existence, of the product. Coulter (2012) noted a trend towards increasing interventionism in Burkina, and this was confirmed by Yameogo (2013), who surveyed 101 POs while studying this subject. Among other things, Yameogo found indications that intervention was lowering the profitability of *warrantage c.* and detected specific cases of farmers miss-selling as a consequence of official selling *à prix social*.

8 The country report makes the following observations: FCPB increasingly wants to orient its activities towards the centralised model, finding community inventory credit too onerous a product to manage without a reliable PO federation which can monitor storage and destocking operations, and the monthly situation in the warehouses. There is also a problem of motivating branch staff, given that credit officers are remunerated in part on the basis of the number of credit applications. Abandoning their post in favour of a monitoring tour in the villages represents a financial loss for them apart from the inconvenience of having to go there by motorcycle.

3.4.7 Conclusions

While particularly noted in Senegal, sustainability is an issue in all the subject countries. There are clearly strengths and weaknesses in this area.

Warrantage c. has some strong *elements of sustainability*, including: local appropriation; strong peer pressures (with members providing, explicitly or implicitly, a mutual guarantee of repayment); a strong relationship of accountability with the lender; the forced savings aspect which makes it easier to handle widely varying seasonal price movements; decentralised management which does not depend on legal frameworks or regulatory institutions (which often do not work); and not requiring costly CMs or insurance cover (most risks can be covered by mutual guarantees among members, or between POs belonging to the same federal structure).

On the other hand, certain *features detract from the sustainability of warrantage c.*, notably: the inflexibility of the product (a largely fixed calendar for depositing, borrowing and reimbursement); the absence of effective mutual MFIs present in the area where the farmers live (especially in the case of Niger; although not so in Madagascar); dependency on outside support to build warehouses; the need for continuous and sustained educational inputs; government actions that upset market fundamentals and cause depositors to lose money (a repeated problem); and the limited ability of small producers to *play the market*.

However, the approach has *some significant positive externalities*, including allowing farmers to hold stocks back in rural areas and making the population more resilient in face of crises. In this regard, *warrantage c.* has outperformed the *cereal banks*, a rural institution promoted since the 1970s, but with more serious sustainability challenges, have tended to decapitalise over time. The cases of the Mooriben Federation and FEPA-B also suggest that *warrantage c. might serve as a stepping stone towards more market-oriented forms of organisation*, including marketing cooperatives, the involvement of CMs and public warehousing systems. It is in the light of these factors that it may be possible to justify further external support for *warrantage c.* However, the Senegalese pilot in Kaolack region highlights an *important risk with the Type A model*: that it may be implemented in order to produce a short-term success story, but without due regard to long-term sustainability.

Warrantage c. initiatives absorb a large amount of project resources on promotion, training and mentoring participants, monitoring uptake and building warehouse infrastructure. For example, in the case of Niger, Coulter and Mahamadou (2009) estimated that FAO and collaborating organisations

had spent around US\$ 4.7 million on it under the auspices of the *Projet Intrants*, which is equivalent to about US\$ 1,000 per ton of product stored per annum as of 2008/09. Continued expenditure of this kind can only be justified when there are prospects for very large scale and sustained adoption of the tool. A key advantage of Type A compared to Type B and C financing is that it is less scale-dependent: groups of farmers with warehouses of 20 t capacity can use it profitably, whereas with Type B and C financing, the minimum economic scale is, arguably, in the thousands of tons per site (see Section 4.3.6 and Box 1). However, scale economies are important to the socio-economic case for spending public and project resources on the development of *warrantage c.* and other Type A approaches.

3.5 Scope for community inventory credit in Mozambique?

Mozambique is a difficult environment in which to establish smallholder oriented inventory credit, but this study has nonetheless led to the formation of a working group that is planning to pilot a scheme with a few groups.

The levels of seasonal price variability for maize are extraordinarily high by Southern African standards; but there are some serious constraints, notably: the poor state of microfinance provision and the lack of MFIs willing to engage in WRF; the comparatively poor levels of producer group management capacity (despite many years of NGO focus on farmer group development); and the high rates of interest. A further constraint affecting commercially-oriented smallholder marketing schemes are the poor quality (in terms of dirt and grain size differentiation) of delivered maize (Mozambique being considered as one of the worst of all countries involved in the P4P programme in this regard). Additionally, there is uncertainty about the availability of sufficient small and suitable community-based warehouses.

The WFP in Mozambique had adopted a system for evaluating PO preparedness using six principal variables (including governance, types of assets owned, financial controls) which was developed by the Inter-American Institute for Cooperation on Agriculture for the P4P programme in Honduras. All 20 POs surveyed scored low.⁹ This adverse finding was reinforced by a 2011 evaluation of certain producer associations in Niassa province.

Given the key role inventory credit has played in Mozambique, Niger and Burkina Faso, the study looked carefully at the potential contribution of the microfinance

9 All 20 received a score of less than 3 (a score higher than 3 would be considered good).

sector. Despite the rapidly expanding presence of commercial banks and MFIs in rural areas, access to agricultural finance has been declining. An important factor has been the polluting effect on farmer credit mentality of government subsidised *loans* which impose no sanctions on defaulters. Meanwhile, a variety of donor-funded guarantee funds have so far had little impact.

Government publicity emphasises the significant inroads made through the Central Bank's bancarização policy of promoting rural outreach of the commercial banks and the rapid growth of rural-based microfinance institutions



Despite the rapidly expanding presence of commercial banks and MFIs in rural areas, access to agricultural finance has been declining

supported by the IFAD and AfDB-funded Rural Finance and Support Programme (PAFIR). Bancarização has led to an impressive expansion of the commercial banking network, but its primary objective has been the mobilisation of rural savings to serve urban clients, with credit being limited mainly to salaried clients. The concept of establishing a broad network of subsidised rural microfinance institutions was

poorly conceived, and most of the institutions established by PAFIR have either gone bankrupt or are likely to do so (due to inexperienced management or unsustainable operations).

AFD promoted a microfinance initiative to target smallholders through an entity now called CCOM in Cabo Delgado province in the late 1990s. It worked on establishing remote associations of solidarity groups lending mainly for the production of food crops (maize) and repaid by cash obtained from cotton sales. The initiative was replicated by the SDC-financed RCRN in Nampula province. There have been other initiatives targeting smallholders, but all have withered except for the CCOM which is cross subsidised by urban operations. What were once promising initiatives to provide financial services to smallholder clients are found to be now falling victim to rationalisation and sustainability concerns. The only true positive development in microfinance has been the rapid growth of community-based savings and credit groups (CBSGs) which are now being promoted by around 30 organisations.

At this stage, Banco Oportunidade (BOM) is the only microfinance operator or non-MFI commercial bank that is willing to become engaged in warehouse receipt financing in a serious way. Since 2010, BOM has been providing credit with considerable success to selected associations and second-tier forums; it has enthusiastically embraced bulking loans due to the minimal risk arising from the off-taker arrangements (mainly with WFP and a few agri-businesses

with contract farming arrangements). So far, virtually all loans have been recovered and the portfolio has been increasing substantially. BOM has been enthusiastic about this arrangement; it now believes that some of the POs are ready to enter into warehouse receipt financing (WRF).

In the light of this finding, the author of the technical country study initiated discussions with BOM and other players, under the auspices of this study. This resulted in a *working group on WRF* involving IFAD and EU-financed Programme for the Promotion of Agricultural Marketing (PROMER), WFP, the Dutch NGO SNV and BOM. It is hoped that a pilot can be initiated with one or two well-functioning producer groups before the start of the next growing season. One lesson learned from two failed pilots was the need for a temporary buffer fund which would cushion (the few) years in which prices fell in order for farmers to become accustomed to the benefits of WRF.

3.6 Cameroon

There have been some inventory credit initiatives in Cameroon including:

- (a) a scheme for grains and agricultural inputs in the north of the country involving members of the Cotton Producers Association (APCC), the MFI Crédit du Sahel, the cotton parastatal SODECOTON and the Islamic Development Bank (as financier)
- (b) the government and IFAD-backed PADMIR project which is specifically concerned with microfinance.

The first of these schemes is described as having worked *more or less with success* for cereals and agricultural inputs. The author proposes promoting warehouse receipting in the zones covered by the PADMIR project, particularly in the northern areas which are suitable for cereals and onions, in order to use it as a learning platform for the microfinance sector. Such a project should be preceded by a national inventory of warehouses and silos, and the effort should be accompanied by technical studies.

3.7 Legal and regulatory considerations with Type A financing

When practised on a small decentralised scale, the legal regime for Type A financing appears to be of limited relevance. Of course, the POs and MFIs involved will need to document their transactions and some guidance on this

and other matters relevant to Type A financing can be obtained from the *Guide to Good Practices with Community Inventory Credit* produced by the Projet Intrants in Niger. In cases where participants take a more market-oriented approach using larger central storage facilities, Type A financing takes on characteristics of Type B and Type C financing, and the legal considerations for these types become more relevant. Table 3 sets out some of the potential legal issues in more detail.

Table 3: Legal issues relevant to developing Type C financing

Relevant legal issues	Addressing the legal issues
<i>Ownership and management of the storage facility</i>	<p>If the scheme is expanded to include storage in centralised facilities, the identity of the owner of that facility becomes relevant. The warehouse might be owned by the financier or by third parties. Where third parties are involved, this raises some legal considerations. In particular, the warehouse operator's obligations to, and rights against, the depositor and financier must be documented (or set out in a regulatory regime). This documentation needs to include setting out the circumstances when the warehouse operator will release the stored goods and to whom. The extent of legal recourse to the warehouse operator in cases where the stored commodity is damaged or lost must also be established.</p> <p>There are also certain non-legal matters to consider, such as the cost of upkeep and management of larger storage facilities, which would usually be covered by charging storage fees passed onto the farmer. Certain Malagasy MFIs charge storage fees at far less than economic cost, and this seems to subsidise farmers living close to the storage facility.</p>
<i>Legal status of farmer groups</i>	<p>Generally speaking, it is possible for POs in the subject countries to take on the status of a legal entity (such as a cooperative). In some cases, POs may be more informal and not have legal personality. In any case, it is important to understand what legal person or entity has title to the underlying commodity and what legal person or entity is entering into any contractual agreement.</p>
<i>Protecting against risk of loss</i>	<p>The potential loss of the crop used as collateral will always be a practical risk. As volumes grow, protecting against this risk becomes of greater concern. However, any regulation in this respect needs to be proportional, so as not to adversely affect the access of smallholder farmers to finance.</p> <p>One measure that (fortunately) is not strictly applied is the OHADA Securities Act requirement that stocks in all warehouses are insured, ignoring the possibility for some producer organisations in receipt of inventory credit to mutualise their risks. For example, it is quite possible for a union of 20 producer organisations, each with its own village store, to mutualise its fire and theft risks, since it is unlikely that more than one store would suffer damage at once.</p>

Relevant legal issues	Addressing the legal issues
<i>Taking security</i>	Where there are larger volumes of crop being stored and financed, the financier may want <i>legal</i> security rather than relying on <i>practical</i> security alone. In this case, the various difficulties in the subject countries of taking security over stored goods become relevant. Where farmers are represented by a PO, it is important that the party who has title to the commodity is the person granting security over it.
<i>Identity of participants</i>	As currently practiced, Type A financing generally involves small groups of farmers from the same community who are well-known to each other. When practiced on a larger scale, legal systems to assist financiers in properly identifying individuals and legal entities, such as cooperatives, may be helpful.
<i>Dispute resolution</i>	The authors have not been able to obtain a great deal of information regarding the dispute resolution process for Type A financing. However, it typically involves local committees and general meetings of members where such matters can be discussed. Where Type A financing is practiced on a larger scale, more formal dispute resolution procedures may be needed. The appropriate forum for different types of disputes may vary.

At present, there is not much regulatory scrutiny of Type A financing in the subject countries. However, as indicated in Section 3.3, there is a pressing need for some in Madagascar, given that the scale of GCV lending and its importance in the lending portfolio of several major MFI networks. At the same time, the transition towards more centralised forms of warehousing gradually strengthens the case for a regulatory regime. Significantly, the Government of Burkina Faso has commissioned a study to propose legal and regulatory reforms with a view to developing community inventory credit, CM and inspection services. Regulatory initiatives with Type A financing will need to tread a fine line between the need to better manage risks and the avoidance of undue administrative burdens and costs on the players involved.



4 Private warehousing (Type B)

4.1 Introduction

A private warehouse is one that is not open to deposits by the public, but only available on a contractually agreed basis. It may be owned and/or operated by a third party, such as a collateral manager (CM), or it may belong to the borrower but be leased to a CM (which is referred to as field warehousing). In either case, the warehouse may also be used to store commodity that is not subject to the same financing arrangement and/or commodity owned by other parties.

The normal contractual framework for private warehousing is a collateral management agreement (CMA), typically a tripartite arrangement among: (1) a lender, providing financing against goods under a warehouse receipt; (2) a borrower who owns the stock being used as security for the loan; and (3) a CM, who takes control of the underlying security for the loan in the form of the commodity stock. Sometimes an importer or exporter is also party to the agreement. The CMA sets out the rights and obligations of the parties in relation to the secured goods. Given the importance of the role played by the CM, the financier usually has the last word as to whom to appoint to this role. The CM will issue to the lender warehouse receipts in relation to any particular goods that the lender deposits in the warehouse and thereby tells the lender that he is holding the goods as loan collateral. Unlike the situation with public warehouses (see Section 5), the normal practice of private warehouses in Africa is to issue the warehouse receipt to the lender, not to the borrower.

Field warehousing involves some special practical and legal issues (see Sections 4.3.1 and 4.7, respectively).

The same CMs who engage in this activity may alternatively be employed by the banks to carry out stock monitoring, under stock monitoring agreements (SMAs). Indeed, a single company may assist banks with different risk mitigants

(e.g., CMAs, SMAs and/or management of receivables) at different levels of the value chain. Further information about the mechanics of private warehousing can be found in Section 4.3.

With some exceptions (notably in Burkina Faso and Uganda), smallholder farmers do not make much use of private warehousing services. This is because cooperatives and organisations representing smallholder farmers tend to lack the means to hire a CM and/or they do not enjoy the confidence of financiers. Additionally, the remote location of producers and their organisations poses a challenge to financiers and CMs. The main relevance of CMAs (including field warehousing) to this study is that it is an important element in the supply chain for agricultural commodities. As such, if it works well and is cost-efficient, smallholder farmers tend to benefit through knock-on effects.

4.2 Distribution of the activity in subject countries

In the wake of the market and financial sector liberalisation of the 1980s and 1990s, international inspection companies and logistics companies increasingly began providing stock monitoring and collateral management services in support of financing of imports and exports. It was a time when many new players entered the import and export trade and the banks increasingly used these services to mitigate the risks involved. During the new millennium, local companies have moved into the business, either independently or in association with international players.

A wide range of imported commodities (notably rice, sugar, fertiliser, frozen fish and cement, as well as a range of consumer goods such as wine, cigarettes and canned sardines and items such as spare parts and reinforcing rods) are collaterally managed in and around the ports; this service assists importers in financing stocks prior to distribution or sale within the countries concerned. In the case of Senegal, it is estimated that 80% of imported cereals are financed in this way (i.e., over 800,000 t of rice and 100,000 t of maize). Such deals have proved a relatively safe and remunerative way for banks to place their funds.

Many exported commodities are similarly handled, normally as part of structured financing deals. The level of involvement with exported commodities depends on: (1) the volume and value of exports; (2) whether the countries concerned have liberalised the trade in such commodities; and (3) the involvement of local exporters, as opposed to multinationals. Each of these points will be discussed in turn, referring to comparative export figures for 2011 in Tables 4 and 5; durable commodities that are exported to the World

market are also listed, although these exclude perishables and commodities which are overwhelmingly for regional trade (and therefore are not likely to be collaterally managed).

Volume and value of exports

Among subject countries, Côte d'Ivoire and Ghana dominate in terms of exports, accounting for 43% and 23% respectively by volume and 50% and 24% by value. The very low figures for Niger show that some of this country's exports are not officially recorded, notably exports of tiger nuts and paprika passing through Nigeria. As regards commodities, cocoa beans and cocoa products together account for 46% of the total volume and 59% of the value. The other main commodities, in order of value, are natural rubber, cotton lint, coffee, cashews, palm oil, sugar, tobacco, spices and essential oils, sesame seed, groundnut oil and tea.

The impact of liberalisation/non-liberalisation

Some countries that have not liberalised tend not to use CMs. This is the case with the Ghanaian COCOBOD, though it employs an inspection company to monitor operations in the port of Takoradi and banks employ CMs at local processing facilities. This means Ghana's main export (cocoa beans) is not available to be collaterally managed, unlike those of the other two main producers, Côte d'Ivoire and Cameroon. This situation further increases the relative importance of collateral management business in Côte d'Ivoire among the subject countries.

The partially liberalised francophone cotton sector makes considerable use of inspection companies; in Côte d'Ivoire the policy has been to employ them for monitoring and risk mitigation in up-country locations and to have them collaterally manage the bales of cotton lint in the ports.

The involvement of local exporters

It is believed that less than half the exported commodities are collaterally managed. Indeed, Madagascar makes no use of CMs. The service is primarily made available to local exporters that do not belong to international groups and therefore cannot access low-cost funds in the international market-place. However, this is not a hard and fast rule; multinationals often make use of both collateral management and monitoring services in mitigating risks though the supply chain.

Table 4: Principle exports from subject countries to the world market (2011) in 1000 t¹⁰

Country	Burkina Faso	Niger	Senegal	Ghana	Côte d'Ivoire	Madagascar	Cameroon	Mozambique	Uganda	Total
Cotton	159	-	14	-	70	-	56	16	26	341
Cashews	84	-	-	145	280	1	-	39	-	549
Cocoa beans	-	-	-	697	1,073	8	190	-	18	1,986
Cocoa products	-	-	-	51	224	-	24	-	-	299
Coffee & extracts	-	-	-	1	38	4	31	-	186	260
Tea	-	1	-	-	-	-	-	1	56	58
Palm oil & kernel oil	-	-	-	50	272	1	5	-	31	359
Groundnut oil	-	-	58	-	-	-	-	-	-	58
Natural rubber	-	-	-	15	259	-	32	-	-	306
Sugar	16	16	4	225	5	20	4	162	105	557
Sesame seed	59	1	-	5	-	-	-	26	15	106
Spices + ess. oils	-	-	-	-	-	30	-	-	2	32
Tobacco	-	-	2	-	-	-	-	53	18	73
Total	318	18	78	1,189	2,221	64	342	297	457	4,984

Note: perishable products and products mostly for regional trade not included

10 Source: FAOSTAT.

Table 5: Principle exports from subject countries to world market (2011) in US\$ millions¹¹

Country	Burkina Faso	Niger	Senegal	Ghana	Côte d'Ivoire	Madagascar	Cameroon	Mozambique	Uganda	Total
Cotton	265	-	24	-	138	-	114	40	86	667
Cashews	62	-	-	170	273	1	-	68	-	574
Cocoa beans	-	-	-	2,207	3,029	17	512	-	45	5,810
Cocoa products	-	-	-	205	875	-	92	-	-	1,172
Coffee & extracts	-	-	-	-	116	7	72	-	460	655
Tea	-	1	-	-	1	-	-	2	72	76
Palm oil & kernel oil	-	-	-	50	292	1	10	-	43	396
Groundnut oil	-	-	79	-	-	-	-	-	-	79
Natural rubber	-	-	-	63	1,132	-	131	-	-	1,327
Sugar	-	7	3	120	5	15	4	106	80	340
Sesame seed	57	0	-	-	-	-	-	31	17	105
Spices & ess. oils	-	-	-	-	-	264	-	-	9	273
Tobacco	-	-	19	-	-	-	1	217	46	283
Total	384	8	125	2,815	5,861	305	936	463	853	11,756

Note: perishable products and products mostly for regional trade are not included

The funds involved in collaterally managed products can be quite large. Estimates vary, but it is believed that approximately 40% of Ivorian exports are collaterally managed in and around the ports of Abidjan and San Pedro; additionally, an estimated 90% of supplies from landlocked Mali and Burkina Faso are also collaterally managed. If one accepts these figures and allows for relevant Malian exports of US\$ 241 million, the banks in Côte d'Ivoire would have needed to mobilise about US\$ 2.6 billion to finance collaterally managed commodities going for export in 2011, in addition to a large volume of imported commodities. This funding level is very significant, particularly for local and regional banks which are the ones that provide most of the finance under CMAs. So it is not surprising that one bank to whom the authors spoke

11 Ibid.

strongly favoured the introduction of negotiable warehouse receipts on the grounds that this would better manage its liquidity, enabling it to refinance its WR loan portfolio on the interbank market.

The scale of collateral management in landlocked countries is relatively small. For example, in Uganda, an estimated US\$ 500,00 was spent on CM in 2007, suggesting that companies engaging in it would need other sources of income, for example inspection, capacity building and consulting activities in order to survive. One explanation for this is that multinationals dominate the export of the leading commodity (coffee) and are not in need of CM services. However, it is believed there has been significant growth in that market since 2007.

4.3 How the system works

4.3.1 Contractual and security framework

Collateral management agreements (CMAs - French *Conventions de tierce détention*) are largely standardised throughout the African continent. Some CMs are logistics companies that own or hold long leases on the warehouse in which they provide the service. In other cases, they are inspection companies or credit management specialists that do not own warehouses but must rent them so they can provide the service. Depending on the circumstances, the CM will either find the warehouse, or will take over the borrower's warehouse under a rental agreement that provides for the CM to pay a small rent.

This latter arrangement, known as field warehousing, often makes logistical sense, particularly when the product is being processed on the same site. It gives the borrower the benefits of inventory financing and the lender effective security, without the borrower needing to move the goods to the warehouse of a third party. In a typical field warehousing arrangement, the CM has staff on site at the field warehouse during working hours and locks the warehouse (often placing seals) for non-work hours, during which there is external security. The CM puts his own staff into supervisory positions, so that they can supervise the depositor's staff as they carry out the physical operations of handling intake, cleaning and drying, primary processing, bagging (if appropriate), storage and handling outtake. Alternatively, the CM may take over the labour contracts of these staff and bond them, with a view toward ensuring their loyalty, or it may bring in its own staff to replace them.

While these practices provide the CM with formal control over the store, risks of theft and malpractice are higher with field warehousing than when the

borrower brings the stocks to the CM's own warehouse, given the need to coordinate with borrower's on-site staff, and the fact that it is usually the borrower and not the CM that provides the external security. The relevant legal issues are discussed in Section 4.7.4.

Once the borrower's loan has been repaid, the financier issues a release warrant to the CM authorising the latter to release the stock to the borrower or a nominated buyer. In some cases, the financier issues a *trust receipt* authorising the borrower to withdraw the commodity without repayment for the purpose of sale, but during such time the borrower holds such commodity and its proceeds on trust for the financier.

4.3.2 The stock monitoring alternative

With stock monitoring the goods are stored in a warehouse (owned by the borrower or a third party) and monitored by a stock monitoring company (or by the financier itself). Stock monitoring arrangements differ from collateral management in the following key ways:

- (a) A CM is responsible for the commodity 24 hours a day, 7 days a week. By contrast, a stock monitor will inspect the goods at agreed intervals and report to the financier.
- (b) A CM has full responsibility for the delivery of the commodity back to the depositor (the out-turn guarantee) and for any loss of the commodity in its control. The CM must be fully insured to this effect. A stock monitor's liability for any loss of the monitored commodity will be limited to losses directly related to its own negligent and/or fraudulent acts.
- (c) A CM will have possession of the commodity, meaning possessory security over that commodity can be perfected by the CM taking possession of the commodity on behalf of the financier (this is *constructive possession*). A stock monitor does not have possession of the goods, meaning that possessory security will not be an option for the financier. In the OHADA region, for example, this would mean that a possessory pledge would not be possible and any security over the commodity would need to be registered with the official collateral registry (RCCM).

From a legal perspective, stock monitoring arrangements are documented similarly to collateral management arrangements. If the warehouse operator is a third party, their role and responsibilities will also need to be documented.

4.3.3 Insurance cover

When operating under a CMA, the CM will ideally provide all risks insurance covering fire, floods, earthquake, employee fidelity and burglary for the warehouse and its contents and professional indemnity insurance in excess of the value of the loan to cover its professional obligations and sanctity of the security against which the loan is being made. International CMs often



A stock monitor's liability for any loss of the monitored commodity will be limited to losses directly related to its own negligent and/or fraudulent acts

cover their risks through global policies that apply to all their operations around the world. In the case of Ghana, the combined costs of insurance policies typically range from 0.7% to as high as 1.5% of the insured value, depending of the assessment of the risks by the insurance industry. There is no indication that banks require life policy of key managers or owners of the borrowing company.

In practice this is a complex area where banks must look at the small print, the level of cover and exclusions. Due to the worldwide incidence of fraud in this industry, by far the most expensive component of the insurance premiums is fidelity and professional liability cover. Hence, one way of reducing costs is to lower the insurance requirements in this area. The author encountered a Nigerian CM who did not provide cover for these latter items, but who sold his company on the strength of its internal organisation and supervisory capabilities. In the case of Uganda, fire and burglary cover is considered mandatory, while *all risk* insurance is widely used, but is not always required by the banks. However, in Burkina Faso, most CMs claimed to take out all risks insurance and professional indemnity cover.

4.3.4 Valuation methods and managing market risks

If the stock of commodities has a history of high price volatility and/or if there is a limited or no immediate market for the stock, there is a high probability that, if there is a default on the loan, the underlying commodity may not fetch enough forced sale value to meet the loan repayment, including accrued interest and other charges. In this instance, two risk management tools are used by lenders: (1) a deep discount (*haircut*) on the market value of the commodity stock at the initiation of the loan contract, to provide buffer against price fall, and (2) a secondary security in the form of fixed asset or liquid financial instrument with value in excess of the loan, in addition to the pledge of the warehouse receipt to the lender.

Methods used for the valuation of agricultural products under storage in a warehouse vary depending on the underlying off-take contracts, price volatility of the underlying commodity stock and the marketability of the underlying stock. For example, in Ghana most banks financing local commodities through inventory credit use the market price (Esoko reference, Kintampo) as the benchmark; they discount these prices from between 70% to as low as 50% in determining the value for lending. However, if there is an off-take contract for the maize, then the contract price is used as a reference and discounted on the basis of an assessment of the risk of the off-take contract and the payment instruments.

4.3.5 Out-turn guarantees and quality management

The CM will be responsible for redelivery of the stored commodity to the depositor and this is termed as the *out-turn guarantee*. In practice, CMs take a very different approach to quality management and grading than what one typically finds in public grain warehousing (Type C) as it has developed in North America, South Africa and elsewhere - or indeed for export commodities stored in warehouses of the Ethiopian Commodity Exchange (ECX). In these cases, the warehouse operator normally has laboratory and testing facilities on site, sufficiently sophisticated to be able to take samples and grade the commodity on the spot (for example as *US No. 1* or *US No. 2 yellow corn*) and they guarantee full out-turn in terms of quantity¹² and grade at the moment of delivery, as long as the commodity is within its agreed shelf-life.

In contrast, the practice of CMs working in Africa is often only to guarantee to the borrower, or his nominee, the same number of containers (e.g., bags, boxes) that it received into storage. Sometimes they provide a *full out-turn guarantee* (FOG) for the tonnage of the commodity stored and more occasionally they will provide an additional full out-turn of quality (FOQ) guarantee - though the fees will be correspondingly higher. Often they have no laboratory testing facilities on site, but will take samples and have them analysed locally or overseas at a qualified or accredited laboratory.

Some higher value commodities are prone to lose quality and value within a few months (notably the case with cocoa), so there may be good reasons why the CM will not wish to guarantee a particular quality or grade. Re-absorption of moisture can be a hazard with grains in very humid parts of Africa. Notwithstanding, there are many areas of the continent, particularly inland and higher locations, where it is possible to guarantee quantity and grade of grains within periods upwards of 6 months. Indeed, this is vital if the

12 The warehouse operator may charge a standard shrinkage allowance (e.g., 1 or 2%), but this needs to be known in advance.

product is to be commingled with those of other depositors and the warehouse receipts are to be transferable. Otherwise the depositor or the subsequent holder of the warehouse receipt will not know what quality he/she is getting.

Hence if CMs wish to provide public warehousing services to farmers and others in up-country areas of the African continent, they will need to review their approaches and traditional caveats and bring them more into line with the North American/South African model.

4.3.6 Service charges

CMs normally charge a fixed fee per site per month; this charge can vary according to the job and the type of company (i.e., whether it is a European-based company, an African subsidiary of a European company, or a local African company). European-based companies will typically be the most expensive as the parent company takes full corporate responsibility and charges can range up to US\$ 10,000 (about € 7,400) per site per month. Local African companies are cheaper and can cost as little as US\$ 1,000 (about € 750). Many port-based contracts cost around US\$ 3,500 (about € 2,600). This excludes the cost of store management, physical goods handling and operational expenses. The CM charges additionally for the insurance cover (discussed above) and for fumigation (if required).

The fixed nature of the CM's costs and charging structure is a barrier to their use by smaller depositors. For example, if a CM takes over a 50 t farmer group warehouse and charges US\$ 1,000 per month, the cost per ton per month is upwards of US\$ 20, a rate that is unthinkable for cereal products worth around US\$ 200 (about € 150) per ton. In some cases, however, CMs charge on a per ton basis, which makes the service more accessible to small depositors. This is the case with the CMs handling coffee, cashews, et cetera in Côte d'Ivoire. One of them charges € 2.50-3.00 per ton per month for storing cocoa or cashews, *inclusive of insurance cover* when storing in the ports. When storing in up-country locations it charges an additional fixed fee of € 700-800 per site per month. Another CM in Burkina Faso charges FCFA 200-250 per 100 kg bag (€ 3.00-3.80 per ton-month) for collaterally managing cereals and another collaterally managing rice (seed, paddy, milled and parboiled) charges between 1.5% and 3% of the value of the financing agreed by the bank.

On whatever basis collateral managers or warehouse operators charge, their operation is very scale-dependent and, if they handle low volumes of commodity, they will struggle to break-even - see Box 1.

BOX 1: SCALE ECONOMIES IN TYPE B AND C OPERATIONS

There are major scale economies both in the operation of warehouses and in the regulation them (where such regulatory regimes exist). Each of these are discussed in turn.

At the level of warehouse operation

In the case of Type B operations, scale economies are a function of the collateral manager's high fixed costs per site. In the case of Type C operations, Onumah *et al.* (2013), using information from the Tanzanian Warehouse Licensing Board (TWLB), estimate that a grain warehouse in Tanzania charging US\$ 13.20 per ton for a six-month season need to hold at least 1,435 t in order to achieve break-even. The break-even revenue is US\$ 18,942 for the warehouses, i.e., US\$ 3,157 per month of storage. The latter figure is as much as three times collateral management charges in rural Tanzania and it includes the cost of renting warehouses. In reality, however, many warehouses in rural Tanzania have lain idle since international agencies funded construction programmes in the 80s and early 90s and they do not cost their users very much. In practice, the storage capacity of most grain warehouses licensed by TWLB averages about 392 t, which is far below the break-even level indicated above. Another technical specialist with experience in Tanzania estimated that the minimum economic scale for a Type B maize warehouses was of the order of 3,000–5,000 t (Allan McNeil, pers. comm.).

Warehouse operators can mitigate the economies of scale problem by carrying out additional activities at the same site such as processing, brokerage, sale of inputs or even trading in the outputs. In doing so, they can generate a range of revenue streams with which to cover the fixed costs. Indeed, this is how Type C public warehouse operators work, notably in North America and South Africa. However, a company operating in this way can have conflicts of interest between its trading and service functions and thus lose the confidence of depositors, which is one reason why public warehouses are sometimes very strictly regulated (notably in the USA). It also explains why inspection and logistics companies doing collateral management have strict rules against trading in the commodities they store for third parties.

At the regulatory level

The economics of regulation is only challenging when the value of commodities handled is limited and/or financial resources are limited. These do not appear to be constraining factors in the one country, Côte d'Ivoire, that regulates Type B warehousing, since the relevant organisations are funded through export levies on the four export commodities that are regulated and for which the combined export value was US\$ 4.4 billion in 2011.

Funding is likely to be most constraining with Type C warehouses regulating storage of domestic staples. One cannot rely on export levies; the most acceptable way of generating income is by charging user fees on licensed warehouses. However, fees have to be kept modest in order to deter participation in the scheme. There is very limited experience on the cost of regulating Type C operations in Africa. In 2001, the UK Natural Resources Institute (NRI) working in Zambia, estimated that in order for the regulator to break-even, the regulated warehouses would need to handle 100,000 t of maize per annum, with six months storage. Theoretically speaking, a regulatory agency could be permanently funded from the government budget, but in practice this would be undesirable as it would render it vulnerable to reductions in public funding and political influence in professional/managerial areas.

Table 6 summarises what the authors learned about collateral management companies operating in the subject countries. All companies that provide CM services also provide SM services, but some companies only do stock monitoring.

Table 6: Collateral managers and related service providers in study countries

Country	International companies & affiliates		Local and regional companies	
	Collateral managers	Stock monitoring only	Collateral managers	Stock monitoring only
Burkina Faso	Bolloré Group		Segas-BF Expertis Auxigages S.A.	
Niger			Auxigages S.A.	
Senegal	ACE Bolloré Group DCL	SGS	Transsene	
Ghana	DCL ACE CMI	SGS Ghana Insp. Co. Unicontrol (Katoen Natie gp)	Ecosafe DMT Mondial	
Côte d'Ivoire	Katoen Natie Bolloré Group CWT ACE DCL	SGS		
Madagascar		SGS		
Cameroon	Certispec ACE DCL Unicontrol (Katoen Natie gp.) La Griffé du Littoral Bureau Veritas	SGS		
Mozambique	DCL	SGS Intertek		
Uganda	ACE DCL	SGS	Coronet	

Note: DCL = Drum Commodities Ltd. provides all services from its UK offices

Collateral management has been largely dominated by the local subsidiaries of international inspection and credit management companies (including SGS, Bureau Veritas, Cotecna, ACE and Baltic Control), normally working through local subsidiaries. Some of these companies have been badly affected by warehousing frauds, which typically affects stocks of high value commodities

entering international trade, notably coffee, as well some lower value commodities such as rice and wheat. This fraud has driven up the cost of professional indemnity insurance, making it difficult to do business. Some companies have reacted by ceasing to use their local subsidiaries and handling all their CM business from their European headquarters, but more often they have ended up completely withdrawing from the business and concentrating on less risky inspection and stock monitoring. Recently, the international inspection company SGS has taken the latter road. At the same time a relatively newcomer, the UK-based Drum Commodities Ltd. (DCL), has taken a leading position in the industry and it is promoting its services vigorously around the world.

In the case of Côte d'Ivoire, three large international logistics companies now dominate collateral management of exported commodities, Bolloré Logistics, Katoen Natie and CWT. These are players with very strong balance sheets and international reputations to defend, which gives considerable comfort to the banks. Moreover, Bolloré owns much of the warehousing capacity in the ports. Bolloré is mainly involved with cotton and cashew, whereas Katoen, CWT and ACE work in coffee, cocoa, sugar, rice, palm oil, fertiliser, wheat and other agricultural commodities. ACE also does a lot of monitoring activity on behalf of the State, particularly in support of input subsidies and price support, while DCL is only involved with imported sugar and rice.

Until recently, most of the Ivorian-based CMs (with the exception of ACE) have been exclusively active in port cities; but now that the security situation is getting back to normal, they are increasingly locating inland, particularly in the town of Bouaké so that they can do cashew and cotton. Parties interviewed attribute the reluctance to operate inland to other factors as well, including the lack of adequate warehouses, power, internet and insufficient bank branches in the interior of the country.

The situation is somewhat different in neighbouring Ghana, where local companies increasingly dominate the scene. The Ghana technical country report names three Ghanaian companies (Ecosafe, DMT and Mondial) which have joint ventures or other reciprocal arrangements with European companies.

Albeit on a much smaller scale, the landlocked countries of West Africa have in recent years seen considerable development in the collateral management field. At least three new collateral management companies are now active, apart from the Bolloré Group, a logistics and freight forwarding giant well established throughout the region. Auxigages SA is a subregional company

with its headquarters in Mali and with additional presence in Guinée Conakry, Senegal, Niger and, since the end of 2012, in Burkina Faso. It works in partnership with Ecobank, Atlantic Bank and BSIC. Expertis S.A. was established in 2009 by Coris Bank and Banque Régionale de Solidarité in Burkina Faso. SEGAS-BF is a collateral management company established in 2010 by a former Central Bank employee, Leonard Ouedraogo, also in Burkina Faso.

In Cameroon, there are half a dozen CMs based at the port city of Douala, using rented warehouses or carrying out field warehousing on borrowers' sites. By and large, they are not involved with commodities which are locally produced and consumed, and few of them (except Certispec Services) will work outside Douala. The reputation of the industry has been somewhat tarnished by bad experiences involving the financing of fictitious stocks, poor controls and deficient insurance coverage.

Uganda's collateral management has had a very difficult history, with two serious fraud cases between 2000 and 2007, each costing tens of millions of dollars (a large multiple of fees annually billed for CM services in Uganda), involving European-owned CMs and international banks and sending shock waves through the financial and insurance sectors. One international provider (ACE Global Uganda Ltd.) remained in the business in Uganda, but it was soon joined by a local competitor, Coronet. The UK-based DCL is also doing CMAs in Kampala. Given events up to 2007 and lesser cases since, banks remain apprehensive about the performance of CMs in Uganda.

4.4 The financiers

Most of the banks finance against CMAs and SMAs in the countries where they are practiced, but they are overwhelmingly in support of the import and export business, and to a lesser extent field-warehousing operations in support of processing of commodities for export (cocoa products, shea nuts, cashews, etc.) and for the domestic market (notably feed milling, wheat and maize flour milling, rice milling and soybean processing). Bankers' perceptions of the performance of CMs vary widely between countries, mainly because of experience with fraud and malpractice which has been a major problem in some countries but not in others. Notwithstanding misgivings about collateral managers, banks are generally comfortable with the transactional and legal aspects. They know their customers and usually the commodity off-takers. Prices tend to be tied up in structured transactions with invoices and letters of credit, and there is access to accurate market information for most commodities. Notwithstanding this, they get occasional problems resulting

from management and moral failings of their clients, poorly performing trade counterparties and illiquid markets.

In Côte d'Ivoire, it is the local Ivorian and regional banks (players like BNI, Ecobank, Diamond Bank, BOA) that mainly do warehouse financing. The international banks are more reluctant and tend to finance the big players (ADM, Cargill, Cocoa Barry, etc.) that usually have overseas headquarters. Ivorian banks say they have the information they need at all levels of the market chain with all the major export commodities except in the case of cashew, which is mainly exported for processing in India and Vietnam, and for which there is a lack of market transparency, and they often know little about the buyers. They are able to obtain bid and offer prices through publications such as commodities.com and *Cashew Week*, but there is a lack of accurate information on the prices at which cashews are actually traded.

Outside the Republic of South Africa, the banks of the sub-Saharan African countries have very limited exposure to agriculture. So their approach to commodity financing is conditioned by what they normally do (i.e., finance structured market chains), and there is consequently much insistence on

“ There is consequently much insistence on value chain lending where the financing is self-liquidating through off-taker agreements. Other types of borrowing for seasonal storage tend to be written off as *speculation*. However, given the informality of markets for domestic staples, it is hardly realistic to expect a predominance of structured trading relationships. For example, in the case of the Ghana maize, it is unlikely that more than 10-15% of the market is accounted for by buyers who are looking for grain where they can trace the origin. To put it another way, if farmers and traders did not engage in speculative seasonal storage of these commodities, there would be mass starvation while those who could afford it would consume commodities imported thanks to structured financing transactions involving millions of tons of non-African commodities, notably rice, arranged by the banks.

If banks wish to develop clientele in domestic supply chains, they need to develop new, internal capabilities with a view toward managing their risks in potentially volatile markets, notably analysing historical price trends, variable haircutting, monitoring domestic market price movements, marking-to-market and margin calls as set out in the IFC Guide for Financial Institutions (IFC Advisory Services, 2013). However, very few banks are set up to do this; it is a classic chicken-and-egg scenario, where the lack of involvement with domestic

trade leads to little investment in the development of market monitoring and financing skills. Indeed, the Ghanaian technical country study notes that only one bank (Stanbic) had the necessary capabilities. Stanbic comes from South Africa, a country with a large and thriving commercial agriculture, and it clearly has a head-start in this area.¹³ To date, banks have made little provision for appropriate in-house training or capacity building, but would nonetheless welcome external support in this area in the form of training and short courses for key staff.

Ivorian banks, accustomed to financing massive trade through the ports, seem particularly unprepared for lending against domestic staples. An informant from the cashew and cotton regulatory organisation (CCA) expressed this situation in the following terms: *Les banques ne bougent pas. Ils attendent que vous organisiez la filière* (the banks will not move; they are waiting for you to organise the value-chain).

Other factors add to bankers' reluctance to get involved in supply chains involving domestic staples and feed ingredients, notably the lack of accurate market information (see Box 2 below), lack of trust in up-country warehousing operations; apprehension over possible difficulties of enforcing pledges and quickly liquidating the collateral of defaulting debtors; reluctance to get involved in the nitty-gritty of trading (as might be necessary if they had to foreclose); and government actions that upset market fundamentals and expected price movements. Some of these fears are based on genuine risks, but they also reflect banks' lack of familiarity and engagement with the domestic trade and scale factors (i.e., limited profit potential on transactions that are relatively small-scale compared to those at and around the ports).

13 Another player, Ecobank, indicated a willingness to build the necessary capabilities saying that it would design a product programme if the product took off.

BOX 2: MANAGING PRICE RISKS WHEN FINANCING MAIZE STORAGE

With a few exceptions, most countries have web-based systems for reporting wholesale and retail prices in major markets and historical monthly price series going back a decade or more. However, the figures supplied do not refer to a standard quality or grade. The problem is not so serious with crops from savannah areas with unimodal rainfall patterns, as in those regions they are normally field-dried to moisture levels of 12-14% where they are relatively shelf-stable. The problem is most difficult in wet equatorial areas like Uganda and the forest (sub-Savannah) zone of West Africa, where the crop can be harvested twice a year. It is difficult to field-dry crops in such areas, and farmers and traders will often try to sell them quickly so as to avoid storage problems. Consequently, maize arriving on public markets in Uganda exhibit very wide variations in moisture content, up to 19-20%, depending on time of year and when and in what condition it was harvested; and there is also wide variability in other quality parameters, such as grain defects and foreign matter. Accra-based feed millers are moreover apprehensive of higher levels of aflatoxin in grain from these areas. In reality, banks wishing to finance transactions can provide for the resulting risk by improving their market intelligence and taking a deeper haircut, but it requires a lot of procedures and work that they would prefer to avoid.

Ghanaian banks seeking to lend in situations where the borrower cannot get off-taker agreements will tend to insist on other collateral, including personal guarantees and mortgages on property. However, there is some flexibility: there are occasions when they give loans without off-taker agreements but taking a deep (40%) haircut. They said they would loosen up their requirements and increase their lending if the regulatory arrangements introduced by the Ghana Grains Council (GGC) and planned under new legislation gave them more comfort about the integrity of the system and provided for trading of the WRs. These arrangements are discussed in Section 5.3.1. In the case of financing smallholder farmers, two banks stated that they would prefer to deal with apex bodies with a structure and governance that they can review.

In Burkina Faso, the collateral management instrument has attracted the interest of several banks, notably Ecobank, which seeks to finance storage of

agricultural products, and Coris Bank, which expects to extend operations with the rice value chain in Bagré to other areas of the country and to explore the potential for similar operations with other commodities.

In Cameroon, all the commercial banks use or have used CMAs, either using their own funds or in partnership with international financiers. In the case of Uganda, nine domestic banks are reported to be lending against collaterally managed stocks. Interest rates are typically 23% per annum for local currency loans and 11% when loans are in hard currencies and the loan-to-value ratio is in the range of 65% to 80%.

4.5 Experiences with financing of storage of products in up-country locations and landlocked countries

Apart from previously mentioned factors, the biggest constraint on up-country financing with local staples and feed ingredient under CMAs and SMAs is the atomisation of production and lack of scale economies, which tend to make the employment of a specialist service provider quite onerous. Notwithstanding, there have been many attempts to use these techniques in the construction of efficient value chains both for commodities going for export and as for those going for domestic and regional consumption. The following sections discuss some of them.

4.5.1 Cocoa in Côte d'Ivoire and Cameroon

Côte d'Ivoire (CI) experience

In CI and Cameroon, government and international organisations have attempted to use collateral management to assist up-country cooperatives and SMEs to become more directly involved in the marketing of cocoa, but so far none have proved successful.

The Côte d'Ivoire technical country report discusses four different initiatives¹⁴, showing that the performance of the assisted cooperatives posed a serious problem, being poorly managed and over-indebted, while some of them were fake organisations. The banks' experience with these initiatives often made them unwilling to lend, even under CM arrangements and the problem

14 These include a three-country project supported by CFC and ICCO to improve cocoa marketing (1999-2007), the Guarantee Fund for Coffee and Cocoa Cooperatives (FGCCC, from 2002), the Fund for the Regulation of Coffee and Cocoa (FRC, 2003/04) and the Cotton Input Finance scheme which started in 2008.

was compounded by a political factors (i.e., official reluctance to disqualify non-performing cooperatives from participation in schemes). Various other problems were noted: two schemes had obvious design flaws - there was conflict of interest with cocoa traders; and a poor bank network outside major urban centers. In one scheme (FRC) cooperative and SME exporters were unable to secure sales contracts. As a consequence of these problems, collateral management services are largely restricted to established exporters of cocoa, coffee, cotton, cashew and other agricultural products. Banks hardly finance up-country cooperatives and SMEs in this way. Such collateral management as does occur up-country normally involves stocks that the exporter has already purchased making use of its local supply network.

Government is now seeking to improve the performance of cooperatives through new legislation, a system of licensing, better accounts and other improvements, notably improving the ability of cooperatives to identify their location and the plantations on which they depend.

Cameroon experience

In the case of Cameroon, Coulter and Etoa (2010) reviewed the state of cocoa value chains. They concluded that, as currently organised, the value chains insufficiently rewarded farmers for the production of good quality product, and it failed to play its full role in productivity enhancement. Much of the difficulty resided in producers' lack of financial wherewithal, causing them to invest insufficiently in inputs, labour, replanting and fixed assets for production, and to sell prematurely. They could do much to tackle these problems by organising high performing POs, to source inputs and bulk outputs for the market, at the same time linking their operations closely with MFIs and banks. Hence, strong POs would be an anchor for financial service provision.

The pre-liberalisation cooperative structures had largely collapsed, but some apparently healthy structures had since appeared, notably the new generation of common interest groups (GICs). GICs had achieved impressive results in terms of bulking and marketing of cocoa, particularly in central and southern region and parts of Littoral; they had formed themselves into unions and federations for the purpose of marketing and access to inputs.¹⁵ Marketing was mainly coordinated at the level of the federations and in the 2009/10 harvest,

15 In Central Region there were some 18,000 farmers organised in about 600 GICs, formed into 150 unions and 31 federations and an apex organisation CONAPROCAM which has the material and technical support of the French NGO, Agriculteurs Français et Développement International (AFDI). The AFDI website now says CONOPROCAM has 20,000 members organised into 26 Federations in the Central and Littoral regions.

those in the Central Region marketed a total of 7,000 t of cocoa beans and this was allowing farmers to get a better price than they could get from private dealers, as well as assisting with the supply of inputs for the new season.

There was widespread support for POs to take the lead in the bulking of cocoa and coffee for the market, not only from producers and government officials, but also from some traders. However, it was noted that POs in Cameroon, as elsewhere, were inherently fragile entities, subject to free-rider problems and prone to politicisation and they frequently failed. Some GICs were fictitious entities, and genuine ones often experienced shortcomings in governance and management. Sometimes there was insufficient turnover in committee membership and cases were cited of leaders taking under-the-table commissions from buyers. Representatives of financial institutions expressed anxiety about the management and creditworthiness of POs. The solution for this problem lay in getting them to *raise their game* by rewarding excellence and providing sanctions for non-performance, and more generally by improving the capacity of value-chain players.

“ The solution for this problem lay in getting them to raise their game by rewarding excellence and providing sanctions for non-performance

Coulter and Etoa recommended a support initiative focused mainly on cocoa, and particularly in Central and Southern regions where there was major yield-increasing potential. Collaborating MFIs and banks would first focus on the most secured transactions (e.g., short term pre-financing against stocks during procurement) and building of member savings. From there they could move on to financing production. The approach should particularly support the emergence of high-performing POs, taking account of some key guidelines set out in the report. One of these was for the POs to keep activities as simple as possible and focus mainly on areas of comparative advantage close to the grassroots (i.e., upstream near the farmers rather than downstream to the export market).

It is only now in 2014 that some action has been taken with regard to this recommendation. The Coffee and Cocoa Board of Cameroon (ONCC) has recently negotiated with a private equity fund (Corporation Daniel Simon/Hyperion Global) a revolving line of credit, initially for € 30 million, to be channelled to MFIs and commercial banks with good rural networks to finance the marketing of cocoa and coffee using warehouse receipts. Funds will be used for importing agricultural inputs, supplying disease resistant plants, increasing the productivity of plantations, and for the collection and export

of products, with credit management services used as appropriate to mitigate risks between up-country locations and the ports. Top priority will be attached to ensuring the CMs/warehouse operators involved perform to the highest standards of quality management, security and indemnity. The ONCC is in the process of creating a joint venture with the above-mentioned private equity fund in order to implement the project.¹⁶

The counter-argument: to work with the multinational grain

Some parties question the emphasis that has been placed in public policy on getting cocoa cooperatives to develop as autonomous entities and to develop downstream marketing. Abbott (2013) finds that several sector programmes to offer credit to cooperatives in West Africa were failures, as default rates were extremely high and little discipline had been imposed when they defaulted. He found producer organisations had some scope for raising income of members, but that due to the lack of an effective rental market for transportation services, they had difficulty arranging transportation to the port. He went on to say that:

- (a) Wherever we encountered successful POs acting as traders and in fact whenever we encountered successful traders, those organisations and traders indicated that they had a partnership with one of the multinational exporting entities. Arrangements between multinationals and traders or POs yielded a number of benefits. Those entities realised higher prices and obtained marketing credit from the multinationals. In addition, controlling for quality was less stringent as long as the entity provided consistently high quality. Multinationals sought partnerships with traders and POs which could consistently provide both high volume and high quality. Only a minority of POs we encountered had achieved such relationships; they were found more often with successful traders.

Abbott ends by saying that based on experience in cocoa markets, the premiums achieved from extracting additional income along the value chain are likely to be relatively small. Strategies to raise productivity on the farm are likely to contribute more to increased smallholder farmer income than innovations along the supply chain.

16 Some relevant information is available on: <http://www.businessincameroon.com/cocoa/0305-4048-cameroon-will-loan-FCFAf-72-17-billion-from-cds-equity-limited-to-fund-cocoa-and-coffee-recovery-plan>

A leading Ivorian banker in the agricultural field¹⁷ expressed a similar view, saying that there is massive potential to raise productivity of export and staple crops; much of the solution resides in the development of stronger forms of contract-farming that link producers with input suppliers, international buyers and banks.

These comments show there is a genuine debate around the overall strategy of assisting farmers in those cocoa producing countries that have liberalised their exports (Nigeria, Cameroon and Côte d'Ivoire) and the role that cooperatives should play. Indeed, the debate is particularly relevant to Cameroon where ONCC has opted for an initiative that will empower POs to deliver directly to the port. In view of this development, it would be appropriate to monitor and learn from the ONCC initiative.

4.5.2 CMAs and SMAs in the cotton sector

Francophone countries account for most cotton production in sub-Saharan Africa. Their largely State-controlled marketing systems have gone through various types of reform and partial privatisation, sometimes opening up opportunities for CMs. The government of Côte d'Ivoire was in particular need of such services in 2008, following the civil war, so that the cotton ginners could re-establish lending and input supplies to farmers under contract farming arrangements and to manage inputs throughout the value chain, employing ACE as a CM, stock monitor and in a general risk-mitigation role. It seems to have been a highly effective scheme that made it possible to distribute inputs on credit to a large proportion of Ivorian cotton farmers and it led to a major improvement in reimbursement. The case is discussed in the Côte d'Ivoire technical country report.

In Burkina Faso, SNTB, a company belonging to the Bolloré group, started doing collateral management of cotton for the parastatal ginning company SOFITEX, having previously handled its freight forwarding. Given that Burkina Faso is the leading cotton producer in sub-Saharan Africa, this is probably a large account, linked with Bolloré's operations in the ports of West Africa.

Collateral management is also being used in the cotton producing area of northern Cameroon. The Cameroon technical country study refers to a scheme for grains and agricultural inputs in northern Cameroon involving members of the cotton producers association (APCC), the MFI *Crédit du Sahel*, the cotton parastatal SODECOTON and the Islamic Development Bank (as financier).

17 Augustin N'dri, *Commodities Trade Finance & Agribusiness*, SGBCI.

4.5.3 Recent initiatives in Senegal

In Senegal there have been two recent schemes involving CMAs and/or SMAs.

The first sought to structure a supply chain for maize, linking farmers from central Senegal to feed compounders and other users in Dakar, with a view to substituting for imports of approximately 100,000 t. It involved a commercially-oriented producer federation (FEPROMAS) with 10 producer networks and 882 members (102 of them women), the State-owned agricultural bank (CNCAS), Bolloré logistics as CM, SGS Senegal and the USAID *Projet de Croissance Économique* (PCE) which developed the model, provided technical support and covered much of the costs of hiring the services of Bolloré and SGS.

While the scheme was successful in allowing FEPROMAS to start building a credit history and organise collective marketing, there were some serious malfunctions. Most of these errors were on the

“ All over Africa, coastal cities tend to procure maize on the world market, taking advantage of low ocean freight rates side of the bank, which lacked familiarity with warehouse receipting and dealt directly with FEPROMAS without making proper use of the intended risk mitigants: CNCAS did not contact Bolloré, no CMA was signed up and pledging was not formalised. Its approach to risk management seems to have been solely based on the credibility of leaders of FEPROMAS and stocks were released without CNCAS issuing the release orders. International maize prices plummeted during the marketing season - far below the prices farmers were expecting¹⁸; only 300 t were sold to the target market (Dakar-based feed-millers), though some 800 t were commercialised overall, with new institutional buyers like WFP seeking to contract with FEPROMAS.

The case also raises the question as to whether the Senegalese producers could compete with imports except at times of unusually high prices. All over Africa, coastal cities like Dakar tend to procure maize on the world market, taking advantage of low ocean freight rates that contrast with high freight charges within Africa. The farmers' ability to play the market posed a further problem. The representatives of FEPROMAS, influenced by Chicago future prices, demanded high prices that were out of line with those at which domestic feed millers were buying from the sub-region and they ended up being obliged to sell at prices far below their expectations.

18 FCFA 125/kg against a minimum price of FCFA 200/kg (about US\$ 400 per ton) delivered to Dakar which FEPROMAS expected based on market forecasts.

The second case was implemented with local rice in the Senegal River Valley. It was part of the attempt to increase local supply in the face of Senegal's crushing dependency on Asian rice which meets around 70% of consumer requirements.¹⁹ It is an unsubsidised B2B initiative that uses a value chain approach. At the centre of the operation is a local rice miller seeking to ensure regular supplies of paddy, working in tandem with producer organisations (POs) that deliver the paddy to their union warehouses, where stocks are monitored and thereby reimburse the production credit they have obtained from the CNCAS. This innovation is of the greatest importance as it allows farmers to take out new loans and engage in dry-season production. The miller in turn obtains credit from another bank (BRM) against stocks of paddy and finished product which are collaterally managed on its own site.

“ The initiative has brought about an improvement in quality, but the miller has still found it difficult to achieve a continuous supply of uniform quality rice

The volume of paddy marketed in this way has grown from 2,830 t in the rainy season of 2011 to 29,510 t with financing of US \$7.4 million in the dry season of 2013, and has allowed 6,800 producing families to enter into this contractual arrangement that allows them to improve their revenue. It has also resulted in an increase in the rate of repayment to the CNCAS from 80% to 95%.

There remain some important challenges to make this system truly efficient and sustainable, notably problems with Vital's cash flow and ability to pay farmers in timely fashion, in quality management, and its ability to minimise its financial charges (including collateral management and related insurance) and remain competitive. The initiative has certainly brought about an improvement in quality, but the miller has still found it difficult to achieve a continuous supply of uniform quality rice. At the same time, Senegal continues to have difficulty competing with very low-priced exports of broken grain rice from India which are a by-product of the vast Indian rice milling industry and which enjoy subsidy mechanisms. Vital's cash flow difficulties are preventing further growth in volumes processed for the moment, and the author of the technical country report (Idiakhoumpa, pers. comm.) believes it would help if the banks could provide marketing finance more closely tailored to Vital's trading cycle. Notwithstanding these challenges, solid progress has been made and there are opportunities to replicate the model with other rice mills.

19 This estimate is based on FAO statistics for domestic production and imports.

Over and above the purely technical aspects involved, a crucial component of the achievement with this model has been the collaboration between different members of the value chain, including the miller, the Irrigation Authority (SAED), the producer organisations (Unions Hydrauliques), the banks (CNCAS and BRM) and the rice distributors.

4.5.4 Developments in Burkina Faso

In Burkina Faso, there is now a national consensus around the importance of community inventory credit and collateral management for food security and the development of local value chains. During 2013, the Ministry of Economy and Finance, the Ministry of Agriculture and Food Security and KFW launched several initiatives, respectively, to propose necessary legal reform (final report awaited), to develop a national strategy and to promote the activity. At the same time, there has been significant entrepreneurial activity in this field.

Collateral management is carried out with the imported and exported products. Imported products include fertiliser and rice, while exports include cotton, sesame, raw cashews, cashew kernels, hibiscus and maize. Financing is provided by five leading banks in partnership with the Bolloré group (SNTB and SDV), SEGAS-BF, Expertis SA and Auxigages SA handling the collateral management.

There have been several processing experiences, notably with rice milling and parboiling (in Bagré), the processing (both crushing and toasting) of soybean, and the crushing (oil extraction) of cotton seed. These experiences had the involvement of two CMS, SEGAS-BF and Expertis SA and financing from BCB and Coris Bank. In the case of rice parboiling, SEGAS-BF is working with a union of women's groups that has its own parboiling facility. The charges for services seem reasonable (e.g., rice millers pay Expertis SA between 1.5% to 3% of the value of the financing provided by the bank). The service has also been used in support of poultry farming. The demand for these services suggests that they are well adapted to the reality of African players who cannot provide collateral in the form of real estate, but who are ready to pay for the collateral management of their stocks and the supervision of their activities so as to access finance.

The collateral management of rice being practiced in Bagré is contributing to the organisation of the local value chain. It is providing benefits to producers of paddy and seeds and to women involved in parboiling and small-scale processors. The author of the technical country report believes there is considerable potential for further development and that the model could be

introduced into other zones of the country, like Bama, Banzon and Sourou, and with other commodities, including maize, cowpeas and soybeans.

The country report indicates that all CMs operating in Burkina Faso have insurance cover for fire, water damage and theft, and most have professional indemnity insurance covering fraud, errors and omissions. They are contractually responsible for the quantity of products delivered but not the quality.

As discussed in Section 3.4.3, one of Burkina's three collateral management companies (SEGAS-BF) has also gotten involved in community inventory credit (Type A financing), working at about 15 storage sites around the country, in partnership with several grassroots POs and federations and with two different MFIs (FCPB and URC.COM). The company's approach has been highly innovative and beneficial, so there is much at stake in its continued success. However, it is not without its risks - one of the first recommendations of this study is that the company is offered special assistance in the form of a review of its activities and ongoing mentoring by appropriately experienced people. Expertis SA and Auxigages SA are also young companies and deserve the offer of technical assistance.

BOX 3: SEGAS-BF BREAKING THE MOULD IN COLLATERAL MANAGEMENT

SEGAS-BF's contractual relationship with the MFI and the producers includes three components: (1) a partnership agreement between SEGAS-BF and the MFI; (2) the warehouse receipt it issues to the producers and which becomes an integral part of the partnership agreement; and (3) the credit agreement between the MFI and the producers. The company receives goods from individuals and groups who deposit at the storage sites, weighs and reconditions them, treats them with insecticide or has them treated by the relevant government authorities (DGPV or SONAGESS), and delivers them warehouse receipts so they can obtain credit from the MFI. It also supplies them with inputs and searches for markets.

The ambition of the founder, Mr. Leonard Ouedraogo, is to build up a branch network around the country. He has taken a great deal of initiative and departed from the classic mould of the collateral management business. Instead of simply focusing on the high volume/value accounts in the export-import trade and agricultural processing, he has sought to build a strong clientele with the POs, giving them

joined-up assistance to develop their livelihoods. It is some tribute to his achievement that farmers are willing to pay SEGAS-BF twice the level of handling fees that they pay when the collateral management service is handled by their own POs under the double padlock arrangement. He appears to be adding value to this system by ensuring quality, through greater flexibility and the additional services he is providing – input supply and search for markets and revealing a greater level of demand for collateral management services than was previously apparent. In certain cases, he has effectively instituted public warehouses, opening up his warehouses for deposits by the public on a first-come-first-served basis. The customers have been large producers and traders.

While this looks impressive, there also appear to be significant risks. On the one hand, a business model of this kind risks becoming uneconomic because of the high costs of staffing and supervising many small (e.g., 50 t) warehouses around the country, and the travel, subsistence and communications costs involved. The technical country report comments that *the scale of collateral management operations is still very low in relation to the potential and probably also from the profitability standpoint*. On the other hand, information from one of the company's sites suggests SEGAS-BF may be taking on too many roles; there is some lack of clarity over responsibilities. Under such circumstances, the company may be at risk of losing the confidence of farmers and financiers.

The technical country report also highlights other important problems: the lack of adequate storage structures available for community inventory credit and collaterally managed marketing and processing initiatives, and the small scale of the collateral management operations. With regard to the first problem, it is noted for example that after the rainy season harvest, most rice millers at Bagré are obliged to store the milled rice in producers' houses and after the offseason harvest they store it under tarpaulins by their mills which is possible given that there is no rain, but is seen as insecure by the banks and the insurers. Consequently, Expertis SA cites the lack of proper storage infrastructure as a limitation on the extension of its activities.

The country report also highlights price risks and the risk of government intervention (notably sub-regional trade bans) as threats.

4.5.5 Uganda

Two locally-based companies have until recently been active in Uganda's collateral management field: ACE Global Uganda Ltd. and Coronet, with the market reportedly split 70%/30% between them. However, some new players, including DCL, have recently entered the market.

ACE works with agricultural commodities, most notably cotton ginneries and coffee exporters, with imported commodities like rice, sugar and petroleum. Coronet has a rather different client mix, including a significant number of producer organisations and the collateral management of in-bond stocks of general merchandise (including sportswear, stationery, tyres, building materials, textiles, sugar and others).

Coronet's MD, Chris Baine, previously worked in the banking sector; he also worked with government and the Common Fund for Commodities on the development of the warehouse receipt system, which has been quite innovative. Since starting in 2008, Coronet has worked with 102 borrowers, focusing on the financing of agribusiness and structured trade, while assisting SMEs in all sectors that wish to access affordable credit from financial institutions including agriculture. In the agriculture sector, Coronet has served NUCAFE and other cooperatives to secure finance for coffee exports. In the cereals sub-sector, it has helped cooperatives to secure production credit for inputs, labour and other pre-harvest operations. It also does pre-inspection, quality testing, capacity building, and it consults on value-chain development, though it has to subcontract quality testing involving complex laboratory facilities (e.g., testing for aflatoxin) with specialist operators.

Nine domestic banks are reported to be lending against collaterally managed stocks. Defaults on loans for domestic and imported agricultural commodities are reportedly very low. Significantly, it is the collateral management of in-bond stocks that results in the highest level of loan default, with banks seizing goods from importers who have difficulty in competing with imports from China, India, or domestic production.

The two CMs have similar modes of operation. As regards insurance, two policies are in wide use, including: fire and burglary cover, which is considered mandatory; and all risk insurance, which financial institutions often do not require.

According to Baine, the main hindrance to the roll-out of collateral management to more rural clients (apart from the cost of the service) is a lack of understanding on the part of the banks (and often CMs too) of the

transactional risks at that level. For this reason, he suggests training programs aimed at banks, rural-based clients and exporters - in the latter case to develop and/or extend their supply chains to the rural suppliers which the banks can then support through CMs.

4.5.6 Mozambique

There has been a mixture of CMAs and SMAs in Mozambique, involving four banks financing stocks of imported wheat, domestically-produced sugar, cashews and a range of other exported products. These products were produced in a pilot operation in the Corredor Agro involving contract farming with commercial farmers and smallholders both for the local market and export. Banco Terra, which focuses on SME agricultural finance, financed the later scheme. Although the pilot was considered successful and worth following up with similar clients, the arrival of the grain and oilseeds giant Cargill is causing Banco Terra to reconsider its warehouse financing strategy. Cargill is expected to make a lot of trader advances mainly based on good faith, thus avoiding the administrative complexities of warehouse receipt financing. Significantly, Mozambique already has a high level of market concentration at the level of grain trading, since a large regional company, Export Trading Company, already dominates the marketing of grain and oilseeds in the northern part of the country.

The largest bank BIM has not engaged in commodity trade finance and it has no short-term plans to do so. One of the constraints raised by the banks is the difficulty of many traders (Asians in particular) to accept the concept of warehoused commodities as collateral instead of traditional forms such as real estate and equipment. At the same time, there is also some speculation that, with the imminent arrival of Standard Chartered Bank with a reputed core business in trade commodity finance, one could foresee a growth in financing against stored commodities.

4.6 Legal and regulatory considerations with Type B warehouses framework

4.6.1 Financing using CMAs

Where a CM is used in a financing arrangement, that party will usually be appointed under the terms of a tripartite CMA. The CMA will set out the contractual rights and obligations of each party in relation to the secured goods and will give the financier direct contractual recourse to the CM in the case of a failure by the CM to perform.

The CM will be responsible for redelivery of the stored commodity to the depositor (the out-turn guarantee). In an unregulated system, this will be a contractual obligation of the CM as set out in the CMA.

Where the warehouse receipt is issued by a CM, it may state that the CM is holding the goods on behalf of the financier. However, generally speaking, such warehouse receipt will not be a negotiable instrument. Therefore, if the goods are transferred to a third party while in storage, the warehouse receipt alone will not be sufficient to obtain release of the goods from the CM. In addition, the holder of a warehouse receipt may not obtain any direct contractual rights against the CM unless it enters into an independent contract with that CM.

In this scenario, the delivery of a warehouse receipt will not in itself create a legal security over the stored goods. As such, the financier and the borrower will need to enter into a legal security agreement (such as a pledge) over the goods. This security agreement may be subject to local formalities, such as liability to pay stamp duty and/or registration.

4.6.2 Taking possessory pledge under standard CMAs

Taking a possessory security such as a pledge requires the financier, as the secured party, to take possession of the pledged goods (meaning that the borrower, as pledgee, is dispossessed of those goods while they are subject to the pledge). In a standard CMA arrangement, the CM will take possession and control of the goods under the terms of the CMA. Where the local law recognises constructive possession, it is possible for the financier to perfect its pledge by taking possession through a CM as its agent. This is the case in each of the subject countries. As noted above, the pledge would also need to satisfy all other local law requirements (which typically require pledges to be created through written documents) and formalities (such as payment of stamp duty and/or registration). As also noted above, the CM would typically issue warehouse receipts confirming that it is holding the pledged goods to the order of the financier.

4.6.3 Taking possessory pledge under field warehousing arrangements

Field warehousing can be a source of special practical and legal issues, given that the financier is financing against goods stored on the borrower's own premises. Key practical considerations include trusting the borrower not to fraudulently remove the goods, ensuring that there are appropriate agents on the ground to perform the control and monitoring functions. The latter can be difficult if the borrower is located remotely.

The key legal question is what further steps should be taken to establish a possessory pledge. While field warehousing happens in nearly all the subject countries, the legal due diligence revealed little



Field warehousing can be a source of special practical and legal issues, given that the financier is financing against goods stored on the borrower's own premises

in the way of specific guidance on the actions to be performed to ensure effective dispossession of the pledgor to create a possessory pledge. However, a legal advisor would probably suggest that certain practical steps be taken in addition to the usual requirements for taking a pledge (see Section 4.7.2), for example: (1) taking a lease of the warehouse (to give the right to access the warehouse to the exclusion of others, including the borrower); (2) creating physical

boundaries around the leased area and controlling who has access to it; and (3) labelling the stored goods with details of the borrower and the financier. Specific guidance would need to be sought on a case-by-case basis.

4.6.4 Improving the legal framework

The two key areas where the legal regime could be improved are: (1) regulation of the activity of collateral management; and (2) removal of barriers to taking possessory security over commodity held by CMs.

Regulation of collateral managers

Regulation of CMs could evolve as part of a more general WRS program or specifically for the activity of collateral management. The key legal issues to address are:

- (a) ensuring the financial, operational and technical capability of CMs and the provision of suitable insurance cover, through a licensing regime. This allows financiers and depositors to rely on the fact that a CM holds a licence and it reduces the need to do extensive due diligence on CMs and to provide for these protections in contractual documentation.
- (b) a regulated system could make ensuring effective out turn guarantees a legal requirement subject to sanctions for failure to perform.
- (c) providing for recourse outside of the courts. In an unregulated system, a depositor or financier's recourse against a collateral manager would be the pursuit of a contractual claim through a notoriously slow court

processes. A regulated system could provide alternatives, such as systems of alternative dispute resolution (ADR) and indemnity funds.

- (d) providing for effective remedies in the event that CMs put at risk the commodities they are holding on behalf of depositors and financiers or otherwise fail to perform.

In addition, allowing CMs to issue negotiable/tradable warehouse receipts could allow collateral management to flourish as part of a WRS regime.

Improving the security regime

Financiers in Africa traditionally prefer taking security over real estate and fixed assets to taking security over commodity. This preference places an onerous burden on potential borrowers, which could be greatly relieved if stock-in-trade was more widely used as security. However, certain factors are discouraging this, in particular:

- (a) The requirement to pay *ad valorem* stamp duty on security documents creating possessory security was a common theme in the subject countries (except Uganda, where only nominal duty is payable on possessory pledges). This requirement is onerous and it discourages secured financing.
- (b) In all of the subject countries, the registration of security interests is problematic. In the OHADA countries, there are long delays reported when registering security at the local registry (RCCM) and uncertainty over the amount of registration fees. Additionally, the RCCM registers are only searchable through submission of a request to the RCCM. In Uganda and Ghana, it was reported that the security registers are not always reliable. In Mozambique, there is no security register at all, meaning there is no way to effectively monitor competing security interests.
- (c) In Mozambique in particular, there are onerous additional formalities required to take a security interest, including the requirement to notarise security documents and the requirement to execute further security each time new deliveries are made into the storage facility.
- (d) There is lack of clarity in relation to competing security interests, particularly in the OHADA countries, where a pledge over commodity

can be perfected either by registration or taking possession. Being able to take a pledge without possession is useful in some circumstances (for example, in a stock monitoring arrangement); however, the two-tier system could lead to competing interests between creditors.

4.6.5 Practical attempts to regulate collateral managers

Uniquely in sub-Saharan Africa, CI has already established a regulatory framework for collateral management. This is not altogether surprising in view of the large volume of commodities and finance at risk in CMAs in that country.

Collateral management operates under the OHADA legal framework regarding the *Droits des Sûretés*, apart from which the Central Bank of West Africa (BCEAO) requires the separation of warehouse control from the trader or the bank. Uniquely among the subject countries, CI has developed a specific legal and regulatory framework for collateral management.

The Law of 1994²⁰ provides a general regulatory framework for all collateral management, and two decrees provide specific provisions for four commodities (coffee, cocoa, cotton and cashew).²¹ There are two regulatory organs, the *Conseil du Café et du Cacao* (CCC) and the *Conseil du Coton et de l'Anacarde* (CCA), dealing with two crops each, but not with other commodities. These are entities financed out of export taxes on the commodities concerned, and which are required to provide services of common interest (*fonctions mutualisées*), notably agricultural extension and research, regulating weight and quality and regulating CMs and other players in the sub-sector.

So far only the CCC has licensed four companies which include the three leading operators (Bolloré, Katoen Natie and CWT) and SGS, which has since decided to withdraw from collateral management worldwide. CCA is in the process of getting organised and has not yet licensed any CMs; the decree establishing it was only passed in November 2013.

Collateral managers must satisfy financial requirements, but these appear too lenient to deter some applicants who are unqualified or have fraudulent intent. Companies seeking to be licensed must have share capital (*capital social*) of FCFA 300 million for cocoa and coffee, FCFA 100 million for cotton and cashew

20 Loi no. 94-620 du 18 novembre 1994 relative à la tierce détention en matière de produits agricoles.

21 The relevant decrees are nos. 2012-1013 of 17 October 2012 concerning coffee and cocoa and no 2013-8814 of 26 November 2013 concerning cotton and cashew.

(€ 457,317 and € 152,439 respectively), and put up a bank guarantee (*caution bancaire*) of FCFA 100 million for cocoa and coffee, FCFA 50 million for cotton and cashew (€ 152,439 and € 72,220 respectively).

While the legislators provided these requirements with the intention of ensuring that the parties practicing CM were real professionals with a strong financials, the technical country study argues that the levels they have set will have little practical effect. The share capital provision does not prevent practitioners from using the capital for other purposes or from emptying the company of funds the day after getting constituted. The bank guarantees are completely inadequate in view of the values of product at risk; based on estimated product values, they would only cover default up to the following derisory quantities of stock: cocoa 65 t, coffee 95 t, raw cashews 125 t, and cotton lint 55 t. The report suggests that the best way to address the second and third defects would be to make it mandatory for the CM to subscribe to a PI insurance (Errors & Omissions), as well as comprehensive fraud insurance. Notwithstanding, a representative of CCA claimed that requirement for these limited bank guarantees had been effective in deterring applicants without the necessary experience.



Côte d'Ivoire is planning to introduce a much broader regulatory framework for public warehousing, which will probably be piloted with cashews

It should also be noted that CI is planning to introduce a much broader regulatory framework for public warehousing, which will probably be piloted with cashews (see Section 5.4.1). It remains to be seen if (and when) this framework subsumes the existing regulatory framework for CMs.

Uganda has enacted comprehensive WRS legislation, which purports to apply to private (Type B) warehousing arrangements, as well as public (Type C) warehouses. However, CMs in Uganda indicate that it is not currently being applied to private warehousing and financing of commodity stored in private warehouses is carried out under the traditional legal framework for collateral management.

Cameroon has had some bad experience with collateral management, involving the financing of fictitious stocks, poor controls and deficient insurance coverage. A WRS workshop drew the government's attention to this problem in 2010, and it proposed the drafting of WRS Laws, applicatory decrees and regulations. The technical country report indicates that the government will be acting on this later in 2014.



5 Public warehousing (Type C)

5.1 Introduction

In this case, *public* warehouse refers to a commercial warehouse open to deposits by commodity producers and other customers. Any person who wants to store commodities meeting the criteria for storage must be permitted to do so. The warehouse may not only store commodities, but provide a range of other services including cleaning, drying and bagging, for which it charges the owner on the basis of a standard tariff that is prominently posted at the warehouse and published in the newspapers and/or on the internet.

When a farmer or other player deposits goods for storage, the warehouse operator issues him/her a warehouse receipt which will be either a negotiable documents of title or non-negotiable. The aim is normally to make warehouse receipts *negotiable by endorsement or delivery*, because this facilitates their transfer to successive holders and it makes the whole system more liquid and attractive to buyers and financiers. It is by transferring the warehouse receipt to one or other of these parties that the depositor is able to either sell the commodity or raise short-term or seasonal finance against it.

This type of financing is only relevant in countries that have the intention of supporting the establishment of public warehouses, currently Côte d'Ivoire, Ghana, Senegal, Uganda and Mozambique. The same legal issues that apply to private warehousing will be relevant to public warehousing (see Section 4.7). However, the case for establishing a regulatory regime will generally be much stronger than for private warehousing because of the potential for involving a larger number of parties whose stocks and funds will be at risk.

As with Type B warehouses, scale economies are very important to the viability of public warehouses. Available evidence suggests that in the case of food

grains, the minimum economic capacity for warehouses not enjoying explicit or implicit subsidy is in the thousands of tons (see Box 1 in Section 4.6.4).

Public warehouses also serve as delivery locations for commodity exchanges, and for reasons outlined in Section 1.3, they have proved to be an indispensable prerequisite to the establishment of commodity exchanges in sub-Saharan Africa.²² Commodity exchanges also play an important role in ensuring the viability of public warehouses, helping depositors find buyers, providing a price discovery function which helps lenders value warehouse receipts providing a market in which they can dispose of stocks of defaulting debtors. Commodity exchanges are less indispensable to warehouse receipt systems than are warehouse receipt systems to the establishment of commodity exchanges. However, those promoting public warehouses will need to establish some system to help depositors sell their goods and ensure settlement of trades, whether it involves a fully-fledged exchange with brokers, a bulletin board to advertise products held, or a simple electronic trading platform providing for delivery of warehouse receipts versus payment (DVP).

South Africa is the main African country to have established a system of public warehousing. There is no express legislation in place, but the country has managed to develop a sophisticated warehouse financing structure around the use of public warehouses and the transferability and tradability of warehouse receipts (referred to as silo certificates or receipts). The impetus for developing a sustainable warehouse financing framework was provided by the ANC Government in the mid-1990s after it became the ruling political party. Although South Africa previously had legislation in place governing warehousing²³ (repealed in 1975 during the Apartheid regime), the legislative approach was not adopted again with the government instead relying on normal contractual rules and market practice to provide the new framework for warehouse financing.

A large part of the banks' concerns about credit and crime risks (such as fraud or theft) posed by silo operators have been resolved by the involvement of the South African Futures Exchange (SAFEX, now a division of the Johannesburg Stock Exchange) which developed a standard form of SAFEX silo receipt that silo operators could issue instead of silo certificates issued in their own name. These could be more easily and freely traded, thereby providing for a wider range of potential buyers in the market. However, in order to be authorised by SAFEX and issue SAFEX silo receipts, a silo operator needed to meet certain

22 See item (f) in the second list in Section 1.3: Commodity exchanges require registered warehouses which can act as delivery locations.

23 Agricultural Warehouse Act, No. 42 of 1930.

minimum criteria: legal status, financial standing and net worth, expertise and the maintenance of appropriate insurance.

The final stage of the development of warehouse financing in South Africa to date was the creation of an electronic platform for the use of electronic silo certificates and this provided the basis and model for Uganda's system of e-Receipts (see Box 4 in Section 5.2).

One issue with public warehouses is whether operators can store their own commodities in the same facilities, issue warehouse receipts in respect of those commodities, and trade those commodities. This situation can create a potential conflict of interest. However, the reality is that a regime that prevents this activity may not fully develop its potential, as a warehouse operator unable to trade in commodities may be unable to effectively use its storage facility capacity. Researchers at the University of São Paulo, Brazil found that licensed agricultural warehouses in Illinois, USA that were permitted to trade in grain were able to provide grain storage services at half the cost of those in Brazil.²⁴ However, the potential conflict of interest between trading and service functions - and related to this the risk that warehouse operators experiencing financial difficulties on the trading side will place inappropriate depositors' stocks - makes the job of a regulator particularly exacting.

5.2 Uganda case

Uganda produced a Warehouse Receipt System Act in 2006, and in 2007 the government appointed the Uganda Commodity Exchange (UCE) as regulatory authority under the Act. UCE had been trying unsuccessfully to establish a commodity trading floor since 1998, and it saw a reliable warehouse receipt system as the key to overcoming problems of performance failure²⁵ that had frustrated previous efforts to get the trading floor operational.



A warehouse operator unable to trade in commodities may be unable to effectively use its storage facility capacity

With its new powers and supported by an EU project that lasted from 2006 to 2010, UCE sought to implement a regulated system of public warehousing for grains (in practice overwhelmingly maize). A *Chief Warehouse Examiner* (CWE) was hired and trained to train warehouse staff; to

24 See in Coulter et al., 1998.

25 Performance failure means sellers defaulting on contracts.

carry out regular inspection to ascertain compliance with all aspects of the system, including grain quality; and to request remedial action. Considerable training was provided to farmers and farmer groups around the hinterland of licensed warehouses and a South African software company was contracted to install an electronic warehouse receipt system (eWRS) linked to South Africa that was being used to receipt millions of tons of grains per annum (see Box 4). UCE took on the role of eWR administrator and became the registrar for warehouse receipts under the system; this moreover allowed it to fulfil a provision in the WRS Act that *negotiations of WRs must be notified to the Authority*.²⁶ UCE also tried to re-establish its trading floor and the EU assisted with training brokers and establishing a settlement system.

BOX 4: THE UGANDAN EWRS

The eWRS was closely linked to the South African system of electronic silo certificates used to receipt millions of tons of grain every year and to document grain deliveries against contracts of the SAFEX Division of the Johannesburg Stock Exchange. Control of the server was confided to PwC under an arrangement designed to ensure data confidentiality. The eWRS was a web-based system which only authorised parties could access and use, with their requisite user names, pin numbers and passwords. Authorised parties included the administrator (an employee of UCE), issuers (i.e., the warehouse operators) and users (i.e., the depositors, the financiers and buyers of e-Receipts).

The process works as follows. The issuer issues the e-Receipt to the depositor (normally a farmer, a PO, or a trader), showing the location, quantity and grade of commodity stored at the warehouse and the warehouse operator's lien (i.e., its accumulated charges against stock). The e-Receipt is a negotiable instrument evidencing title to the grain and the depositor can then transfer it to a financier, in encumbrance for a loan, or to a buyer, in fulfillment of a sales transaction. The buyer may then transfer it electronically to another buyer and so on, until such time as a holder wishes to take delivery of the commodity. The holder then transfers the e-Receipt back to the Issuer (i.e., the warehouse operator), paying accumulated charges, after which the

26 Negotiable warehouse receipts provide good faith buyers with effective and immediate protection against third-party claims over the commodities they represent. However, this has not been tested in practice.

Issuer cancels the e-Receipt and releases the product to the holder. Each player can see the status of its holdings on the computer screen at any time.

The administrator is the first point of contact for issuers and users signing up to the system, given that the system provides an audit trail of transactions that can be studied in the event of a dispute, and it is by virtue of this ability the registrar. The system has various other interesting features:

- e-Receipts can be split into smaller lots; a holder can advertise its stock electronically to other participants
- a holder can transfer an e-Receipt to a broker pending the conclusion of a sale transaction
- it can serve as an electronic delivery system for a commodity-trading platform
- an on-line auction facility can be installed if required to facilitate competitive procurement by buyers
- the system can provide statistics, notably on overall stocks held in warehouses.

In fact, UCE should at any time be able to obtain information on the volumes received, at a few touches of buttons.

The leading difficulty in establishing a WRS for maize in Uganda was the mainly informal and fragmented nature of the grain trade, for which reason there was limited private sector demand for dry, graded, shelf-stable grain, and market players generally focused on turning over their stock quickly. It was for this reason that UCE sought to enlist the dominant buyer (WFP), which at that time was procuring over 200,000 t of grain commodities per annum in Uganda (mainly maize), overwhelmingly by competitive tender, as a *market maker*. The idea - so the theory went - was for WFP to *prime the pump*, that is, to ensure there was strong demand for receipted grains in the early stages of the WRS, and unlock latent demand from other users who would buy dry/quality maize if they could reliably get it. By doing this, WFP could encourage prospective warehouse operators to get licensed, and help WFP ensure the quality of grain delivered to refugees and internally-displaced people in the zone.

WFP finally came on board at the end of 2008, but only after 2 years of discussions, eventually committing itself to buy 150,000 t of commodities

through the WRS, and making a series of investments in drying and storage facilities, market collection points, access roads and farmer capacity building.

UCE licensed five warehouses, but the total deposits over the 5 years to the end of 2013 were only about 22,600 t, which was insufficient to ensure the financial viability of most warehouses, and a small fraction of what was needed to ensure the viability of the regulatory authority which needed to survive long term on the income from levies on licensed warehouses. With the end of the EU funding in 2010, UCE became fully dependent on government budgetary resources. As a result, services and compliance declined, and the regulatory system is not presently operational. Notwithstanding, at least two warehouses remain operational, and one reports that it is working with about 162 POs representing 10,000 farmers, and to be handling 8,000 t of maize per season including both outright purchases and storage for third parties.

The technical country study identifies the following underlying causes for the poor performance:

- (a) the feasibility of the regulated WRS was not thoroughly appraised at the outset
- (b) the project sponsors (Ugandan players and the EU) were significantly at cross-purposes, the former stressing cooperative/bottom-up action and the latter stressing scale-economies and financial viability
- (c) WFP-Uganda did not become a market maker as hoped
- (d) the project sponsors were not able to deal with the problems as the project unfolded.

With regard to (b), it is worth noting two separate sources concur in the view that private sector warehouse operators that traded in the commodity while also storing it for third parties performed better (showing more initiative in seeking business) than cooperatively-owned warehouse operators licensed under this scheme (Onumah and Nakajjo, 2014; Richard Wangwe, ex-Stanbic, pers. comm.).

The experience demonstrates that innovative projects of this kind require decision-makers and funding agencies to have a shared understanding and a strong strategic vision before they get started. Moreover, for WFP-Uganda to become a market maker and achieve its 150,000 t target, it would need to share this strategic vision and develop a new approach to procurement

accordingly. In particular, it would need to: (1) induce some of its established tender suppliers (those with large-scale grain drying, cleaning and storage infrastructure) to become compliant with the WRS and get licensed as UCE-licensed warehouses; (2) radically speed up its (very slow) procurement cycle, with procedures that would allow farmers and others to get paid upon delivery of a warehouse receipt; (3) use the UCE-licensed warehouses as its agents in ensuring quantity and quality of grains delivered, holding them accountable for any shortfalls; and (4) be prepared to pay premiums to achieve the high standards required. In practice, however, insufficient attention was given to these preconditions, in addition to which WFP did not apply its quality standards consistently, often prioritising procurement volume over and above strict compliance to grade specifications.

The issue of quality came to a head in 2012; and in 2013 WFP-Uganda rejected most of the grain offered by its tender suppliers. This new policy might favour the development of the WRS, despite WFP's gradual shift from distributing cash and vouchers instead of food; however, it is doubtful whether the UCE-system is in a state to capitalise on this opportunity.

5.3 Ghana case

5.3.1 Relevant initiatives

Various initiatives need to be considered in Ghana, including a commercial inventory credit pilot in the 1990s, the Ghana Grains Council (GGC) initiative starting in 2012, complementary outgrower schemes for maize, drafting of WRS and commodity exchange legislation and the Ghana Commodity Exchange (GCX) initiative. These are discussed in turn, focusing primarily on the GGC initiative which has made most progress to date:

(a) Commercial inventory credit pilot in the 1990s.

Between 1993 and 1997, an unregulated form of public warehousing was piloted with traders storing maize in central warehouses operated by the parastatal Ghana Food Distribution Corporation (GFDC), and a CM (SGS Ghana Ltd), with financing by the Agricultural Development Bank (ADB) and Barclays Bank Ghana Ltd. The longer term objective was to induce POs to deposit in the same storage facilities. Deposits and financing grew regularly, reaching 5,500 t in 1995/96, but the pilot ended after problems in the following season, including mishandling of stocks by an ailing GFDC and the government's unannounced and selective suspension of import duties which caused prices of maize to seriously slump below anticipated levels.

(b) The GGC initiative, starting 2012.

Another initiative is now in progress with some official encouragement and considerable donor support at technical, operational and infrastructural levels. Once again the scheme is starting with maize, but this time under the auspices of a private sector body, GGC, a novel kind of membership organisation with 60 corporate members and varying entitlements according to the class of member (platinum, gold and bronze). GGC is running a regulated WRS for its paid-up members.

GGC has so far certified seven warehouse operators with combined capacity of 36,600 t, and it has contracted an inspection company to carry out stock monitoring and authorise certified warehouse operators to issue warehouse receipts through GGC's central depository. A single company, Weinco, accounts for 49% of the total certified warehousing capacity, while two warehouses in greater Accra account for 40%; the remaining four operators have warehouses of between 500 and 1,000 t each. GGC has also approved smaller community warehouses which are used to accumulate stocks for onward marketing²⁷, subject to appropriate post-harvest training and their meeting basic standards with respect to store hygiene and equipment.

Deposits started in December 2012; according to GGC, three warehouses have issued warehouse receipts for 29,500 t of maize, of which 6,900 t have been financed for GH¢ 2.88 million (an estimated € 1 million).²⁸ The warehouse operators may receipt deposits made by all GGC members, but have so far only issued receipts against their own stocks.

Significantly, all of the funding to date originates from Stanbic Bank Ghana Ltd., and it has been channelled through an innovative CCH Repo scheme. The promoter of the CCH Repo scheme (who is coincidentally the author of the Ghana technical country report) ascribes this mainly to lower collateral requirements under the Repo scheme. The banks themselves view lending through CCH as an alternative to direct lending, in which they trade off cost (in the form of GGC's margin) with the potential advantage of dealing through an intermediary who knows the borrowers much better than they do as well

27 Unlike the Type A warehouses described in Section 3, these are not designed to store products for local consumption but for primary level aggregation of products destined for the market.

28 The technical country report shows higher figures (i.e. < 12,555 t have been financed with GH¢4.98). It is believed that the difference is accounted for by the warehouse operator Weinco issuing new receipts against the same stock as the first ones had expired after their six-month term.

as how to mitigate risks. However, they do not emphasise the legal security of the Repo vis-à-vis a conventional pledge as an important reason for adopting using the Repo financing approach.

CCH's longer-term goal is to convert the commodity-backed Repo into a fixed interest money-market instrument that can be sold to private and fiduciary funds, in competition with treasury bills and other short-term investment instruments. There are precedents for this in Colombia and Venezuela where such Repos have been successfully sold on commodity exchanges, allowing farmers and traders to access loan finance at rates close to those payable on short-term money market instruments.

However, the efficiency of the market is being hampered by problems of Ghanaian macro-economic management, leading to extraordinarily high interest rates which range from 20% to 48% per annum.

- (c) Outgrower schemes for maize.
- (d) Weinco accounts for the overwhelming majority of deposits and borrowing to date under the GGC scheme. Weinco is a major agricultural inputs supplier, and starting in 2005 it organised a maize outgrower scheme with small farmers in northern Ghana, now coordinated by a company-affiliated producer organisation called Masara N'Arziki Farmers Association (MAFA).²⁹ MAFA now works with around 9,000 farmers organised into solidarity groups of 5-10 farmers, who each must cultivate at least 2 ha as part of a single block of land. Groups are supplied with fertilisers, hybrid seeds, herbicides, insecticides, spraying equipment, innovative farm implements and technical advisory and training services on credit. They are also given a cost-of-production based minimum price guarantee in advance of production and they are paid a market-related price at harvesting time.
- (e) Farmers must deliver all their maize, save that required for home consumption, to MAFA; failure to do so results in tough sanctions which range from exclusion of the group from the scheme to court processes. Despite the group guarantee and the sanctions, the scheme is far from achieving full repayment of input loans. USAID (2012) reported repayment as 82% at the 2010 season and still counting; Wienco claims

29 Both Weinco and YARA, the world's leading producer and marketer of mineral fertilisers, have invested in MAFA, which has a board representing the two sponsoring companies and the farmers. Netherlands Cooperation is also reported to be supporting the organisation.

that current levels of repayment is 90%, which is tolerable. Weinco's scheme in Brong-Ahafo region has already collapsed due to a high default rate.

- (f) Weinco reports that the outgrower scheme has resulted in a massive increase in productivity, from 1.2-1.8 tons to 4.0-4.3 t per ha, and that overall output is around 60,000 t³⁰ per annum, about half of it yellow maize - reducing the poultry sector's interest in importing this commodity. MAFA delivers the maize to Weinco which cleans and bags it, and markets it throughout the country - selling some 60-70% of output to compounders of poultry feed, some to a flour mill and the remainder to market traders.
- (g) The government has also provided considerable technical support in raising maize productivity, as have other important outgrower initiatives involving varying degrees of donor support, including those of the Savannah Farmers' Marketing Company, Gundaar (both of which operate GGC-certified warehouses) and the USAID/AGRA-supported nucleus farmers' scheme (involving 18 community warehouses of 80 t capacity).

The Weinco/YARA scheme is a major event in the development of the Ghanaian grain markets over recent years. It has apparently succeeded in containing the problems of side-selling and repayment default, which has caused most staple-crop contract farming schemes to fail in sub-Saharan Africa. For this reason, Ghana has a major stake in the continuing success. However, the scheme is not without risk. It was developed on the premise that Ghana had a maize supply deficit and made up for the shortage through imports; but the combined effect of all the productivity-enhancing activity has been to make the country more self-sufficient and greatly reduce the degree of seasonal price volatility.³¹ This, coupled with the difficulty in predicting government interventions³² and their

30 This number represents the average of two different figures of 50,000 t and 70,000 t provided by different Weinco representatives.

31 An analysis of seasonal price swings from 1995/96 to 1998/99 showed wholesale prices in Techiman for June to average about 125% above those of the previous September in constant price terms (source: TechnoServe); Esoko data for the 3 years to 2012/13 show an average increase of 22% in current price terms.

32 Discretionary import permits for poultry farmers and feed compounders to import yellow maize, discretionary export controls and interventions by the National Food Buffer-Stock Company (NAFCO). USAID (2012) states that the main concern of speculators and traders is the existing export licensing system, which is set up to allow for trade policy changes without warning in response to political or food security pressures. Traders are apprehensive, as they have been burned by sudden changes in trade policies in the past. In 2008, speculators were holding stocks in anticipation of the expected seasonal price increase, when a ban on imports was suddenly lifted, imports flooded the market, and prices plummeted.

impact, makes seasonal storage a much more risky proposition than previously. The scheme has reportedly lost money over the last two seasons, facing a volatile end user market while committed to paying minimum guaranteed prices based on cost of production. Consequently, Weenco carried forward 10,000 t of stocks from 2012/13 to 2013/14. Moreover, Yara and Weenco have seriously scaled back on their objective to support MAFA to improve the supply 200,000 t of locally produced maize to about 50,000 farmers by 2015, regarding it as too risky.

- (h) Legislation for the establishment of a commodity exchange and warehouse receipt system.
- (i) In 2012, the Ministry of Trade & Industry (MOTI) formed a national task force for the development of a commodity exchange and its supportive warehouse receipt system. The Ministry of Food and Agriculture (MOFA) formed another task force for the development of a credible warehouse receipt system. Both task forces had broad stakeholder representation from the public and private sectors, involving GGC among others. Their work has led to the drafting of two legislative instruments (LIs) that are to be enacted within the next few months. The Security and Exchange Commission (SEC) is named as the regulatory organ for both commodity exchanges and the warehouse receipt system, though the SEC is able to delegate the warehouse regulatory role to other bodies.
- (j) The Ghana Commodity Exchange (GCX) initiative.
- (k) Working in parallel with the legislative process, MOTI plans to implement this exchange by 2015 and UNDP is funding a project office which is promoting the initiative. Technical support is being provided by a company called *Eleni*, led by Eleni Gabre-Madhin who promoted and managed the Ethiopia Commodity Exchange (ECX). Eleni seeks to establish turn-key commodity exchanges in Africa with ancillary supporting infrastructure, notably the warehouses that will serve as delivery locations. The project office has put together a group of founding investors, including two banks (Ecobank and UT Bank), two investment funds (Databank Agrifund and 8 Miles), the International Finance Corporation (IFC) and the government with a 10% share, with a total equity of US\$ 15 million. A draft agreement was to be signed and the exchange should be in place within about 12 months.

- (l) GCX will initially trade maize and rice and, following the Ethiopian model, it will establish large exchange warehouses where these commodities will be deposited prior to spot trading through trading members who will carry out a brokerage function. The project office is currently receiving expressions of interest for investment in eight warehouse sites, each with grain cleaning and drying facilities and 10,000 t storage capacity, around the country. The authors sought information on financial feasibility, notably how the project office would motivate investors to build the warehouses, the break-even level and how the exchange would reach this (in the absence of a mandatory trading through the exchange floor which was key to the establishment of GCX), but such information was not forthcoming. Neither was it possible to establish the permitted storage period.³³ However it was made clear that all receipted produce would be sold over the exchange floor, and none could be sold by private treaty outside of the exchange framework.
- (m) The GGX promoters see GGC as a strategic partner, given its prior work on regulated grain storage, but the two parties have so far not been able to agree the nature of this partnership. A particular sticking point concerns the type of warehouse receipts that GGC may issue; GGC wants them to issue both GGC and GCX receipts, but the GCX model provides for the exclusive use of GCX warehouse receipts and that all must be traded through the exchange.

5.3.2 SWOT analysis and conclusions

It is too early to forecast the ultimate success of GGC-inspired regulated public warehousing in Ghana, but it has various *strengths*:

- (a) The nature of GGC itself, notably that: (1) it is a stakeholder-driven institution whose leading members have invested considerable time and resources in it; (2) it has a pragmatic approach, enlisting the entrepreneurial abilities of market intermediaries rather than just focusing on producer organisations/cooperatives; (3) it has a lot of experience and it has developed trust of farmers and others; and (4) it is able to learn from experience and address challenges as they occur.
- (b) Long-term and flexible support from USAID, with considerable additional support from other donors.

33 The ECX precedent is relevant here: as initially established (and probably still applicable) coffee could only be stored for 1 month prior to trading, sesame and pea beans 2 months, and maize 3 months. Warehouse receipting was ancillary to the trading operation; there was no provision for long-term storage such as can be carried out in GGC-certified warehouses.

Stronger government support than existed with the 1990s pilot, particularly with enabling legislation.

The GGC scheme also faces some significant *weaknesses/challenges*:

- (a) **The limited scale of the formal market for agricultural commodities in Ghana.** Presently the GGC scheme only handles maize, of which national production is around 1.8 million t. However, only a limited share of this is purchased by the sort of formal sector end users that demand quality ingredients and are likely to opt for produce from licensed warehouses. Food processors are mainly of a small scale nature, and the large scale roller mills one finds in East Africa are nearly absent in West Africa. The most quality-conscious buyers are (probably in descending order) (1) Nestlé, which buys a few hundred tons a year; (2) the brewers that may be buying as much as 20,000 t in maize grits; (3) NAFCO, which is reported to buy around 14,000 t of grain per annum for public institutions; and (4) the fast-growing animal feed sector (overwhelmingly poultry) which was buying about 410,000 t according to USAID.³⁴ This means that the poultry sector is key to generating demand for the warehouse receipt system. However, poultry farmers vary widely in scale and technical sophistication; many buy most of their requirements from traditional market intermediaries and are likely to continue doing this. As such, they will not immediately see the advantage of buying through a highly-formalised system like the WRS. The Greater Accra Poultry Association is one of the most quality-conscious buyers, buying all its maize from three or four suppliers it trusts (notably Weinco); but it does not require the maize to be graded according to the standards adopted by GGC. There is also potential demand for receipting of a range of other products, including paddy rice, sorghum, palm oil, cashew, shea nuts, frozen fish, cassava flour, ground nuts, cotton and soybeans; but the potential tonnage for all of these was lower than for maize.³⁵ The dominant export commodity (cocoa) is already being managed under a highly-organised government scheme, which has some characteristics of a WRS but which is tied to a single-channel public sector export system; locally processed cocoa might be traded through the commodity exchange, but this is not part of GCX's current plans.

34 Coulter and Aning (2012) estimated that total formal sector demand for maize (excluding purchases by bakers, confectioners and public sector buyers like schools and prisons) was about 170,000 t, with poultry feed accounting for about 95% of the total.

35 See Table 5.4.c in the Ghana country annex in Volume II.

- (b) **Stronger players like Weinco have financing alternatives.** Weinco is a Ghanaian blue chip and its participation in the GGC financing owes more to its institutional commitment to GGC of which it is a leading member, rather than to necessity. Having found the grading and documentary requirements rather onerous³⁶, it may seek other forms of financing that draw upon the strength of its balance sheet and its track record.
- (c) **Flattening of the seasonal price curve for maize** and the increased risks involved in seasonal storage, as discussed above.
- (d) **Some laxity within GGC**, which has resulted in a borrower-member (Africa Connections) moving stock out of the warehouse where it was being stored and defaulting on repayment to CCH which (notwithstanding) has repaid the financing bank (Stanbic). The case affects about 12% of WRS lending to date, has gone to court and is still unresolved.³⁷ Hopefully, GGC can learn from this experience; an expert review is in progress, and this review should result in stronger corporate governance and compliance systems.

Looking forward, there are various *opportunities and threats* of which GGC will need to take account. Apart from the laxity issue which calls for immediate action, one of the main threats is Ghana's present monetary turmoil, involving obscenely high interest rates, which will make it difficult to persuade members to obtain WRS financing from the banking sector. However, there are opportunities to use the warehouse receipts in other ways, including:

- (a) as a means of securing the credit that buyers extend to their rural suppliers - this is an extension of traditional supply chain practices - if the supplier can pledge goods in his/her warehouse, the buyer can advance him/her more money, which in turn bids up farm-gate prices and benefits farmers
- (b) to transfer title from suppliers to buyers, taking advantage of the transferability of the GGC warehouse receipts
- (c) for larger warehouse operators, notably Weinco, to receipt the goods of its farmer suppliers and offer to sell them on a brokerage basis.

36 Wienco's main source of concern was the requirement to have its grain re-graded once it had passed the five month shelf-life allowed under GGC rules. The rule prevents grain being handled on a first-in-first-out basis and involves significant additional expense.

37 The Chairman of GGC holds the donor (USAID) largely responsible for the problem, claiming that pressures to show results caused corners to be cut in signing up and financing the member concerned.

GGC members should explore the scope for expanding on approaches 1 and 2 that are reported to have already occurred on a small scale. Approach 3 might provide a partial solution to difficulties that threaten the long-term viability of Weinco's outgrower model. As suggested by the GGC Chairman (Tom Gambah, pers. comm.), it might make sense for Weinco to move its farmer suppliers (through MAFA) to a risk-sharing arrangement so as to overcome its current predicament, whereby it finds itself caught between cost-plus pricing to its farmers and uncontrollable off-take prices.

The GCX initiative represents both an opportunity and a threat. On the positive side, the establishment of an exchange trading mechanism would complement the WRS, making warehouse receipts more liquid and the bankers more willing to provide finance without having an off-taker agreement in place (a difficult requirement to meet in a market where there are a limited number of formal sector off-takers prepared to enter into forward contracts). On the negative side, GCX may prove to be GGC's competitor for a limited pool of receiptable commodities, making it difficult for either of them to progress towards break-even.

The main difficulty with GCX, as presently conceived, is that it attempts to reproduce most of the organisational and operational characteristics of the Ethiopian exchange (ECX), but in a totally different environment, involving: (1) food crops instead of export cash crops; (2) a high level of informality at the buyer end; and (3) the impossibility of *mandating* trade along Ethiopian lines.³⁸ Insufficient consideration appears to how GCX can reach break-even in the Ghanaian situation. It is to be hoped that the promoters will review their approach, consulting intensively with local stakeholders. A lighter structure is called for in the early stages, one which will allow the concept to be piloted in a few strategic locations. The trading floor can be a simple delivery versus payment system, with electronic matching of bids and offers, delivery in the form of warehouse receipts and settlement system whereby banks guarantee their clients' payment up to a given limit.

CCH has made an interesting start, so far accounting for the totality of WRS lending under the GGC scheme. However, this is partly related to the incipient nature of the scheme where only one bank has provided finance, so it is difficult to draw conclusions at this stage about longer-term attractions of Repo financing vis-à-vis direct lending by the banks. The real challenge for

38 Government is likely to mandate purchases by public sector institutions, notably NAFCO, believed to buy around 14,000 t of commodities per year for distribution to schools and other entities, but it is not contemplating the mandating of regular private trade. Any attempt to do so could be expected to foster large-scale evasion and parallel trade.

CCH, and one to which the promoter is committed, is to develop the Repo into a short-term financial instrument which can radically reduce the cost of warehouse financing in Ghana.

The main conclusion from the above is that GGC is an interesting scheme that can help Ghana become a major surplus producer of field crops within the West African region, working in coordination with contract farming initiatives and a new commodity exchange. However, it has a number of challenges to overcome; it will need long-term external support and mentoring to help it develop and fulfil its potential. It is important to find ways of simplifying documentary requirements and ensuring that quality management procedures and documentation are in line with market requirements and that they do not create an undue administrative burden.

5.4 Other actual or potential initiatives

5.4.1 Côte d'Ivoire

Côte d'Ivoire is planning a regulated WRS and it intends to pilot the system with a single crop, probably cashews. The government wants to substantially increase local processing of raw commodities, and it sees public warehousing accessible to farmers and cooperatives as playing an important role in this plan. The cashew sector has developed very fast such that national production of raw nuts reached 450,000 t in 2012, and Côte d'Ivoire is now the second producer in the world after India. However, only 5% of production is locally processed; processing is inhibited by stakeholders' difficulties in accessing storage and financing. For this reason, the government wants to pilot the regulated public warehousing system with cashews.

The IFC and industry stakeholders have been working with the government to draft a Warehouse Receipts Bill which will provide for regulated public warehousing. Banks, insurance companies, producers, cooperatives, processors, CMs and Ministries of Trade, Industry and Finance have all reviewed the Bill and contributed to its drafting. The Act will provide for a Regulatory Council³⁹ to certify warehouse managers/CMs that will take deposits from the public and if required issue negotiable and non-negotiable warehouse receipts against them. These may be electronic or paper documents. The Bill also provides for a central registry. The Council will be responsible for ensuring compliance with the rules and for enforcing commodity standards. It was first proposed that the use of the warehouse receipt system would be voluntary, but after

39 Conseil du Système de Récépissés d'Entreposage et à des Fins Connexes.

discussions with the stakeholders it was agreed that farmers, processors and other sector players would only be allowed to store the commodity (cashew) in approved warehouses.

There is still some uncertainty as to whether Côte d'Ivoire will start with cashew or another commodity, but if the country opts for the former, implementation could start at the earliest with the next cashew crop, in February-March 2015. After the establishment of the regulated WRS, it is envisaged that the country will establish a physical commodity exchange.

Some factors bode well for the success of this initiative in Côte d'Ivoire, for example:

- (a) Scale and liquidity: Côte d'Ivoire produces large volumes of internationally traded commodities and it markets them through private channels
- (b) Unlike other countries studied it has some prior experience in regulation of CMs
- (c) The process is partly driven by private stakeholders who understand the sector and the challenges it faces
- (d) The scale of financing of commodities under CMAs is so large (estimated at €2.6 billion just for export crops) that some banks will welcome negotiable instruments that allow them to refinance their debt on the local money market and thereby overcome liquidity constraints on their lending
- (e) It has the technical support of an international institution (IFC) with a long-term commitment to the development of WRS around Africa.

Some of the stakeholders have, however, expressed concern that the banks have not been sufficiently involved in designing the WRS. According to this view, there is a general lack of experience with negotiable instruments in CI, and changing this and introducing other features of the WRS will require considerable leadership from the banking sector that is not yet apparent.

It is also important that WRS is not seen as a panacea to the failings of the value chain. One leading banker (M. N'dri Augustin, SGCBCI) believes there is massive potential to raise productivity of export and staple crops and much of the solution resides in the development of stronger forms of contract farming linking producers with input suppliers, international buyers and banks.

5.4.2 Mozambique

Influenced particularly by the Ethiopian Commodity Exchange (visited by the Mozambican President) and probably by other examples in southern Africa, the government established the Mozambique Commodity Exchange (BMM) in 2012, and drafted a Warehouse Receipt Law. At the time of this publication, the BMM appears far from functional, but it is in the process of assuming responsibility for 39 new silos with a capacity of approximately 200,000 t of grain. Each silo is equipped with a quality control laboratory with the objective of being able to provide certified elevator type storage facilities. BMM representatives admit that they have not consulted private sector stakeholders and are only in the incipient phases of training lab technicians, while still not having developed a business model.

The approach is very much government-driven, in contrast to the case of Côte d'Ivoire where there have been incremental moves toward the establishment of public warehousing system and a commodity exchange, with much more consultation of relevant stakeholders. Under such circumstances, the prospects for this scheme do not look good. The technical country study argues for focusing BMM's activities on the most productive agricultural areas in the north, while working in consortium with exchanges in Malawi which already has its agents working in northern Mozambique.

Regardless of the prospects for BMM, the drafting of a new WRS law could provide the opportunity to engage the government seriously about the legal and institutional framework for different kinds of warehouse receipting in Mozambique, including CMAs and SMAs. This is referred to in the recommendations (see Section 8.2.6).

5.4.3 Burkina Faso

The technical country study on Burkina Faso notes that one of the CMs is providing public warehousing services to farmers and traders and that certain POs already involved in Type A activities (community inventory credit) wish to develop a national system of PO-managed warehouses where groups can deposit their goods under the coordination of the FEPA-B apex body. The Confédération Paysanne du Faso (CPF) will advocate for the establishment of such a system with the government and donors. The technical country report goes on to recommend the drafting of a law to facilitate the development of public warehousing by the above mentioned players, to assist in the development of processing and give comfort to the banks.

5.4.4 Madagascar

The Madagascar technical country report also notes how MFIs which have developed the GCV (Type A) system are increasingly establishing central warehouses under their own management; it recommends to build on this trend and develop a national warehousing profession, with an appropriate regulatory structure. The Malagasy MFIs could be prime movers in establishing such a system; given their sterling achievement with the GCVs, Madagascar probably presents one of the strongest opportunities for public warehousing in the subject countries.

“ Madagascar probably presents one of the strongest opportunities for public warehousing in the subject countries

However, to do this they will need to see beyond their trade and to reach out to government, banks and other value-chain players. It is recommended that any regulatory structure be able to sustain itself through levies on licensed warehouse systems and internalise the cost of all due diligence and risk assessment, rather than depending on government budgetary allocations.

5.5 Legal aspects of public warehouses

5.5.1 Which approach is most appropriate?

Introduction

The key legal elements of a regulated system of public warehouses include the authority to issue warehouse receipts, the status of those receipts, financing against the receipts, the warehouse operator's out-turn commitments, commodity grading, the regulatory regime, licensing criteria, handling warehouse failure, and the recourse of those suffering losses due to warehouse failure or non-performance. These and other points are discussed in Annex 3, Section 2.

Those seeking to establish a regulated system face the choice of going for legislation (following the examples of Tanzania, Uganda and Ethiopia) or creating the system out of contractual arrangements between the relevant parties (following the examples of South Africa and the Ghana Grains Council). Annex 3, Section 3, analyses the pros and cons for these two options. The main conclusion from this is that both routes are likely to be difficult.

The voluntary contractual route

The contractual route is difficult because it requires industry motivation, available finance and ongoing discipline from the participants. Moreover, it

requires an unusual level of stakeholder cohesion, something which existed in abundance in South Africa around 1994, when the system of silo certificates was established, but is not a characteristic of field crop commodity sectors (grains, pulses and oilseeds) in the remainder of continent. In South Africa, two companies controlled 70% of the silo capacity and provided a core around which consensus could be easily reached, and there were trade associations representing all sections of the relevant value chains. The limited number, the large scale, and the education level of the commercial farmers⁴⁰ in that country meant that this group was more organised too. However, the opposite is generally the case in other African countries, due to the relative atomisation and informality of production, marketing and even processing functions and the absence of strong bodies representing stakeholder groups.

Organising stakeholders is somewhat easier in Eastern and Southern Africa than in West Africa, because there are some large formal sector end-users, notably millers and traders who have an interest in making the supply chain more efficient and can serve as a focus for organisation. This may in part explain initial success in organising the Eastern African Grain Council (EAGC). However, the Kenyan State has not always acted in a way that facilitates this stakeholder-driven approach and the process of organising the regulated WRS seems to have languished.

With the voluntary system there is also a risk of claims from third parties outside of the system, for example, if a depositor grants security over commodity covered by a warehouse receipt to a third party. In this scenario, the rules of the voluntary system would not be binding on the third-party creditor and the normally applicable rules of priority would apply. This could put a creditor who has financed on the back of a warehouse receipt at a disadvantage, as it may only have a contractual claim against the borrower rather than an effective security right. However, this risk has not prevented the unregulated South African system from getting firmly established. Further legal research would be justified to understand the South African experience, the residual risks associated with the non-regulated system in that country and the scope to reproduce the South African approach elsewhere in Africa.

40 The official census of agricultural production for 2007 shows the total number of farming units (all crops) at 57,980 in 1993, falling to 37,982 in 2007. These are relatively small numbers compared to the numbers of producing households in each of the other countries of sub-Saharan Africa, numbering in the hundreds of thousands or millions.

The legislative reform route

The legislative reform route is also difficult, as illustrated by the case of Uganda. The process was embarked on with project support of international aid donors, but the local and international project sponsors did not share a cohesive vision of what they were trying to achieve. Indeed, the local promoters seem to have been more concerned with resurrecting the cooperative movement, a laudable aim, but different from a warehouse receipt system. Tanzania, which passed its WRS Act in 2005, has been more successful, but it has challenges in the areas of governance, funding and staff numbers, which according to a recent review, call for urgent action (see Box 5).

BOX 5: REGULATORY CHALLENGES IN TANZANIA

Tanzania has one the strongest public warehousing systems in sub-Saharan Africa, and it is regulated by the Tanzanian Warehouse Licensing Board (TWLB), which operates under the Ministry of Industry and Trade (MOIT). TWLB has licensed 60 warehouses with a total storage capacity of 259,700 t, and the main commodities stored and financed are raw cashews and coffee destined for export. Thirty-five of the warehouses hold paddy rice, maize and sunflower, but these are relatively small structures with average capacity of 392 t.

According to a recent review, the system has experienced some losses in the form of non-delivery by licensed warehouse operators, particularly in the cashew subsector, that have been higher than the operators' capital. In such cases, it can take a long time to settle claims and it sometimes involves court litigation. Indeed, it took over three years for the courts to determine liability in a case involving under-delivery of receipted cashew. Such a long and usually costly process can significantly undermine confidence in the WRS and its effectiveness in assuring delivery against (planned) exchange-traded contracts.

The review found TWLB to be severely underfunded and understaffed. There was a shortage of available trained personnel able to undertake effective warehouse examinations, as well as inadequacies in both off-site analysis of reports submitted by the warehouse operators and in reports from collateral managers hired to carry out inspections on TWLB's behalf. Apart from this, TWLB's financial constraints mean it is unable to use the inspectors as often as required. The licensing fees it charges warehouse operators represent a very small fraction

of its financing requirements and it is almost entirely dependent on government for funding.

Apart from not being able to set realistic user fees, part of TWLB's problems lie in its governance. The Board is presently dominated by farmer representatives (four out of eight members); balance needs to be shifted in favour of representatives of banks, insurance and major exporters.

Difficulties of this kind increase the risks associated with the WRS, including physical losses, quality deterioration and fraud. However, the review states that *as at now the incidents do not appear to be affecting confidence in the system, but that can change quickly if robust systems are not instituted to minimise the risk of much larger losses.*

Source: Onumah *et al.*, 2013

In some countries, government stakeholders have at times conceived of the WRS as a basically government-managed system, in a way which makes it difficult to establish an operational framework that gains the trust of private stakeholders inspiring fear of inefficiencies or heavy-handed intervention. This has been evident at certain times in several African countries, including Zambia, Kenya and Nigeria, though it may not presently be the case in those countries. Governments tend to have short-term priorities, sometimes with an electoral focus, which prevent them from focusing patiently on the long-term institutional development projects which require more than a decade to achieve, and in such circumstances, they may not deliver effective legislative reform.

Another potential problem is that the legislative process in any country can be very long; its outcome is uncertain. In the case of Zambia, draft WRS legislation was under consideration for most of a decade before the Agricultural Credits Bill was passed in November 2010. Standards of public service can pose another problem, with a regulatory activity which in few words needs to be *strict, fair or - best not at all.*

A third option: the ECX route

Another option is the *Ethiopia Commodity Exchange (ECX) route* and variants on it which have been widely promoted around the continent. It is inspiring initiatives in Mozambique, Malawi, Tanzania and Ghana. The promoters of this model seek to enlist wholehearted support of governments in the countries

concerned for a model that includes a (normally) open-outcry commodity trading floor with a series of delivery points (warehouse sites) in the main producing regions. Governments have varying levels of involvement in the ownership structure and governance. The warehouses are mainly established for trading purposes; all commodities deposited there must be sold through broker-members acting on the trading floor and warehouse receipt financing is subsidiary to this. In examples that the authors have seen to date, there is no prospect of selling by private treaty outside the exchange.

“ A model that includes a (normally) open-outcry commodity trading floor with a series of delivery points (warehouse sites) in the main producing regions

By getting the governments enthusiastically involved and enlisting the large-scale support of aid donors, international financial institutions, banks and investment funds, the promoters seek to create the critical mass whereby regulatory obstacles are quickly overcome, and the exchange and its linked public warehousing system takes off quickly with massive volumes of commodities. Indeed, this is what happened with ECX: by the third year of operations (FY 2010/11), the volume of commodities traded had reached 509,000 t, of which 51% was coffee, 41% sesame, 7% pea beans, and 1% maize, the latter being the only non-mandated commodity.

There are, however, some potential snags with this model:

- (a) Above all, it is very difficult to translate conditions in Ethiopia to other countries of sub-Saharan Africa. The Ethiopian Government *mandated* all exports of the relevant crops through the commodity exchange; it could do this (despite considerable evasion/black market) because: (1) it focused on export crops that could be controlled at the point of export; and (2) the government's writ is widely respected, indeed feared, because evasion can carry serious penalties such as 15-year jail terms.
- (b) Most of the ECX lookalikes are focusing primarily on domestically consumed field crops like maize and soybeans, which cannot be effectively mandated in the Ethiopian way without causing a massive illegal parallel trade such as existed with parastatal grain monopolies in Eastern and Southern Africa during the pre-liberalisation. This situation lasted into the 1980s, and it can be observed today in massive illegal cross-border trade flows in rice and other commodities. Probably in the light of this problem, the promoters have generally stopped short of advocating for the mandating of crops through the commodity exchange,

but this leaves a situation like the one in Ghana (see Section 5.3.1) where they cannot explain how investors would be motivated to build the warehouses and bring the exchange to break-even.

- (c) In practice, the approach risks appealing to the more interventionist and short-term political instincts of governments. There is evidence of this with Mozambique and Ghana, where there has been insufficient consultation with stakeholders on the ground and in Nigeria, where government supporters expected a revamped Abuja exchange to have transformative impact in advance of elections.
- (d) Large projects involving the prestige of governments, IFIs, investment funds and renowned international figures risk creating a situation like the one observed in Ethiopia, where there has been insufficient research into the pros and cons of ECX and insufficient local and international debate about its achievements (see Coulter, 2013).

Conclusion

The above observations support the authors' conviction explained in Section 7.3, that the funding agencies need to take a long-term programme approach, one that will gradually empower



The funding agencies need to take a long-term programme approach

local stakeholders seeking to improve the performance of value chains. Notwithstanding the various challenges faced by Ghana Grains Council, USAID's approach in supporting GGC has some merit in this regard, notwithstanding

the challenges this organisation faces. It has started by gaining experience with a contractually regulated WRS, but is at the same time advocating for a nationally regulated system. Its experience as a practitioner makes it a wiser advocate, with a strategic view and it may allow it to steer official processes towards a positive outcome.

5.5.2 Legal reform in the OHADA region

In terms of the legislated approach, there is the possibility of achieving reform across the OHADA. S&W consulted with Ivorian firm Brizoua-Bi to gain a deeper understanding of the scope for this. Annex 3, Section 5 (Overview of key OHADA provisions) sets out some detail on the background to the OHADA legal regime and the existing OHADA laws applicable to commodity financing.

The process of introducing new OHADA Acts is long, and it ultimately requires unanimity of the voting countries. Implementing WRS legislation across the whole OHADA region by introducing a Uniform Act would clearly be a difficult task. Brizoua-Bi, who have extensive experience of OHADA laws advise that it is, however, possible to encourage warehouse financing within the framework of existing OHADA laws. For example, the Securities Act provides that in the context of a non-possessory pledge over commodity, the RCCM may issue a *bordereau de gage de stocks* (a pledge form) which serves as confirmation that the relevant pledge agreement has been successfully registered with the RCCM. A pledge form can be endorsed by a secured creditor to a third party who will then obtain the rights of a secured creditor in relation to the pledged goods. The pledge form does not transfer ownership in the goods nor is it a document of title, but the endorsement mechanism is a useful way of transferring certain rights to underlying commodity.

However, the pledge form is only relevant in the case of non-possessory registered pledges. The legal and technical due diligence suggest that unregistered possessory pledges are the more common practice, meaning the pledge form is currently of limited practical use.

There is nothing in the Securities Act opposing the passing, in the individual Member States, of specific legislation relating to the possibility of issuing a warehouse receipt-like instrument in the context of a possessory pledge over commodity. In other words, under current OHADA legislation, each OHADA country is given the discretion to legislate in respect of warehouse receipts as part of a possessory pledge over stocks arrangement. On the assumption that a warehouse receipt offers better security to a secured creditor (for instance, by providing, among other things, proof of ownership of commodities that are stored in a warehouse), Brizoua-Bi would encourage it in the OHADA countries, especially in Côte d'Ivoire.



6

Lending against the security of current or future production (Type D)

For a long time, there has been considerable lending under out-grower arrangements in the subject countries, but the primary tools in ensuring repayment are not the legal security over the crop, but the lender's supervisory arrangements and, for some bulky crops (e.g., sugarcane) or high value-crops (like air-freighted vegetables), the absence of alternative buyers in the vicinity. With the Weinco/MAFA scheme discussed in Section 5.3.1, the lender is taking other drastic action, including the police and the courts, to ensure delivery of the crop under the contractual terms. In Côte d'Ivoire, banks are lending to producers on the security of the crop and in the event of default, they can easily send in a contractor to harvest the rubber under contractual provisions that provide for an assignment of receivables (*cession de créances*).

However, the funding agencies are principally concerned with identifying cases where there is scope for new financial instruments like the Brazilian agricultural bonds (*cedulas de produtos rurais*), forward contracts underwritten by a bank or other party which can be financed or even traded on a commodity exchange. The authors' soundings on this suggest that in most African countries it is not realistic to expect banks to take security over such paper, given that there are so many cases where they are unwilling to finance against the security of possessory collateral held in warehouses. The small scale of most agricultural producers compared to Brazil and the weakness of cooperatives also make this a challenging proposition.

However, the authors discussed the proposition with a leading Ivorian banker who thought it might be possible with the Ivorian rubber producers, many of whom have plantations of 50-100 ha. Key considerations would be the quality of the party underwriting the issue of the documents and the availability of suitable insurance for loss of harvests. If the funding agencies wish to pursue the idea of agricultural bonds, it is suggested they test it out with the Ivorian rubber sub-sector.



7 Conclusions

7.1 Pros and cons of types

WR/CM is not a panacea or a magic ingredient, but tools that can be used in the development of agricultural value chains, alongside or in combination with a range of other tools. Table 7 outlines key pros and cons of the different approaches reviewed.

Table 7: Key pros and cons of types reviewed

	Pro	Con	Main subject countries using it to date
Type A	<ul style="list-style-type: none"> • Low scale, direct farmer involvement • High accountability and repayment • Improved management of home economy/<i>forced savings</i> • Possible stepping stone to market-oriented approach 	<ul style="list-style-type: none"> • Inflexible product with fixed calendar • Dependency on project support, especially for warehouse construction • Producers lack of market knowledge 	<ul style="list-style-type: none"> • Madagascar • Burkina Faso and Niger
Type B	<ul style="list-style-type: none"> • Important component of key value chains supporting millions of families • Spontaneous activity, not dependent on governments or donors 	<ul style="list-style-type: none"> • Economies of scale - high fixed costs per site/ inaccessible to most rural clients • Vulnerable to fraud in some countries 	<ul style="list-style-type: none"> • All countries except Madagascar

	Pro	Con	Main subject countries using it to date
Type C	<ul style="list-style-type: none"> • Open, contestable system, allowing public access • Facilitates price discovery, trading & development of commodity exchanges 	<ul style="list-style-type: none"> • Requires regulation or self-regulation, either of which is difficult • Economies of scale in operation & regulation of warehouses • High initial cost of external support 	<ul style="list-style-type: none"> • Uganda, Ghana

7.2 Key success factors

The authors have examined a heterogeneous set of initiatives in a widely varied set of countries. What can be said about the main ingredients for success? To answer this question, the nine cases set out in Table 8 are examined.

Table 8: Factors contribution to success or failure of initiatives

Country	Initiative (type)	Success factor	Source of failure (actual or potential)
Burkina Faso	Collateral mgt. for farmers and processors (A/C)	<ul style="list-style-type: none"> • Stakeholder driven • Vision & leadership 	<ul style="list-style-type: none"> • Risks stemming from inexperience • Interventionist trend at Government level
Niger	Community inventory credit 1999-2009 (C)	<ul style="list-style-type: none"> • Product strengths: accountability, ownership • Vision & leadership of promoters • Long-term commitment (1999-2007) 	<ul style="list-style-type: none"> • Inflexibility of product • Dependency on donors for warehouse construction • Limited scale
Senegal	Senegal River Valley rice collateral management (A)	<ul style="list-style-type: none"> • Stakeholder driven • Large scale • Government and donor support 	<ul style="list-style-type: none"> • Policy contradictions, calling for strong national leadership and strategic choices
Ghana	Ghana Grains Council (B)	<ul style="list-style-type: none"> • Stakeholder-driven • Long-term support of funding agencies 	<ul style="list-style-type: none"> • Monetary turmoil • GGC cohesion & governance • Limited scale of formal markets

Country	Initiative (type)	Success factor	Source of failure (actual or potential)
Côte d'Ivoire	Coffee & cocoa coop guarantee fund (FGCCC), 2004-2008		<ul style="list-style-type: none"> • Management shortcomings • Failure to involve relevant players • Official reluctance to disqualify non-performing coops
Côte d'Ivoire	Public warehousing initiative (B)	<ul style="list-style-type: none"> • Stakeholder's relevant experience • Government & stakeholder- driven • Scale factor 	<ul style="list-style-type: none"> • As yet untested in practice
Madagascar	GCV system (C)	<ul style="list-style-type: none"> • Strong underlying demand • Vision & leadership • Long-term approach 	<ul style="list-style-type: none"> • Weaknesses in quality and risk management
Mozambique	BMM exchange and warehousing system (B)	<ul style="list-style-type: none"> • 39 new silos, with capacity of 200,000 t + QC laboratory 	<ul style="list-style-type: none"> • Government-driven; private stakeholders not consulted • No business model or technical capacity
Uganda	Regulated WRS for grains (B)	<ul style="list-style-type: none"> • Liberal government policy towards trade in staple foods 	<ul style="list-style-type: none"> • Lack of scale economies • Promoters lack shared vision • Weak involvement of private stakeholders

Further country-by-country explanation is provided below:

- (a) Madagascar: with the establishment of the GCVs, it can be seen that: (1) strong underlying demand, in terms of the enhancement of food security and livelihoods and the ability to smooth predictable seasonal price movements for the staple food; (2) a product that was quite simple and institutionally workable; (3) the strong vision and leadership of the promoters, including people who came from the French credit unions, producers' representatives, public officials and bankers; and (4) long-term commitment of funding agencies that continued supporting for about 18 years. This gave the players scope to adapt their approach in the light of experience; notably they learned by dint of trial and error that a single-minded focus on POs as key protagonists would not work in the Malagasy environment.

- (b) Burkina Faso: there has recently been growth of collateral management activities in support of (often small-scale) agro-processing and producer groups, contrasting markedly with the mainstream collateral management model that clusters around high volume international trade. Key ingredients of this (tentative) break-through are the vision, leadership and drive of some of the key private stakeholders (notably CMs and banks), who are finding ways of working effectively with organisations of producers and small-scale processors. However, the rapid expansion of this activity and the limited experience of the players is a source of risk.
- (c) Niger: the widespread adoption of community inventory credit owes much to the efforts and vision of key individuals who promoted the product under FAO auspices over the best part of 10 years and to the development of direct credit MFI which filled the gap left by failing mutual MFIs (credit unions). The product itself has both strengths and weaknesses.
- (d) Senegal: in the Senegal River Valley, significant success has been achieved in developing the irrigated rice sector with a value-chain approach that makes use of stock monitoring and collateral management at different levels of the chain. The initiative has made progress in overcoming historic difficulties in making Senegalese rice competitive with imports in terms of price and quality, but there are still unresolved issues in this area. Key success factors include scale economies (the operation involves tens of thousands of tons per harvest) and the stakeholder-driven nature of the initiative. The government has provided major support for local rice production through the irrigation authority (SAED), as have development partners, but more civil society leadership is needed to address underlying policy contradictions.
- (e) Côte d'Ivoire cocoa: this country witnessed various attempts to increase the role of cooperatives and SMEs in cocoa marketing, including the Coffee & Cocoa Coop Guarantee Fund (FGCCC), and making use of collateral management services. There has been little lasting impact due in large part to management shortcomings and an official reluctance to disqualify non-performing coops, some of which were fake entities (see Section 4.6.1).
- (f) Côte d'Ivoire public warehousing: the current initiative seems to have a fair chance of success, given the large potential scale of operations,

the involvement of a range of stakeholders with a lot of experience with CMAs and the support of IFC which has a long-term commitment.

- (g) Ghana: with GGC, private stakeholders have set standards for warehouses, management and grains at the level of community and aggregator warehouses; they have established a regulated WRS for domestically staples. The scheme has significant challenges, but it should be able to make good and provide a sounding board and potential partner to new initiatives, like the establishment of a commodity exchange.
- (h) Mozambique: The government has established BMM, built a chain of silos, and caused a WR law to be drafted, but there is scant private sector involvement in this process, and BMM lacks a business model or technical capability. The country study expresses the situation as follows: *Unless there is an effective scheme to cede silo space to highly competent private operators, plus the capability to effectively regulate their use, there is a major risk that the silos of the BMM will be poorly managed and underutilised.* BMM and the proposed WRS seem to be part of push for greater official influence over markets for agricultural staples.
- (i) Uganda: Progress is poor with the regulated public warehousing system for maize. One very favourable feature is the government's liberal policy towards trade and exports of staple foods, in contrast with most countries of Eastern and Southern Africa which frequently intervene in markets in a way that sometimes discourages those engaged in seasonal storage. However, the initiative has suffered from a lack of scale economies, a lack of shared vision among domestic international promoters. and little involvement of larger-scale private stakeholders.

In conclusion, scale factors are vital to the success of all kinds of WR/CM initiatives. In the case of Type B and C operations, it is because of the high fixed costs of operating/collaterally managing warehouses, added to which regulatory frameworks may result in additional costs. Type A warehouses have low overheads, and providing they can access a financier, can be run on a much smaller scale in rural communities. However, given the high expenditure on promoting the tool, its promotion can only be economically justified if there are prospects for sustained adoption by large numbers of communities.

- (a) Economic factors, including both demand and scalability, are fundamental to the success of warehousing and collateral management initiatives. The promoter's unwillingness or inability to deal with them up-front

sometimes leads to difficulties at later stages. This was the case with the regulated WRS in Uganda, where there was a lack of clarity at the project design stage. Economic factors also adversely affected the rice pilot in the Senegal River valley, where the government had to deal with a long-standing political hot-potato, (i.e., the trade-off between supporting domestic production and of ensuring low-cost rice to a nearly 50% urban population which has become accustomed to well-graded broken rice which is a by-product of Asia's massive rice industries).

Other key success factors are found to be:

- (a) the vision and leadership of promoters, be they private, governmental or foreign
- (b) private sector involvement and initiative
- (c) the scope to modify approaches in the light of experience
- (d) the role of government, particularly whether it is supportive or otherwise.

Addressing these latter factors is largely about *process*. When a project is first mooted, promoters may not share a coherent vision as to what it will achieve and how; there may be a lack of private sector involvement and drive; and government policies and actions may constrain the initiative. Under these circumstances, international funding and technical assistance agencies may need to provide patient long-term support, often for upwards of a decade, if they want to get results.

One can already see elements of a programme approach with some agencies. For example, USAID and other players have provided long-term support to the Eastern African Grains Council. In the case of Ghana, USAID continued its support for grains market development under the Advance 1 project with an Advance 2 project (notwithstanding, there is sometimes discontinuity and memory loss when USAID tenders out new projects). In the case of the World Bank Group, both the World Bank and IFC now provide long-term thematic support for warehouse receipt systems and commodity exchanges around World. AFD's long-term support for the CECAM network and the GCVs has also been alluded to above.

7.3 Need to move to a programme approach/limitations of the project approach

Notwithstanding the trend towards a programme approach, donor activity is largely driven by the need to present results within the life of projects, which can sometimes be at the expense of long-term impact. IFAD reportedly has 30 projects with warehouse receipts components, but there seems to be no thematic repository for this information upon which researchers and project planners can draw. The Senegal technical country study describes a Type A initiative, supported by Belgian-funded microfinance project and two NGOs, that was presented as a *success story*, but without evidence of sustainability beyond the end of the project.

The Burkina Faso case highlights the limitations of project-based approaches. Large donor-supported projects (PICOFA and PAPSA) have been helping grassroots POs implement community inventory credit using a *decentralised approach*, but without the support of higher level structures that would help them sort out problems (such as negotiation with MFIs, grain marketing, etc.) after the end of the project assistance. They have also been building and rehabilitating community warehouses, but only for the duration of the project. There is no arrangement whereby farmers can access funds to build such warehouses beyond the project horizon, and this makes the expansion of this activity dependent on donors and governments continuing to fund specific projects.

7.4 Need for capacity building

The report has highlighted to build the capacity of stakeholders involved with WRS and collateral management in Africa - see Table 9.

Table 9: Opportunities for capacity building

Country/ Region	Activity	Section reference in this report
West Africa	Banks already financing warehouse receipting and even establishing collateral management companies, but which still need to develop the sort of internal management and marketing monitoring framework they will need to grow their lending portfolio in this area.	4.4 4.5

Country/ Region	Activity	Section reference in this report
Senegal	CNCAS in need of capacity building in warehouse receipt financing. Case of FEPROMAS underlines need for proper training of farmers participating in warehouse receipting operations.	4.6.3
Niger	Asusu and Coopoc-Kokari, which have stepped up to the opportunity of financing in remote rural villages, with the former diversifying its product portfolio.	3.4.2
Senegal and Burkina Faso	Nationwide mutual microfinance networks which could possibly learn from their Malagasy counterparts and do much more inventory lending.	3.4.4 and 3.4.6
Burkina Faso	Newly established collateral management companies doing innovative work in rural areas, developing the structure of value chains and improving the position of small producers and SMEs within them, but they will need expert mentoring to help them expand and manage the risks involved.	4.6.4
Uganda	Need for training programs to expose banks and rural based clients to WRS operations and to encourage exporters to develop and/or extend their supply chains to the rural suppliers which the banks can then support through CM-operated WRS.	4.6.5
Madagascar	An immediate need for training in commodity handling and for improvements in risk management.	3.3

The approach of capacity building is discussed in the recommendations below.

7.5 Sahelian countries are at a crossroads: Which way forward?

During recent decades, there have been many initiatives to develop markets from the bottom up through community-based and cooperative initiatives, often supported by mutual MFIs inspired by the European Raiffeissen model, with results varying from success to abject failure. Opinions often vary as to the degree of success, for example with two of the best known peasant-based agricultural marketing cooperatives, Faso Jigi in Mali and UGCPA-BM in Burkina Faso. Some hold them up as successes, but others, while recognising their achievements, question the cost-effectiveness of considerable donor funds invested in their development.⁴¹

41 Author's comment based on multiple conversations with people involved with these initiatives.

Burkina Faso presents an interesting case where three separate approaches can be observed:

- (a) The *warrantage c.* model with small local warehouses and stocks held identity-preserved in the name of each farmer
- (b) The development of service cooperatives (or other kinds of PO) including UGCPA and the FEPA-B, which have focused largely on procurement of inputs (sometimes involving barter for outputs) so as to intensify production, but are now seeking to develop a national marketing structure with warehouses that they will manage for the benefit of their members
- (c) Recent innovation among banks and specialist service providers (collateral managers) seeking new lending opportunities in the development of agricultural value-chains.

Approaches (b) and (c) provide a transition from Type A financing to value chain financing which may involve Type B or Type C financing. Each has its respective strengths and weaknesses; there is considerable overlap between them; and it is by no means clear how far it is worth supporting one, as opposed to another. CMs are managing to provide services at a much lower scale in Burkina Faso than in other subject countries, but it remains to be seen how far this can be sustained. One could also consider the implementation of peer-based mutual guarantee schemes (MGS) which, building on French experience, would allow scheme members to access financing based on stock declarations. While one should not underestimate the challenges involved, the potential advantage of this approach is that, by doing away with the need for an independent collateral manager, it could work economically at a lower scale than Type B and C financing. MGS are discussed in Annex 4, suggesting that it might be implemented among service cooperatives and seed producers.

In such circumstances, the funding agencies should pursue a flexible learning-based approach with a view towards identifying the best ways forward starting in Burkina Faso and this can inform their approach in other countries. Burkina Faso is a suitable place to do this given the generally favourable policy framework with respect to WR/CM and the consensus that has emerged between private stakeholders, government and certain donors (notably KFW) about the role of inventory credit and warehouse receipt systems in food security and development of agricultural value chains. This is taken up in the recommendations for Burkina Faso in Section 8.2.2.

7.6 A caution against direct investments

Some donor and intergovernmental programmes have opted for investing directly in commodity exchanges and associated warehouse operations, but the authors would caution against this as it risks potential conflicts of interest with the last of the roles listed above (i.e., that of capitalising experiences and feeding them back into the public domain). We feel this has happened to some extent with the Ethiopian Commodity Exchange (ECX) and warehouse receipt system model. It has been heavily promoted around Africa as a branded and replicable product and several governments are seeking to implement it or variations of it, including Mozambique (see technical country study), Ghana (see technical country study), Nigeria and Malawi. However, relatively little funds have been devoted to researching the experience and drawing out lessons from Ethiopia that could be useful to prospective adopters.⁴² In the case of the Ghana Commodity Exchange (GCX), more thought should be given to the specific needs of Ghana compared to Ethiopia where the model was conceived.

7.7 Key legal findings

The different legal ways of achieving a regulated system of public warehousing are discussed in detail in Section 5.5 of this report. Countries can follow a legislated approach, a voluntary approach, or what might be called a *big bang approach*, involving the establishment of a commodity exchange and linked warehouses based on the Ethiopia model. However, the authors would generally advocate a gradual approach led by local stakeholders seeking to improve the performance of the value chains in which they are involved, leading to proposals for legislation that take full account of the pros and cons.

Countries should also be clear as to the scope of the legislation and the regulatory authority and they should avoid giving the authority a massive brief in terms of commodities and types of warehousing which it lacks the means to regulate. As was indicated in the legal study for Uganda (Volume III), such situations can place firms in a situation of legal ambiguity.

Finding a competent and trusted regulatory authority may be not be an easy task and experience in from certain (non-subject) countries shows that the choice of the regulator can prove a subject of serious inter-ministerial infighting. While theoretically speaking, one would want to appoint the regulator shortly after legislating, it may in practice make more sense to

42 The subject is discussed by Coulter (2013).

initially pass the legislation providing for rights and obligations of parties and then subsequently appoint a regulator or regulators with a brief to regulate specific commodities.

Where there is not the support or infrastructure for developing a regulated system, it is possible to consider making less drastic changes to the legal system to encourage commodity financing. Without legal intervention, it is not possible to provide for warehouse receipts to be recognised as negotiable documents of title. Therefore, the focus turns to the security regime and to taking steps to ensure creditors can easily take effective, enforceable security over stored commodity by other means. For example, removing financial impediments to taking security, such as stamp duty and registration fees, can encourage financiers to enter into secured financing arrangements.

It would be possible to further improve the security regime in many of the subject countries by improving the functionality of collateral registers. However, even if registers are operationally efficient, they are only useful if used in practice and if they serve as effective legal notice to all parties as to the existence of a security interest and give the holder the certainty of priority over any competing creditors.

Alternatively, countries where registration of pledges is currently required could abolish this requirement by relying on the principle of pledge requiring possession of the secured goods. As only one party can have effective possession of goods at any one time, this should offer legal protection against third-party claims. This solution requires careful consideration of how to address the priority of competing security, including non-possessory security. Generally speaking, non-possessory security is subject to registration as the most effective method of evidencing security interests to third parties. A possessory (unregistered) pledge would need to remain subject to any pre-existing registered non-possessory security. As such, the improvement of the functionality of registers remains an important consideration even where pledges do not require registration. The legal consultants in the OHADA region suggest that registration at the RCCM can take up to 60 days. Delays like this create an additional risk where competing security interests might be granted within a short period of time.

It would give greater confidence to financiers if this move went hand in hand with the effective regulation of warehouse operators and CMs, as a financier would need generally to rely on the constructive possession of those third parties.

In the OHADA countries there are currently two methods of perfecting a pledge: taking possession or registration with the RCCM. In the latter case, registration gives access to a pledge form, a potentially useful tool for commodity financing. However, in practice, parties appear to avoid registration and opt for perfection through possession.

As explained in Section 5.4.2, it may prove difficult to introduce legislation across the whole OHADA region since it requires unanimity. It might be best to start by introducing suitable national legislation in one or two individual countries and use this experience to frame legislation for the entire region. Given the economies of scale involved in regulating warehouses and the need to develop cross-border trade, a pan-regional approach makes sense in the long term. Given the existing scale of collateral management activity, the existing regulatory experience, the impetus to establish public warehousing, the positive approach of the government and broad stakeholder involvement, Côte d'Ivoire might be a good place to start.

8

Recommendations

We present the recommendation in three sections. Section 8.1 provides a strategic recommendation to the three client organisations, to establish a joint Agricultural Commodity Programme. Section 8.2 proposes near-term initiatives (*low-hanging fruit*) for immediate action. Section 8.3 proposes additional initiatives for the longer term.

8.1 Establish an Agricultural Commodity Programme

The three funding agencies have worked together in commissioning this study. Our key recommendation is that they consider continuing this partnership through the establishment of a joint *Agricultural Commodity Programme* (the Programme), with a view to developing commodity-collateralised funding and related value-chain innovations in Africa. The functions of the Programme would be as follows:

- (a) Independent analyses and backstopping for the funding agencies. It would interact thematically with each funding agency's country offices and projects; it would provide independent analyses and backstopping for relevant project initiatives in the commodity marketing and financing area.
- (b) Capacity building through training, mentoring, workshops and quality certification. The Programme would interact closely with the key players interested in warehouse receipt financing, notably banks and MFIs, CMs and POs, with the offer of workshops and training events - Table 9 shows some capacity-building initiatives suggested in other parts of this report. Readers seeking guidance and case study material for training banks should consult a manual which IFC commissioned for this purpose (see IFC Advisory Services, 2013).

- (c) A challenge fund should be established to support initiatives in this area. Priorities should include building capacity of financial institutions and business development services to help some of the growing institutions develop management competencies and compliance structures in line with the roles to which they aspire.
- (d) Help collateral managers organise professionally, set standards and certify capacity. Fraud-related failures underline the need for an initiative along these lines. The Programme should be prepared to assist industry self-help in this regard, particularly CMs serving up-country and landlocked areas.
- (e) Develop and test a robust model, partially publically-funded, for supporting warehouse construction. The technical country reports repeatedly refer to the shortage of suitable warehouse infrastructure and grain handling equipment in the hands of POs, rural traders, CMs and professional warehouse operators. Given the shortage and often very high cost of term financing in Africa, this clearly poses a constraint to the development of agricultural markets. However, donors have a poor record in funding rural stores (and even large-scale silo facilities); they often remain idle or are grossly underutilised; it is simply not acceptable to go on repeating the same mistakes. Hence a priority should be the development and testing of a model (or models) designed to ensure a high level of utilisation, with a view to wider implementation. Findings suggest that Burkina Faso, Ghana, and/or Madagascar might be suitable test locations testing (see Box 6).

BOX 6: SUGGESTED FEATURES OF THE WAREHOUSE-FUNDING MODEL(S)

The process of developing the warehouse-funding model should involve a review of warehouse financing experiences (focusing on the more successful cases), consultation of relevant experts and a study of the situation on the ground in the countries where implementation is being considered. We cannot anticipate the outcome of this process, but want the following ideas to be considered.

We would like to see funds applied on a matching basis with mortgage financing from local banks, with the explicit objective of getting these more involved in terms of financing of such structures. Beneficiaries would be selected on the basis of simple criteria (e.g., the target

group, the experience of the promoter, internal management systems) and in a transparent manner. Some key principles would need to be established, for example that:

- the beneficiaries pay a substantial part of the capital and financing cost (e.g., 50%-60%), though this could be varied according to the purpose of the investment (e.g., local food security or marketing surplus production)
- the beneficiaries follow a set of public-interest oriented rules in using the warehouses, such as Ghana Grain Council (GGC) regulations for community and aggregator warehouses
- failure to repay or follow the agreed rules will carry a real penalty, including closure and/or sale of the facility
- upon fulfilment of the agreed terms, full title passes to the operator
- governance and management will be insulated from partisan political influence (government or opposition) in the countries concerned.

Establishing such a rigorous framework is no easy task, but it is a precondition to successful operation. Getting beneficiaries to pay a substantial part of the cost is a way of ensuring that the most serious and committed parties, capable of generating the necessary cash flow, receive the support. It also heeds the author of the Senegal technical country report in his caution against promoting dependency. With regard to the fourth bullet point, it is best to achieve clear ownership by a private individual or entity and to avoid the lack of clarity that sometimes occurs at the end of development projects, where ownership is vested in a governmental or local authority, but it is unclear who is entitled to operate it (circumstances where maintenance is likely to be neglected). IFAD-Madagascar informed the author of such cases where POs' entitlement to continue using warehouses remained unclear.

- (f) Coordinate with international companies in the field. The Programme would reach out to important international players including banks, governments and trading companies, with a view toward identifying areas of common interest which can be advanced through new commodity financing and trading initiatives. Special attention should be paid to South African silo operators-cum-trading companies, such as AFGRI

and SENWES, that are actively investing and trading in other African countries; and they have capabilities that the proposed programme and country governments should seek to leverage in order to get the WRS up and running (see Box 7). However, one has to ask whether such companies will be motivated to do this, or whether they will prefer to adopt a more proprietary business model than the one they provide to farmers in South Africa. In any case, host governments may be able to arrive at a win-win arrangement favouring both the company and the country concerned through discussion and negotiation.

BOX 7: REASONS FOR LEVERAGING THE SKILLS OF INTERNATIONAL GRAIN COMPANIES

AFGRI has, for example, been established for several years in Zambia and it has been working with others to establish the WRS and a Lusaka-based SAFEX contract for maize. It has also been working with the international group AFEX to establish storage facilities and commodity exchanges in Rwanda and Nigeria. It has also formed a collateral management subsidiary, Collateral Management International (CMI) which has started to do business around Africa. International grain companies like AFGRI (or indeed Cargill) have much greater skills in grain handling than do conventional CMs and providing full out-turn guarantees in terms of quantity and quality should not pose a challenge to them. They also have a lot of experience running public warehouses in their countries of origin. If companies of this kind invest in African countries, they can (if they wish) use their knowledge and resources to single-handedly pilot public warehousing on a large scale, demonstrating its virtues to the banks and other stakeholders.

- (g) Coordinate with other international programmes. The programme should attract and coordinate with other international development programmes with a view to ensuring that the whole is more than the sum of the parts and achieves greater impact. One area of particular opportunity is that of enhancing coordination between two arms of donor support to African countries that is, agricultural market development activities such as those presented in this report and local and regional procurement (LRP) of food aid commodities. WFP annually buys many hundreds of thousands of tons of commodities across Africa; it has been trying to procure from POs and others using a range of novel devices (including warehouse

receipts and commodity exchanges) in some 15 African countries under its Purchase for Progress (P4P) pilot. In certain countries (Malawi and Zambia) there has been very fruitful collaboration between local WFP staff and local commodity exchange and WRS initiatives, but much more could be achieved through higher level strategic collaboration, and by harmonising operational procedures. As set out in Box 8, there is scope for a major win-win relationship in this field. There is an opportunity to pilot this in Malawi (not a study country); and the authors recommend accordingly in Section 8.2.7. There may be scope in other countries including Ethiopia, Kenya and Uganda, pending thorough reform of the regulated WRS in the case of latter country.

BOX 8: LRP AND WRS - SCOPE FOR A WIN-WIN RELATIONSHIP

The aim should be to establish a delivery-versus-payment (DVP) system, whereby WFP pays a supplier, as soon as this party transfers to WFP a warehouse receipt issued by the licensed warehouse operator for the goods concerned. WFP can take delivery of the goods at a later time, and it will hold the warehouse operator (not the supplier) responsible for delivering goods of quantity and quality specified in the warehouse receipt.

Prospective gains for the WRS stakeholders: in countries where WFP purchases or seeks to purchase large quantities of food commodities, in the tens of thousands of tons, LRP can provide major demand and help kick-start the WRS as well as associated commodity exchanges, particularly in the early stages when these institutions are most fragile and in most need of support. Comments by farmers in an IFC-sponsored WRS conference in Malawi in February 2014 showed that if WFP can assure suppliers get paid immediately, it will greatly motivate their participation in the WRS.

Prospective gains for WFP and the food aid system:

- Reduction in costly defaults on the part of suppliers, a problem WFP has encountered with all kinds of suppliers, and particularly when trying to procure directly from smallholders. Problems of this kind upset the food aid pipeline and increase overheads at WFP.
- Strict enforcement of WFP's quality standards and reduction of quality control costs. The Uganda report (Section 5.2, in Volume II) shows that WFP has since 2013 been strictly enforcing its quality standards in East Africa. It is possible to achieve this if WFP relies

on an effective network of certified warehouses and holds them responsible for quality control. At the same time, WFP can save on costs of superintendents, using them more sparingly on a spot checking basis rather than have them check every shipment.

- Increased logistical efficiency. With the DVP arrangement, WFP can hold commodities it has purchased in the supplying warehouses, paying storage charges up to the time of delivery, and ship them directly to final distribution points. In this way it can avoid roundabout routes through its own warehouses. Indeed, if a country can develop a robust regulated WRS, it can consider outsourcing its entire warehousing operations and save on unnecessary expenditure.
- Opening up procurement to a wider range of suppliers than is possible with conventional competitive tenders. Anyone, including a PO and small trader, may deposit in a certified public warehouse.
- Development of an innovative and socially responsible procurement approach that can be replicated by other public sector bodies around Africa, notably food reserve agencies. Available storage facilities can be used much more efficiently if public and private sector stocks can be held side by side, or even commingled, in licensed warehouses.

(h) Support specific country initiatives. See Sections 8.2 and 8.3 below.

(i) To capitalise experiences and to feed them back into the public domain. The aim would be to accelerate learning about what works best in practice and about the pros and cons of different approaches.

The Programme should have its own governance, staff, budget and a set of rules and operating procedures that will allow it to focus on the subject area long-term, with the ability to launch, review and curtail initiatives. These features should allow it to assist and monitor local initiatives around the continent, flexibly and as opportunity presents, without the constraints of project funding.

8.2 Near-term initiatives/low-hanging fruit

8.2.1 Madagascar

Madagascar's achievements with the GCV model are impressive, but there is an urgent need to improve price risk management and ensure confidence among depositors and financiers. The funding agencies should approach the Malagasy MFIs and key banks involved in refinancing GCV lending, with a view to establishing a support programme involving: (1) improvements in price-risk management; (2) development of a national warehousing profession and regulatory structure; (3) improving post-harvest handling and funding of commodities other than paddy and; (4) more supportive public policies with respect to rice marketing.

Given the prominence of the GCV product in the portfolios of leading MFIs, public financial oversight needs to focus on the product and the risks involved, not just on the lending institutions. With their track record to date, the MFIs could be prime movers in developing the warehousing profession and the regulatory structure, but to do this they will need to reach out to government, banks and other value-chain players. The regulatory structure should be designed to sustain itself through levies on licensed warehouse systems and internalise the cost of all due diligence and risk assessment so as not to depend on government budgetary allocations.

Improvements to post-harvest handling should focus on commodities like maize, pulses, potatoes and dried cassava. The MFIs will need to come to grips with the post-harvest handling and storage issues which they have hitherto largely left to their borrower/depositors who lack the necessary technical knowledge.

MFIs and agricultural sector players will also need strong advocacy with respect to rice marketing policy, so as to prevent sudden changes in import policies that cause producers using GGVs to lose money, as happened in 2013. Coupled to the development of regulatory, risk management, and advocacy functions, AFD should examine the scope for gradually phasing out its portfolio guarantees, as these should not be necessary with a low-risk and well-regulated lending product.

8.2.2 Burkina Faso

Section 7.5 outlines the case for focusing on Burkina Faso with a learning-based approach. This should start with an in-depth multi-disciplinary study to assess the potential, limits and complementarity of the two market-oriented

approaches (i.e., development of service coops and innovation led by banks and service providers), and to plan assistance accordingly. Questions of the following kind need to be answered:

- (a) The performance of service coops (or similar POs), in terms of governance; management and accounts; accountability to members; and ability to market crops, generate profits and further motivate members.
- (b) The operations and performance of collateral managers and associated financiers under Burkinabé conditions, covering services, management structures and financial viability with different types and scales of operation.
- (c) The risks associated with (a) and (b) above and players' ability to manage risks (e.g., by mutualisation of risks within cooperative structures), professional standards, compliance systems, insurance and other means. This should include an examination of the scope for peer-based mutual guarantee schemes (MGS) of the kind discussed in Annex 4.

The study should also examine the scope for improving grain storage and pest control practices, overcoming current misuse of insecticides as noted in Section 2.2 of the Burkina country report.

The study will involve deskwork, interviews with key informants and field visits during the storage period; and the output will be a set of recommendations which may include: technical assistance; expert mentoring of players; a challenge fund for capacity building/business development; schemes to develop and enforce professional standards; MGS; and a fund to support warehouse construction - see Section 8.1(g).

Taking account of the output of the forthcoming report commissioned by the *Direction Générale des Impôts*, consideration should also be given to new laws or legal amendments to support the development of inventory credit and collateral management and of inspection services in Burkina Faso. The funding agencies should seek a place at the table to discuss the propositions in the light of the work done in this study. The top priority should be to facilitate the emergence of a strong cadre of CMs, to minimise risks of non-performance, to provide for rapid sale of goods belonging to defaulting debtors by private treaty and rapid solution of disputes.

8.2.3 Niger

Priority should be given to getting up-dated inventory of *warrantage* c. lending in Niger and more in-depth examination of selected cases (e.g., Taanadi and the Cigaba Union of Konkorido). The AP/SFD (the Association of Microfinance Institutions) and the ARSM (Microfinance Regulatory Agency) should be involved in the updating process and they should develop a simple monitoring tool that can be updated year after year.

8.2.4 Ghana legal reform

As indicated in Section 7.7, it would give greater confidence to financiers if moves to abolish the requirement to register pledges of possessory collateral and/or to improve the functionality of collateral registers went hand-in-hand with the effective regulation of warehouse operators and CMs. As Ghana is in the process of passing a warehouse receipts regulation, such complementary reforms would be opportune at this time. Assistance should also focus on reducing the onerous stamp duty on secured transactions, introducing fast-track enforcement and eliminating any legal uncertainties affecting the use of Repos.

8.2.5 Côte d'Ivoire: support to the regulated WRS and legal reform

Côte d'Ivoire is moving to implement a regulated WRS with considerable support of the government and stakeholders. Notwithstanding the support that IFC is already providing, it is recommended that the funding agencies make a special approach to the banking sector, government and other stakeholders to scope out potential for support. The focus should be very firmly on the banks as their participation will be key to the success of this initiative.

As in Ghana, it is proposed to accompany the planned regulatory reform with reform of the collateral registry and enforcement systems. The Côte d'Ivoire country report in Volume II indicates that financiers seeking to use the collateral registry (RCCM) are having considerable problems in terms of both its design and operation. At the same time, Côte d'Ivoire should be a testing ground for reforms throughout the OHADA region.

8.2.6 Mozambique: implement pilot and engage on drafting of the WRS Act

The recently founded WRS working group should seek to implement the pilot it identified during the study and the funding agencies should offer backstopping support.

The drafting of a new WRS law can provide the opportunity to engage the government seriously about the legal and institutional framework for different kinds of warehouse receipting in Mozambique, including CMAs and SMAs. The following points, most of which were raised in the legal country study, should be placed on the agenda:

- (a) cut down on onerous formalities, such as the need to notarise documents
- (b) address the legal difficulties in taking security over commingled fungible goods
- (c) design an alternative dispute resolution process to avoid a lengthy and costly court process
- (d) create a reliable, searchable electronic collateral register, with a legal obligation to register security
- (e) eliminate the administrative and financial burden (stamp duty) involved in reconstituting a pledge each time deliveries of goods are made
- (f) define the rights and duties of parties to a warehousing contract and the negotiability of warehouse receipts
- (g) provision for the possibility of electronic documentation.

8.2.7 Pilot enhanced coordination with LRP of food aid commodities

We provided the rationale for this in Section 8.2, item (d), and suggested Malawi for piloting. It is recommended to seek high level support for the idea within WFP and donors which fund both WFP and market development activities of the kind discussed in this report.

8.3 Further initiatives

The country reports contain many proposals for support and some of them are highlighted below. This is by no means exclusive. Indeed, the key advantage of establishing the Commodity Programme would be its ability to identify and follow up on opportunities as it progresses.

8.3.1 Warrantage c. in West Africa (especially Niger and Burkina Faso)

The Burkinabé government is committed to increasing the use of *warrantage c.* and other forms of warehouse receipting, but the Nigerien government seems to be less committed. If the funding agencies and governments decide to work together, they will require long-term engagement (i.e., a decade or so) with a view to extending it both horizontally (i.e., to a larger number of communities) and vertically (i.e., downstream, involving more complex cooperative structures, collateral managers, and/or public warehousing). The following activities should be prioritised:

- (a) Developing national strategies embracing both *warrantage c.* and related approaches (collateral management and public warehousing); this should provide the basis for coordination between the players and the harmonisation of public sector interventions. It is important to avoid interventions that increase speculative risks faced by private players.
- (b) Long-term institutional commitment (going beyond the duration of standard projects), but also a willingness to pull out or change tack if it is not producing results and/or the policy framework is not supportive.
- (c) An up-dated inventory of *warrantage c.* lending in Niger and selected case studies (see 8.2.3 above).
- (d) Greater coordination between donors and development projects over the building of storage infrastructure, moving from the current project approach to a global approach - along the lines proposed in Section 8.1(g).
- (e) Support for building capacity of the players (MFIs, CMs and POs) involved in development of local markets; this may take the form of another *Projet Intrants* type project, and/or a challenge fund approach where the targeted institution is free to choose the trainer or consultant concerned.
- (f) Simple legislative reform in support of the warehouse lending, notably to allow lenders to enforce their claims against defaulting debtors, by selling the stock by private treaty.

8.3.2 Ghana

The funding agencies should seek to work in concert with the USAID-ADVANCE project which is providing core support to GGC. The present high interest rates

seriously depress interest in warehouse receipts as a funding mechanism for maize; so more emphasis should be placed on their use in developing supply chains. On the one hand, they can serve as collateral against which buyers can provide credit to their rural suppliers; this will allow the buyers to push more financing out through their supply network, creating more demand for goods at the farm gate. On the other hand, suppliers can also use warehouse receipts as a means to transfer title to downstream buyers.

Ghana may be a good country to test the proposed warehouse funding model set out in Section 8.1(g). The Chairman of the GGC places a high priority on the building of such warehouses and the GGC can provide a rule-based structure for selecting beneficiaries and holding them to account. However, it is first recommended taking a close look at the functioning and performance of warehouse construction schemes already funded in northern Ghana by AGRA, USAID and others and find out what GGC has done to address corporate governance issues mentioned in Section 5.3.2.

The funding agencies should also closely examine the Weinco contract-farming regime. It constitutes an important breakthrough in the development of peasant agriculture, the issues and implications of which need to be fully understood by those seeking to develop agricultural markets in Africa.

8.3.3 Cameroon

There have been some warehousing and inventory credit initiatives in northern and other non-cocoa areas of Cameroon; these include:

- (a) a scheme for grains and agricultural inputs in northern Cameroon involving members of the cotton producers association (APCC), the MFI Crédit du Sahel, the cotton parastatal SODECOTON; and the Islamic Development Bank (as financier)
- (b) the government and IFAD-backed PADMIR project which is specifically concerned with microfinance.

We recommend a mission to review exactly what has been done in this field and appraise the need and scope for additional work.

We also propose periodically monitoring progress with ONCC's revolving line of credit to assist POs with the marketing of cocoa and coffee using warehouse receipts, to see what can be learned from this experience (see Section 4.6.1).

8.3.4 Uganda

The main recommendation in the case of Uganda is to build on WFP's newfound determination to enforce grain quality standards in Eastern Africa; and for governments and other stakeholders to act in a coordinated fashion to ensure uniformity of testing procedures, standards and their application. Secondly, the government of Uganda needs to decide if it wants to see a continuation of the regulated WRS in that country and under what terms. In the authors' view, the following principles are vital to its success:

- (a) The near-term aim should be massive and regulatorily compliant adoption of the system, rather than impact on particular groups (small farmers, cooperatives, etc.), though these are clearly the ultimate beneficiaries.
- (b) There should be a convincing strategy for building scale on the demand and the supply side and thereby UCE's financial autonomy.
- (c) Regulatory compliance should be strict and not de-emphasised with a view to achieving promotional targets.
- (d) Selling should be streamlined, so as to minimise the transaction cycle.
- (e) UCE should be reformed, with a new ownership structure, governance and management, and with a fresh injection of capital.

If there could be a genuine meeting of minds on these points, the funding agencies may wish to offer some support.

8.3.5 Senegal

Most government and donor interest has been directed towards the use of WR/CM for rice in the Senegal River Valley (see Volume II, Senegal country report, Section 3.3) in supplying a domestic rice market of circa 1.3 million t, which mainly depends on imports from South Asia. Much has been achieved in organising the domestic supply chain and making the product more competitive with imports. Notwithstanding, the political issue of urban rice prices is making it difficult to bring this initiative to fruition. The priority is therefore for the government to define a robust policy and implementation framework that will allow people to continue profitably producing rice for the domestic market, obtaining better livelihoods than with alternative crops.

The maize marketing initiative in Kaolack region (see Section 3.2 of the same report) faces a similar problem, in that it targets a major coastal

market (Dakar) with demand upwards of 100,000 t per annum, but which has excellent transport links to the World market. Rigorous economic analysis (with sensitivity analysis) should be carried out to determine if and under what circumstances it is profitable for farmers to supply the Dakar and as a basis for supporting this initiative.

The funding agencies should examine the potential for getting seed producers to institute a mutual guarantee scheme that will allow them to gain speedy access to funding against inventories (see Annex 4).

The funding agencies may wish to coordinate with IFC, which is already working with the Ministry of Trade to develop warehouse receipting in Senegal.

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Annex 1: Terms of reference

Study on appropriate warehousing and collateral management systems to promote access to finance through warehouse receipt finance (and other forms of asset-based finance) in favour of smallholder farmers in sub-Saharan Africa

1. Background

Securing access to finance for smallholder farmers is a major challenge to address as part of collective efforts from the international community to achieve food security and fight poverty. More than 8 billion dollars of Official Development Assistance (ODA) were dedicated to agriculture in 2010⁴³ and for many years support from multilateral and bilateral donors to agriculture has included projects and programmes with this goal. However, despite such support, the magnitude of demand for financing arising from the world's 500 million smallholder farmers⁴⁴ (i.e., 2 billion people) calls for a change of scale which involves an increased participation from the private sector and commercial banks.

Various studies carried out by development institutions highlight the key role of value chain finance in agriculture, more specifically targeted at smallholder farmers. Such studies also advocate a wider use of physical asset collateralisation like warehouse receipt financing, one of the most appropriate tools available to create access to finance for such categories of farmers.

Warehouse receipt financing is a loan extended by a bank (or microfinance institution) which is secured by a collateral created on a crop stored by a farmer in a warehouse operated by a third party or by a representative group of farmers collectively. The debt is represented by a specific instrument, a

43 Source: OECD.

44 Source: "Investing in smallholder agriculture for food security" A report by the High Level Panel of Experts on Food Security and Nutrition, June 2013.

warehouse receipt or warrant. Warehouse receipt financing enables farmers to access credit as they are in a position to offer lenders an asset which is safe, liquid and easy to monitor as a guarantee for the repayment of their loan.

Thanks to warehousing, farmers do not need to sell their crop immediately after harvest and can increase their income if they manage to take advantage of price increases over time. When putting their



Warehouse receipt financing enables farmers to access credit as they are in a position to offer lenders an asset which is safe, liquid and easy to monitor as a guarantee for the repayment of their loan

efforts and resources together for storage and marketing of their crops, small farmers can reach a critical mass and therefore benefit from economies of scale and more bargaining power when negotiating with traders. Storage also helps reduce post-harvest losses. In addition, it involves a grading and certification process which adds value to productions and creates an incentive to produce quality. Standardisation improves fungibility of products which is

necessary to access commodity exchanges and introduces a more competitive and transparent commercial process.

Warehouse receipt financing also involves risks and limits which have hindered a wider development of such financing instrument. One of the main limits is the fact that, in most cases, warehouse receipt finance becomes available only after harvest. Financing of inputs and other investments is possible only if the financier structures proper value chain financing with various controls during the productive cycle (from inputs to transport to raw and processed commodities). Moreover, the cost of storage and financing, as well as insurance costs, may appear a deterrent to smallholders when compared to potential financial gains to be made on the sale of their crops. This cost issue is even more critical when crop volumes are too limited to accommodate transaction costs.

Risks associated to warehouse receipt financing mainly consist of risks associated with a decrease in prices during the period of storage and fraud or theft. Besides, the reliability of warehousing infrastructure and the professionalism of warehouse operators appear critical prerequisites for the development of warehouse receipt financing in a country. In addition, the introduction of an appropriate institutional framework for licensing and monitoring of warehouse operators can contribute to the creation of an enabling environment and help promote warehouse receipt financing.

Although warehouse receipt financing has now a good track record in a number of countries, it has not succeeded yet to mobilise financing commensurate with

the needs of smallholder farmers in Africa. Nor has it succeeded in channelling sizeable volumes of local agricultural production toward this storage and marketing approach.

Based on this assessment, a report prepared by the International Finance Corporation for the Global Partnership for Financial Inclusion (GPFI) in 2011⁴⁵ highlights a series of recommendations to unleash the potential of warehouse receipt financing in developing countries. They include:

- The setting up of appropriate institutional, legal and regulatory environment(s)
- The use of grades and standards to classify agricultural products and make them more tradable
- The enhancement of financial, technical and administrative capabilities of warehouse operators or entities in charge of warehousing in a country with a review of the way this business is organised and the introduction of an effective licensing and monitoring system
- An improvement of price risk management
- The establishment of indemnity fund(s) against potential fraud/theft or negligence from warehouse operators or against calamities.

Different initiatives have already been launched to promote warehouse receipt financing, particularly within the Agricultural and Rural Finance working group of Making Finance Work for Africa (MFW4A)⁴⁶, a partnership supported by several donors including the Agence Française de Développement and IFAD. The present study intends to further examine certain areas of concerns already identified in previous studies. It will focus on warehouse receipt operators and will review essential features of this business in specific countries and regions (including the regulatory environment, risk management, how this business is organised and supervised and the type of support required).

In addition to warehouse receipt financing, the study will also examine other form of financing such as repurchase agreements (Repos) which could be

45 "Scaling Up Access to Finance for Agricultural SMEs Policy Review and Recommendations".

46 The MFW4A Partnership is a G8 initiative to support the development of Africa's financial sector, overcome fragmentation and increase aid efficiency. Several donors and development partners have joined this initiative and more information is available at <http://www.mfw4a.org/>



Repurchase agreements provide a buy-back obligation on sales and are therefore employed by trading firms to obtain access to more and cheaper funding due to that security promoted if the conditions are met. Under a repurchase agreement, a buyer receives securities (warehouse receipts) as collateral and the seller agrees to repurchase the securities sold at a later date. Commodities are usually stored with accredited collateral (Repos) managers responsible for quality, grading and issuing receipts with agreed conditions for repurchase. When there is a commodity exchange, such receipts are often transferred to an exchange broker. Repurchase agreements provide a buy-back obligation on sales and are therefore employed by trading firms to obtain access to more and cheaper funding due to that security. Simpler modalities may exist. Examples are well documented in Latin America and Asia, but too little in sub-Saharan Africa where opportunities to develop the potential of this financing tool are worth exploring.

2. Objective of the study

The objective of this study is to foster the emergence of warehouse operators and entities in charge of warehousing (accredited collateral managers) in order to promote a wider use of financing based on physical asset collateralisation in sub-Saharan Africa. The study will focus on an analysis of the role of warehouse operators in connexion with warehouse receipt financing or repurchase agreements practices in Burkina Faso, Ghana, Côte d'Ivoire, Madagascar, Niger, Senegal, Uganda, Mozambique and Cameroon. Such an analysis will comprise a legal and an institutional due diligence and will aim at: (i) identifying obstacles raised against the implementation of warehouse receipt financing by the warehousing system in place and (ii) making recommendations to support the efficient development of warehouse receipt financing and warehouse operators that can be operationalised in countries included in the scope of the study and possibly in member countries of the Treaty on the Harmonisation of Business Law in Africa (OHADA^{47,48}).

47 OHADA counts 17 Member States in West and Central Africa: Benin, Burkina Faso, Cameroun, Comores, Congo, Côte d'Ivoire, Guinea Bissau, Guinea, Equatorial Guinea, Mali, Niger, Central African Republic, Democratic Republic of Congo, Senegal, Chad, Togo.

48 The OHADA Uniform Act has recently been reviewed concerning securities in order to facilitate access to finance.

3. Scope of the study

3.1 Review of earlier and current studies, reports and experiences

The consultant will review projects, experiences and studies related to warehouse receipt financing and repurchase agreements, in particular ongoing projects from IFAD, USAID, FARMAF (funded by the EU) in countries covered by the study.

The consultant will also review present and past experiences (including reasons for success and failure) concerning collateral management of agricultural products (local as well as imported products) and identify best practices. Meetings with stakeholders involved in agricultural imports (such as SGS, Veritas, etc.) and loans predicated on local produce can prove to be a useful source of information in that respect.

3.2 Review of Government policy and applicable laws and regulations in relation to warehouse receipt financing

In each country, the consultant will examine the policy measures which might affect the development of warehouse receipt financing and assess whether the environment is an enabling one or not.

In addition, the consultant will review, among others:

- Relevant regulations in force (cooperatives, warrantage, collateral management, public warehousing, security, standards of agricultural products, etc.)
- The status of smallholders farmers⁴⁹ and farmer organisations (“cooperatives or other forms of producer organisations”)
- The status of warehouse operators and other entities involved in storage of agricultural products (potential collateral managers)
- Financial solidarity mechanisms in place between producers within cooperatives (or other forms of producers organisations) or between warehouse operators, such as mutual guarantee systems

49 Legal status of “entrepreneurs” under OHADA for instance.

- Contracts (including collateral management agreements) between stakeholders involved in warehouse receipt financing or repurchase agreements
- Warehouse receipts or warrants, promissory notes, collaterals, bill of exchanges or any other form of documents related to stored agricultural products which can be traded, endorsed or discounted
- The possibility of financiers' taking a security interest in an existing or future agricultural production and conditions underlying the creation of such a security interest
- Record and registration of a security interest and (electronic) registries
- Eventual obstacles to the use of electronic warehouse receipts
- Conditions for the enforcement of a security interest created in favour of a financial institution by means of a warrant receipt related to agricultural products stored in a warehouse. More specifically, the consultant will examine the possibility for a financial institution to enforce such security interest without a court ruling
- Insurances of stored commodities and/or of loans in the event of the borrower's death
- Support programs and approaches introduced to secure warehouse receipt financing and financing based on repurchase agreements (guarantee funds, refinancing, financing infrastructure, strengthening the capacity of operators, etc.).

Consultants are invited to add to this list any other matter they might consider relevant for the purpose of the review. In countries which are members of the Organization for the Harmonisation of Business Law in Africa (OHADA) relevant provisions of the OHADA Uniform Act (s) will also need to be taken into account for this review.

3.3 Review of the organisational and operational framework of warehouse operators (public or private entities, regional, national, local structures) and when the business of warehouse operators is not developed, review of the prevailing practices for storage of agricultural products. This review will involve:

- Identifying the main stakeholders in a country (public or private, cooperatives, business organisations, regions, provinces or municipalities...) and the main characteristics of this sector (location/capacity, safety and robustness of storage infrastructure, type of productions stored in warehouse and benefiting from warehouse receipt financing). A relevant typology of warehouse receipt finance implemented in a country will be established.
- Describing the type of services offered by warehouse operators and potential accredited collateral managers (grading, classifying products at the time of storage, standardisation, bundling, secure storage facility, etc ...) quality of services offered in terms of stock management and custody, cost of storage.
- Analysing the financial robustness of warehouse receipt operators, their capacity to invest and maintain storage infrastructure and how various stakeholders involved are organised and interact in a country.
- Examining whether warehouse receipt operators/collateral managers and farmers are insured and the type of cover available to them (risks insured, insurer and costs) more specifically concerning insurance of stored commodities and/or of loans in the event of the borrower's death.
- Methods used for the valuation of agricultural products at the time of storage in a warehouse.
- Analysing (i) contracts between farmers (or farmer organisations) and warehouse operators and (ii) contractual arrangements set up with banks and microfinance institutions for the purpose of warehouse receipt financing or financing based on repurchase agreements. Consultants will also study issues related to the responsibility of warehouse operators/owner in the warehouse financing process and the possibility of legal action and indemnity in case of fraud and negligence.

Specific feed-back on these matters will be sought from professional organisation in the agricultural sector involved in the storage of agricultural raw materials.

3.4 Surveys of local banks, microfinance institutions and, as the case may be, non-bank lenders on their experience in warehouse receipt financing or financing based on repurchase agreements for agricultural products

Surveys will focus on the following topics:

- Their experience in terms of warehouse receipt financing and repurchase agreements: type of projects, average size of transactions, maturity and other terms of the loan, amount of the loan as compared to the valuation of the agricultural products stored in a warehouse and rationale for the determination of such amount.
- Their risk perception for such transactions, transaction costs and profitability of such transactions.
- The volume of business of and relative to this, loss experience with warehouse receipt financing/repurchase agreements.
- Their expertise and resources mobilised in-house for this type of activity.
- The main obstacles and constraints they encounter.
- Their potential appetite and their views on the prerequisites for a greater involvement from their part in warehouse receipt financing/repurchase agreements as well as their needs in terms of support and incentives.

3.5 Appraisal of the potential for warehouse receipt financing and repurchase agreements that could be developed in connection with the main agricultural productions in each country included in the scope of the study

The initial analysis will focus on current warehouse receipt financing/repurchase agreements practices in each country, which may include, without limitation and depending on each country's specific context: paddy/rice, sorghum, millet and maize, cowpea, groundnuts, cashewnuts and cotton. Extension of warehouse receipt financing/repurchase agreements to other crops including, whenever relevant, processed perishable agricultural produce will also be considered as well as the possibility of warehouse receipt financing for livestock products will also be examined.

In relation with such appraisal, the study will also examine marketing approaches used for agricultural productions benefiting from warehouse receipt financing/repurchase agreements. This will include a review of market information systems used for monitoring prices and selling agricultural production. Technologies used as well as the involvement of various stakeholders in the process (smallholder farmers or cooperatives, warehouse owners/operators/collateral managers, microfinance institutions/

banks, government bodies ...) will be examined. The potential for marketing of agricultural products through commodity exchanges will also be examined.

3.6 Appraisal of economic and social costs and benefits of warehouse receipt financing

In each country the consultant will:

- make an assessment of the impact of warehouse receipt financing and repurchase agreements on smallholder farmers' revenues during the inter-seasonal period
- study gender implications of warehouse receipt financing and repurchase agreements, including the degree of women's involvement in the implementation of warehouse receipt financing/ repurchase agreements, women's access to the benefits deriving from this practice and constraints to a broader inclusion of women in the overall process.

3.7 Recommendations expected from the present study will concern, among others:

- Amendment of national laws and regulations and if needed of the Treaty on the Harmonisation of Business Law in Africa (OHADA) or of the OHADA Uniform Act(s).
- Measures to be implemented and initiatives to be promoted concerning the organisation of warehouse operators/owners/collateral managers, which play a critical central role in warehouse receipt financing and repurchase agreements, in order to enhance their reliability, particularly in terms of legal and financial responsibility towards different stakeholders involved in the process, farmers on one side and lenders on the other. This could include proposals concerning:
 - Operators to be promoted in a country and models to be tested for Public Private Partnerships (PPP) in the warehousing business
 - Organisations and structures to be introduced (for instance, the feasibility of financial solidarity mechanisms could be tested)
 - Accreditation of socio-professional actors (feasibility, conditions and selection criteria)

- The type of licensing, monitoring and regulation bodies that could be put in place
 - Modalities for licensing (eligibility criteria and standards) and an appropriate legal environment
 - Modalities for monitoring and regulation (including modalities of remuneration for monitoring and control)
 - Types of insurance cover that could be provided and modalities of insurance
 - Proposed methodology for feasibility studies for an indemnity fund against fraud and calamities
 - Contractual arrangements between the different stakeholders involved in warehouse receipt financing
 - A relevant dispute resolution and arbitration mechanism
 - Information systems or platform that might appear necessary
 - Capacity building, technology transfer for the improvement of storage infrastructure and potential investment.
- Approaches to be promoted to facilitate access to storage and warehouse receipt financing and repurchase agreements to smallholder producers.
 - Institutional partners to be mobilised at a national level and their needs in terms of capacity building and training to ensure an efficient implementation of the recommended institutional and regulatory changes. Such institutional partners may include various ministries (Agriculture, Justice, Finance), professional organisations, chambers of commerce.
 - Proposals for mechanisms to mitigate the main risks related to warehouse receipt financing and repurchase agreements (price fluctuations, risks during storage and risks of fraud/theft which might be based on stock management and valuation techniques).
 - For each country included in the scope of the study (i) the identification of agricultural production from smallholder farmers likely to benefit to a

larger extent from warehouse receipt financing/repurchase agreements and (ii) the identification of appropriate incentives to promote a more active involvement of financial partners (local banks and microfinance institutions) interested in developing a warehouse receipt financing business.

- Recommendations for the greater involvement of women at different stages of warehousing and receipt financing/repurchase agreements and an improvement of women' access to the benefits from warehouse receipt financing/repurchase agreements.

4. Methodology

Consultants will review existing literature on the country and conduct interviews with stakeholders involved in warehouse receipt financing and repurchase agreements. They will also analyse relevant legal and regulatory texts and documents in connection with the different topics included in the scope of the study.

In each country included in the scope of the study, consultants will collect information about local warehouse receipt financing/repurchase agreements practices from concerned stakeholders: banks and microfinance institutions, non-bank lenders, warehouse receipt operators or warehouse owners, cooperatives and farmers organisations, professional organisations, ministries and relevant administrative bodies. Consultants will travel to such countries for the purpose of the study if they are not based locally.

Consultants' work will be monitored by a Steering Committee comprising experts designated by the different institutions financing the present study. The Steering Committee will meet for a kick-off meeting and twice thereafter: (i) at the time of submission of the interim report and (ii) later at the time of submission of the final report.

Consultants are invited to coordinate their work with other work undertaken on the same topic in each country included in the scope of the study (in particular with the initiatives supported by AGRA and the World Bank in Burkina Faso).

5. Expected outcome and time frame

An interim report concerning the review of applicable laws and regulations will be submitted within [90] days from the date of signature of the contract.

A final report will be submitted within [150] days from the date of signature of the contract.

A final report, in the form of a main report and country profiles, including an executive summary, a table of contents, a list of references, a list of appendices and a list of acronyms will be submitted within [180] days from the date of signature of the contract.

A presentation⁵⁰ of the main findings and recommendations of the study together with the participation of the consultants in the event organised for the occasion.

6. Budget and financing

The total budget for this study is capped at 150 000 €, 50 000 € per block. The study will be financed by the Agence Française de Développement (AFD), the International Fund for Agricultural Development (IFAD) and the Technical Centre for Agriculture and Rural Cooperation ACP-EU (CTA). Separate contracts will be signed with each institution based on the country profiles financed by each institution. Consequently, bidders are requested to submit proposals for each of the following blocks of countries:

- Block 1: Burkina Faso, Niger, Senegal
- Block 2: Ghana, Côte d'Ivoire, Madagascar
- Block 3: Cameroon, Mozambique, Uganda.

7. Qualifications

Consultants are invited to form a multidisciplinary team including experts with legal expertise (in terms of business law and relevant national laws - OHADA in the case of West Africa), experts with a good experience of agricultural finance in Africa and warehouse receipt financing in particular as well as experts with competences in the field of warehousing and agricultural production funded through warehouse receipt financing. Experts should have a good fluency in French and Portuguese for the expert(s) working in Mozambique.

⁵⁰ In form of a powerpoint presentation or another form to be further determined.

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Annex 3: Legal annex

1. Conclusions and themes from the legal due diligence

The legal due diligence covered a broad spectrum of applicable laws in each of the nine subject countries and it revealed broad differences in the legal systems of those countries. The subject countries include both civil and common law jurisdictions, with legal systems shaped by influences from anglophone, francophone, lusophone, and Islamic legal practice. Five of the subject countries are Member States of OHADA, resulting in strong similarities in the legal analysis between those countries, subject to some important local differences.

Each of the subject countries is at a different stage in relation to the introduction of specific laws and regulation relating to storage of commodity. Uganda is the only country of the nine which has passed WRS legislation, though draft legislation has been proposed in Côte d'Ivoire, Ghana and Mozambique. In Côte d'Ivoire, legislation also exists to regulate CMs.

Overall, some key themes can be drawn from the legal due diligence as to commonly found barriers to the progression of commodity financing:

- (a) **Stamp duty liability.** An important issue that applies to nearly all of the subject countries is the requirement to pay *ad valorem* stamp duty on security documents (with the exception of Uganda where pledges attract only nominal duty). This key barrier to financing could be removed by *abolishing stamp duties and registration fees for security over goods in warehouses, particularly where financing is done through a warehouse receipts system.*
- (b) **Unsuitable requirements for taking security over stored goods.** Generally speaking, security over stored goods in the subject countries

would be taken by way of a pledge (i.e., a possessory security). The minimum requirements for taking and perfecting a pledge vary. However, a written document is usually needed and there are sometimes onerous perfection requirements. The involved parties would benefit from the *availability of more flexible means of granting security to financiers* – for example, the ability to create an effective pledge over goods by delivery of a negotiable/transferable warehouse receipt that evidences title to the goods.

- (c) **Lack of regulation of warehouse operators and CMs.** In the majority of the subject countries there is little or no regulation of warehouses, warehouse operators, or CMs. As such, it would in principle be beneficial to *implement systems to regulate warehouses and license warehouse operators and CMs*. The potential effectiveness of regulatory structures in any country depends on the quality of governance and the financial viability of these structures will depend on scale economies and potential revenue sources, all subjects which promoters will need to consider.
- (d) **Absence of negotiable warehouse receipts.** With the exception of Uganda, warehouse receipts are not treated as negotiable instruments in the subject countries. The function of, and requirements for the form of, warehouse receipts vary between the subject countries. It would be beneficial to *implement warehouse receipt systems to facilitate trading of goods within warehouses (without the need to move them), as well as the transfer of goods in and out of warehouses and for the taking of security over the stored goods*.
- (e) **Ineffectiveness of collateral registers.** Another common theme from the legal due diligence is difficulties with the effectiveness of collateral registries. Where such registries exist, they are not always effective or reliable; and in some cases registering security can be time consuming. The situation could be improved by the *introduction of electronic, or at least publically searchable, collateral registries for warehouse receipts*. To be fully effective, such registries would need to allow instant registration of a financier's interest in a warehouse receipt; it should be available for all relevant players to search and view (including, commodity owners, warehouse operators, CMs and financiers). Such registries would form part of a general eWRS register, whereby electronic warehouse receipts would be issued and negotiated.
- (f) **Difficulties for creditors in enforcing security over goods.** A concern raised by the legal consultants in all the subject countries (with the

exception of Madagascar) is the extent of a secured financier's rights to enforce a pledge over goods by private sale of those goods. Generally speaking, the legal due diligence revealed that parties must expressly provide for private sale in the security document (i.e., the pledge agreement between the borrower as pledgor and the financier as pledgee). Removing this obstacle by *providing that secured creditors can enforce pledges over stored goods by private sale as a matter of law* would assist financiers in avoiding potentially lengthy court enforcement procedures. However, excepting a case in Ghana, this legal issue was not reflected in the concerns raised by the technical due diligence, perhaps because financiers have so far not ventured much into Type C financing where they may be dealing with previously unknown borrowers and/or it is common practice to provide for the right of private sale in contractual documentation.

- (g) **Lengthy dispute resolution procedures.** A common theme throughout the subject countries was the inefficiency of court enforcement procedures, which are often lengthy and potentially costly. Alternative dispute resolution processes exist. However, take up of these methods is not always high, and access to such procedures is inconsistent. Further, opting for alternative dispute resolution is not necessarily an effective way of avoiding court procedures as enforcement of, for example, arbitral awards may still involve resorting to court procedures. Peer-based alternative dispute resolution is a possibility for commercial disputes between buyers and sellers, but financiers are likely to be distrustful (as they will assume peer-based arbitrators are borrower-friendly). *Financiers could be greatly assisted by providing access to effective and speedy dispute resolution procedures.* This could include recourse to indemnity funds for financiers (and commodity depositors) where there is a warehouse operator or CM failure.

2. Key legal elements for a regulated system of public warehouses

This section sets out some of the key legal elements of a regulated system of public warehouses. As discussed in the main body of the report, one of the key non-legal factors to be determined before implementing any such system is its scope, in other words, whether it will apply generally to agricultural commodities, or whether it will be implemented in respect of specific commodities only.

- (a) **The issue of warehouse receipts.** The legal system should specify who can issue warehouse receipts and the format they must take, including requirements for the minimum information that receipts should contain. This information would typically include details of the commodity (including type and grade if applicable), the location of the commodity, applicable storage charges to be settled before the goods are released and notification of any security interests.
- (b) **The status of warehouse receipts.** The legal system should provide that a warehouse receipt is a document of title that is either negotiable or transferable⁵¹, meaning that rights to the underlying commodity can be transferred to third parties by transferring the warehouse receipt alone. The legal framework should provide for how warehouse receipts can be transferred and the legal rights obtained by a third-party transferee (including rights against the warehouse operator holding the goods and against third parties who may claim an interest in the goods). The system would provide the conditions for a warehouse receipt holder to retrieve the stored commodity, typically being presentation of the warehouse receipt and payment of any outstanding storage charges.
- (c) **Registration of warehouse receipts.** Where a system provides for electronic receipts, the system should also include a central electronic register for the issuance and transference of receipts, accessible to all relevant parties, including financiers. Such a register would also allow for the registration of security interests against the receipts.
- (d) **Financing against warehouse receipts.** Financing should involve lending against warehouse receipts or delivery of warehouse receipts as negotiable title documents. Where the financier wants to have security over the financed goods, the security regime will be relevant.
- (e) **Out-turn guarantee.** The holder of a valid warehouse receipt must be clear as to what he is entitled to receive in terms of quantity and quality of produce. In the case of low-value and bulk commodities like grains, goods belonging to different depositors will usually be commingled by type and grade. The warehouse operator will need to guarantee delivery of quantity, type and grade of the commodity stated in the receipt (i.e., a full out-turn guarantee of quality) within a specified shelf-life or time limit. This is an important issue, because CMs do not include quality within

51 See glossary for definition of these terms.

the conventional out-turn guarantee. It is vital to ensure the transfer of warehouse receipts against unseen stock held in the warehouse; the buyer or financier must be able to count on receiving a certain quantity and quality as the grain is loaded out. Where goods are commingled, the system may allow for the like-for-like replacement of fungible goods.

- (f) In the case of higher value commodities and those subject to quality deterioration within the storage period, the warehouse operator may be held to less stringent out-turn commitments. In any case, high value commodities like cocoa are normally stored identity-preserved, as it is difficult to bulk different lots into an undifferentiated mass of homogeneous properties with very similar market value.
- (g) **The recourse of a warehouse receipt holder** if the warehouse operator fails to deliver back commodities according to its contractual commitments. This should additionally provide for a ranking for the order of claims in the event the warehouse operator fails to perform. For example, if the warehouse operator does not hold enough commodities to satisfy the claims of all warehouse receipt holders, the losses might be shared equally between all holders. Without this, the warehouse receipt holder would be left with only a contractual claim for damages against the warehouse operator, ranking with other unsecured creditors, which may not be attractive to financiers.
- (h) **Regulation of warehouses, warehouse operators and CMs.** Such regulation would include setting criteria for the licensing of warehouses (including structural, financial and insurance requirements) and providing for legally-enforceable recourse for parties who suffer losses due to a warehouse failure. Effective regulation requires a regulatory body with monitoring and enforcement powers. The regulatory system must provide for sanctions against warehouse operators for failure to perform; these may include the revocation of licenses, exclusion from the system, intervention in or closure of the warehouse, blacklisting, fines and, for serious failures (such as fraud), criminal penalties. The regulator will also need the ability to intervene rapidly in, and take over the management of, failing warehouses so as to protect the interests of owners and financiers. This aspect of regulation will need to be reconciled with existing laws and practices concerning insolvency.
- (i) **Financial performance guarantees and indemnity funds.** The system should provide for warehouse operators to provide performance

guarantees or to contribute to indemnity funds which give participants financial recourse in the event of performance failure.

- (j) **Offences of other participants.** This would include, for example, penalties for a person depositing goods subject to a security interest and/or negotiating warehouse receipts representing goods subject to a security interest without declaring such interests.
- (k) **Ongoing regulation.** In the context of a legislated system, for such a system to be sufficiently flexible to react to the development and changing needs of the market, any legislation implementing WRS should allow for the delegation of the determination of certain elements of the system to the relevant regulating authority. For example, the authority might have powers to determine the specific licensing criteria for warehouse operators.

3. Comparison of contractual approach with legislative reform

There are two different approaches to implementing a warehouse receipt system: a voluntary contractual approach (with a degree of reliance on the existing legal regime), or through legislative reform.

In some countries, the legal framework is sufficiently flexible for a successful warehouse receipt financing system to be created using contractual arrangements between the relevant parties. The table below considers some of the key legal concepts relating to warehouse financing; it compares how these can be addressed through private contractual arrangements or through legislative reform.

Table 10: Goals and approaches

Legal issue/ goal	Achieving success through a contractual approach	Achieving success through legislative reform
Targeting participants		
Targeting the right participants	A voluntary system will only be applicable to those who choose (or who are permitted) to join it. This type of system is likely to emerge in an already established industry with existing well-established participants (the case of South Africa with two companies having approximately 70% of total silo capacity).	Legislative reform should limited to sectors of the industry at first. As observed in Uganda, a widely encompassing law that purports to apply to all types of warehousing but which the State does not have the capacity to implement might be widely ignored and/or create legal confusion.
Access by smallholder farmers	For public warehousing to be truly public, any person who wants to store commodities meeting the criteria for storage must be permitted to do so. If this is provided by way of self-regulation, it requires a degree of transparency from the warehouse operators.	Legislated WRS could provide that any person who wants to store commodities meeting the criteria for storage must be permitted to do so.
Ensuring the rules and system are fit for purpose	Another issue is whether public warehouse operators can store their own commodities in the same facilities, issue warehouse receipts in respect of those commodities and trade those commodities. This report has provided evidence of both economic and business efficiency in favour of allowing warehouse operators to trade in the types of commodity they store for third parties, while at the same time highlighting the regulatory challenge this may pose (see Sections 5.1 and 5.2).	
Flexibility in developing rules	In theory, a self-regulating system could react more quickly to changes in the industry and market.	Changing laws is generally a slow process. Countries could side step the need to change laws by limiting legislation to the legal framework needed for WRS and then giving the applicable regulatory body discretionary powers to set and adapt the operational rules of the system.

Legal issue/ goal	Achieving success through a contractual approach	Achieving success through legislative reform
Monitoring and control		
Regulation of warehouses, warehouse operators and CMs	Where no legislative regime exists, it is possible that Regulation can be achieved through voluntary membership of self-regulating organisations (e.g., Ghana Grains Council) with contractual enforcement and remedies. The success of such a regime will depend on political, economic and practical considerations. Regulation will need to be financed through levies on the members, though donors may fund on a temporary basis as they are currently doing in Ghana.	Legislative regimes can be used to regulate warehouses and operators. However, success will depend on political, economic and practical considerations, in view of which it will not be viable in some countries. A State-sanctioned regime might receive State funding (although this is not viable on a long-term basis) or permission to raise funds by levies against warehouse operators.
Full out-turn guarantees	A contractual system can provide for a full out-turn guarantee, in accordance with the rules of the system.	A legislated system can equally provide for a full out-turn guarantee, in accordance with the rules of the system.
Financial protection for depositors and financiers on failure of warehouse operator or CM	This could be achieved through self-regulation, where fees are collected from members to establish indemnity funds. The success of this would depend on the terms and scale of the scheme.	Legislation can provide for a regulator to take over the operation of failing warehouses and for indemnity funds, giving depositors and financiers the reassurance of State backing. The success of this would depend on the terms and scale of the scheme.
Sanctions for failure to perform	The sanctions under a voluntary system are likely to be limited to exclusion from the system, blacklisting and lawsuits.	A legislated system with a State-backed regulator can potentially implement more stringent sanctions, including fines and, for serious failures (such as fraud), criminal penalties.

Legal issue/ goal	Achieving success through a contractual approach	Achieving success through legislative reform
Warehouse receipts as negotiable and tradable instruments		
Use of warehouse receipts as negotiable instruments	If local law does not recognise warehouse receipts as negotiable instruments, then delivery of the warehouse receipts to a buyer would not in itself be sufficient to deliver title. Contractual arrangements would be needed to effect the sale. This could be achieved by setting up an electronic registry, with users signing up to standard terms and conditions governing the rights attaching to warehouse receipts issued under them.	Legislative reform could provide that warehouse receipts are negotiable documents of title, meaning that a sale of the underlying commodities can be effected by delivery of the warehouse receipt. This mechanism is particularly useful in establishing commodity exchanges. However, this will only work where the buyer can have certainty that the underlying commodity exists and so such reform must usually be coupled with effective warehouse regulation, or the market will only accept as negotiable the WRs of a few multinationals and blue chip players.

Legal issue/ goal	Achieving success through a contractual approach	Achieving success through legislative reform
Rights obtained under warehouse receipts	<p>The system would need to provide for the rights obtained by the holder of a warehouse receipt, including a transferee. This would include rights against competing creditors and the warehouse operator, including in the case where a warehouse operator over-issues receipts, meaning that there is not enough commodity available to meet all claims.</p> <p>With the voluntary system there is the risk of claims from third parties outside of the system. For example, if a depositor grants security over commodity covered by a warehouse receipt to a third party. In this scenario, the rules of the voluntary system would not be binding on the third party creditor and the normally applicable rules of priority would apply. This could put a creditor who has financed on the back of a warehouse receipt at a disadvantage, as it may only have a contractual claim against the borrower rather than an effective security right.</p>	<p>In a legislated scheme, the risks set out in the left-hand box could be more easily eliminated, as the rights provided by the warehouse receipt system would be applicable to all creditors.</p>
Issue and transfer of warehouse receipts	<p>The system would need to provide for who can issue receipts and in what format (including whether physical or electronic). The system would need to provide for how the instruments can be transferred.</p>	<p>As with a contractual system, the system would need to provide for who can issue receipts and in what format (including whether physical or electronic). The system would need to provide for how the instruments can be transferred.</p>

Legal issue/ goal	Achieving success through a contractual approach	Achieving success through legislative reform
Taking security over commodity represented by warehouse receipts		
Use of warehouse receipts to create possessory security	If local law does not recognise warehouse receipts as documents of title, then delivery of those receipts to the financier is unlikely to be sufficient to give rise to a possessory security. The warehouse receipts might still be useful to evidence control, but it is likely that the security would need to be separately documented. The success of this will depend on the relevant security laws.	Legislative reform could provide that warehouse receipts are documents of title, meaning that a pledge can be created over the security by mere delivery to the financier.
Creation of security over commingled commodities or future commodities	If local law expressly prohibits this, it is unlikely that a contractual arrangement can be used to otherwise achieve this.	Legislative reform could specifically address issues relating to taking security over commodities.
Competing interests of creditors	Please see the box above rights obtained under warehouse receipts for a discussion of the concerns relating to claims of creditors outside the voluntary system.	The priority of competing creditors would need to be addressed in the WRS legislation.
Enforcement		
Increased liquidity and saleability of commodities	This could be achieved through a private organisation establishing a commodity exchange. This relies on the motivation of the participants to self-regulate. An effective grading system would be necessary.	Legislative reform could establish an exchange, with a regulatory body to have oversight. Issues regarding motivation of the participants and the need for an effective grading system are similarly relevant.
Access to self-help remedies	Where the law prescribes a certain procedure for enforcement (such as sale by public auction), it might be that the parties cannot contract out of such a procedure. If they can opt out contractually, the parties would need to ensure this was properly documented.	Legislative reform can provide for more effective enforcement procedures.

Legal issue/ goal	Achieving success through a contractual approach	Achieving success through legislative reform
Fast, inexpensive, predictable channels for dispute resolution	Where enforcement through the courts is a lengthy, expensive, or unpredictable process, it is possible that the parties could agree to alternative methods of dispute resolution, such as arbitration, mediation, or reference to industry body dispute resolution schemes (if any).	As part of the creation of a legislative regime for warehouse receipt financing, governments could consider creating alternative dispute resolution procedures, such as industry-specific arbitration, to promote the faster and cheaper settling of disputes.

3.1 Improving the prevailing legal environment to encourage existing commodity financing techniques to flourish

Where there is not the support or infrastructure for developing WRS, it is possible to consider making less drastic changes to the legal system to encourage commodity financing. Without legal intervention, it is not possible to provide for warehouse receipts to be recognised as negotiable documents of title. Therefore, the focus turns to the security regime and to taking steps to ensure creditors can easily take effective, enforceable security over stored commodity by other means.

For example, removing financial impediments to taking security, such as stamp duty and registration fees, can encourage financiers to enter into secured financing arrangements.

It would be possible to further improve the security regime in many of the subject countries by improving the functionality of collateral registers. However, even if registers are operationally efficient, they are only useful if used in practice and if they serve as effective legal notice to all parties as to the existence of a security interest. For example, by giving the holder of registered security the certainty of priority over any competing creditors.

Alternatively, countries where registration of pledges is currently required could abolish this requirement by relying on the principle of pledge requiring possession of the secured goods. As only one party can have effective possession of goods at any one time, this should offer legal protection against third-party claims. This requires careful consideration of how to address the priority of competing security, including non-possessory security. Generally speaking, non-possessory security is subject to registration as

the most effective method of evidencing security interests to third parties. A possessory (unregistered) pledge would need to remain subject to any pre-existing registered non-possessory security. As such, the improvement of the functionality of registers remains an important consideration even where pledges do not require registration. The legal consultants in the OHADA region suggest that registration at the RCCM can take up to 60 days. Delays like this create an additional risk where competing security interests might be granted within a short period of time.

“ The improvement of the functionality of registers remains an important consideration even where pledges do not require registration

To work in practice, this move would need to go hand in hand with regulation of warehouse operators and collateral managers, as a financier would generally rely on the constructive possession of those third parties.

In the OHADA countries there are currently two methods of perfecting a pledge: taking possession or registration with the RCCM. In the latter case, registration gives access to a pledge form, a potentially useful tool for commodity financing. However, in practice, parties appear to avoid registration and opt for perfection through possession.

Addressing issues relating to dispute resolution

It is a common theme throughout the subject countries that dispute resolution through the courts is a slow process. While the legal due diligence uncovered information about the alternative dispute resolution techniques available in the subject countries, it is not clear that these are being used very much.

However, in most of the subject countries it is possible to avoid going to court to enforce security over commodity by relying on contractual self-help remedies (such as a contractual power of sale for the security holder). Reliance on such self-help remedies is preferable for financiers who will want to avoid having to resort to the courts where possible.

There are also other potential disputes that could arise in the course of a financing relationship (such as disputes regarding quality and, therefore, price). Peer-based alternative dispute resolution is a possibility for commercial disputes such as those between buyers and sellers. However, financiers are likely to be distrustful of this type of dispute resolution forum (as they will assume peer-based arbitrators are borrower-friendly).

Whichever form of dispute resolution is chosen, it is important to try to achieve a situation where the underlying commodity can continue to flow through the supply chain while disputes are being resolved.

3.2 Overview of key OHADA provisions

This section has been written in conjunction with Bilé-Aka, Brizoua-Bi & Associés (Brizoua-Bi).

3.2.1 Background to OHADA law

OHADA stands for *Organisation pour l'Harmonisation en Afrique du Droit des Affaires* (Organisation for the Harmonisation of Business Law in Africa). The OHADA treaty was signed at Port-Louis, Mauritius 17 October 1993 and entered into force 18 September 1995 (the Treaty). The Treaty was modified, amended and completed in Québec on 17 October 2008.

The objective of the Treaty is the harmonisation of business laws in the then 14 and now 17 Member States by the elaboration and adoption of simple modern common rules adapted to their economies, by setting up appropriate judicial procedures and by encouraging arbitration for the settlement of contractual disputes.

The acts enacted for the adoption of common rules as provided for in Article 1 of the OHADA treaty are known as Uniform Acts.

To date, nine Uniform Acts have been adopted and, for some, revised. The Uniform Acts cover the following legal areas:

- (a) general commercial law (entered into force 16 May 2011)
- (b) commercial companies and the economic interest group (entered into force 5 May 2014)
- (c) security interests (entered into force 16 May 2011)
- (d) simplified recovery procedures and measures of execution (entered into force 10 July 1998)
- (e) insolvency (entered into force 1 January 1999)
- (f) arbitration (entered into force 11 June 1999)

- (g) accounting (entered into force 1 January 2001 and 1 January 2002)
- (h) carriage of goods by road (entered into force 1 January 2004)
- (i) cooperative companies (entered into force 16 May 2011).

Some of the Uniform Acts include provisions giving rise to criminal liabilities. Concerning these, the Member States may determine the corresponding criminal penalties as the Uniform Acts merely set out the offences.

3.2.2 The process for adopting Uniform Acts

The Uniform Acts are prepared by the permanent secretary office in consultation with the governments of the member states. They are debated and adopted by the Council of Ministers on consultation with the Common Court of Justice and Arbitration (*Cour Commune de Justice et d'Arbitrage*) based in Abidjan, Côte d'Ivoire. Draft versions of the Uniform Acts are issued by the permanent secretary office to the governments of the Member States, who have ninety (90) days from the date of reception of the draft versions to submit their written observations to the permanent secretary office based in Yaoundé, Cameroon.

Considering the circumstances, including the complexity of the text to be adopted, such ninety-day (90) period may be extended for another ninety (90) days upon the permanent secretariat's request. At the expiration of the period, including any extension, the permanent secretariat immediately forwards to the Common Court of Justice and Arbitration for its advice on the draft Uniform Act, together with the contracting parties' comments and a report of the permanent secretariat. The court provides its advice within sixty (60) days after receipt of such request from the permanent secretariat. Upon the expiration of this last period, the permanent secretariat completes the final text of the draft Uniform Act and proposes it for inclusion in the agenda of the Council of Ministers' next following meeting.

Adoption of the Uniform Acts by the Council of Ministers requires unanimous approval of the representatives of the Member States who are present and who have exercised their right to vote. For such adoption of the Uniform Acts to be valid, at least two-thirds (2/3) of the Member States shall be represented. Abstention does not delay adoption of the Uniform Acts.

Within sixty (60) days after their adoption, the permanent secretariat causes the Uniform Acts to be published in the Official Journal of OHADA. The Uniform

Acts become effective ninety (90) days after such publication, unless these Uniform Acts contain different preconditions to entry into force.

The Uniform Acts are also published in the Member States, in their Official Journals or by any other appropriate means. This formality does not affect the Uniform Acts' entry into force.

3.2.3 Direct applicability of Uniform Acts

The Uniform Acts are directly applicable and overriding in the Member States, notwithstanding any conflict they may give rise to in respect of previous or subsequent enactment of the laws of the Member States.

3.2.4 Relevant provisions of the OHADA Uniforms Acts

The following section sets out some of the key provisions of the OHADA Uniform Acts relevant to commodity-financing which, in the absence of specific WRS legislation, provide the legal framework for carrying out warehouse financing in the OHADA countries.

The OHADA Uniform Act on Securities dated 15 December 2010 (the Securities Act)

The OHADA Securities Act largely addresses the legal requirements for taking security. In the absence of specific warehouse receipts legislation, the Securities Act provides a legal framework for conducting warehouse financing.

The Securities Act does not contain any restrictions on the types of entity that may grant security over goods; secured goods may be held directly by the financier or may be held by a third party (such as a warehouse operator or collateral manager) appointed by the borrower and the financier.

Some key provisions referred to the relevant country summaries are as follows:

- (a) *Taking security.* It is possible to take security interests over a number of different assets, including security over tangible movable goods (Article 92 et seq), security over receivables (Article 127 et seq) and security over bank accounts (Article 136 et seq). Security over tangible movable goods is taken by way of pledge (*gage*).
- (b) The pledge must be granted under the terms of a written pledge agreement between the grantor of the pledge and the beneficiary of the

pledge. The pledge agreement must specify the nature or kind of the secured goods, their quantity and the debt that the pledge is securing.

- (c) *Perfecting a pledge.* A pledge agreement may be perfected (so that it is enforceable against third parties) by either:
 - (i) registration
 - (ii) delivery of the pledged goods to the creditor or an agreed third party (such as a collateral manager).
- (d) Parties that opt for registration must register the agreement at the *Registre du Commerce et du Crédit Mobilier* (the RCCM) in paper or electronic form (Article 52). There is no mandatory timeframe for registering a pledge agreement with the RCCM, but priority of competing registered pledges will be determined by the order of registration. A registration fee must be paid to the RCCM when registering a pledge agreement. The fee payable varies.
- (e) See paragraph 8 (*procedure for registering security at the RCCM*) below for more details on the registration process.
- (f) In practice, it appears that parties have a preference for a pledge that involves delivery of the goods to the secured creditor or (more commonly) a collateral manager under the terms of a tripartite collateral management agreement.
- (g) This may be due to the fact that by taking possession of the secured goods (either actual or constructive) the creditor has better control of the goods. It should be noted that taking possession of the goods does not give the creditor ownership rights.
- (h) However, in a scenario where a creditor does not take possession of the pledged goods (for example, a stock monitoring arrangement), registration of the pledge would be the only effective means of perfection.
- (i) *Insurance requirements in a non-possessory pledge over stocks agreement involving the issue of a bordereau de gage.* Any pledge agreement between a financier and a borrower must provide details of the insurer that is

providing cover against risk of theft, fire and partial or complete damage of the pledged goods.

- (j) *Ranking of creditors in an insolvency.* The Securities Act provides for the ranking of different creditors in the insolvency of a company (Article 226). Priority is first given to meeting the expenses incurred in the sale and distribution of the company's assets, followed by creditors of highly preferred wages and then secured creditors. For secured creditors, creditors with the first ranking perfected security have highest priority. Unsecured creditors have the lowest priority.
- (k) The different ways of perfecting a pledge raise the issue of how priority is determined between two or more creditors who each have a pledge over the same goods. In such a scenario, the question of priority is to be determined on the basis of which pledge was perfected first. This would involve looking at whether possession of the goods in question was taken before the registration process was completed at the RCCM. This is also subject to the issue of whether the creditor taking the second pledge knew, or could reasonably have known, of the existence of the first pledge. If the second creditor did know, or should reasonably have known, of the existence of the first pledge, then the second pledge will rank behind the first.
- (l) This issue of priority reflects the importance of conducting appropriate due diligence when taking security over goods in the OHADA countries, including checks with both the RCCM (as to whether there is any pre-existing registered security) and checks with the pledgor as to the location of the goods, whose possession they are in, and whether there is any unregistered security over them.

The OHADA Uniform Act on the General Commercial Law adopted 15 December 2010 and entered into force 16 May 2011 (the Commercial Act)

The OHADA Commercial Act contains provisions dealing with lease agreements and it permits a person to take a lease of land or premises for commercial, industrial, professional, or artisanal purposes. The provisions of the Commercial Act in relation to leases could be used to support field warehousing arrangements.

The Commercial Act (together with the OHADA Uniform Act on Companies Law) provide for certain requirements in relation to the registration of companies.

The OHADA Uniform Act on Cooperatives dated 10 December 2010 (the Cooperatives Act)

Under the provisions of the OHADA Cooperative Act, cooperative societies have legal personality, are capable of entering into legal agreements (including loan agreements, sale and purchase agreements and security agreements) in their own name and have the power to sue and be sued in their own name. Under the Cooperatives Act, cooperatives have the power to undertake any activities that are in the best interests of its members. Further powers of a cooperative are set out in its constitutional document which is known as a *statuts*.

The Cooperatives Act requires that national cooperatives register with the cooperative registry established in their respective country.

The OHADA Uniform Act on Arbitration dated 11 March 1999 (the Arbitration Act)

The OHADA Arbitration Act provides for the resolution of disputes by arbitration and it applies to any arbitration proceedings in an OHADA Member States. The Act provides that arbitration is open to all persons with legal personality.

The Common Court of Justice and Arbitration is the principal arbitral body for OHADA; it is based in Abidjan, Côte d'Ivoire. Alternatively, OHADA Member States may establish local arbitration bodies.

3.2.5 Procedure for registering security at the RCCM

A pledge agreement must be registered at the RCCM in paper or electronic form. There is no mandatory timeframe for registering a pledge agreement with the RCCM.

A registration fee must be paid to the RCCM when registering a pledge agreement. The fee payable varies. In Côte d'Ivoire, the registration process is intended to take no more than 5 business days. However, registration can routinely take up to 60 days across the other OHADA countries.

Following registration of the pledge agreement, the RCCM will issue a document known as the *bordereau de gage de stocks* (the pledge form). This will specify details of the pledge, its registration date at the RCCM and the unique identification number assigned to it by the RCCM.

The pledge form serves as confirmation that the relevant pledge agreement has been successfully registered with the RCCM. It does not transfer ownership in the goods, and it is not a document of title.

The pledge form will be issued to the pledgor who is then responsible for endorsing the pledge form to the pledgee. The endorsement confers on the pledgee the quality and rights of a secured creditor. The pledgee may in turn subsequently endorse the pledge form to a third party who will then obtain the rights of a secured creditor in relation to the pledged goods.

The pledge form is a potentially useful tool, allowing transfer of some rights in the underlying goods to third parties through endorsement. Development of this tool could potentially be used to support warehouse financing. However, in practice, it appears that most creditors will not obtain a pledge form as they do not opt for the route of perfection by registration. The issues around this would need to be addressed first.

3.2.6 Searching the RCCM register of security and the future of electronic registers

The RCCM maintains a register of all security registered with it that is publicly available. Any person wishing to search the register to see if any security has been registered over specific goods must submit an information request to the RCCM. The RCCM then has two days from receipt of the request to deliver a certificate stating whether any security has been registered over the goods concerned.

In the OHADA countries that are subject of this report, the RCCM register is not currently electronic. In practice, the RCCM registers are available only on submission of a request making it particularly difficult and sometimes time-consuming to obtain information on a person.

The revised Commercial Act, adopted by the Council of Ministers 15 December 2010 and entered into force 16 May 2011, provides for the set-up in each contracting State of an electronic national file. Each contracting State is to designate the body responsible for maintaining the national file and the information contained in the forms submitted to the national file will be treated as public information.

To all requests for information made to the national file, the clerk or the head of the competent organ in the contracting State shall respond immediately or at the latest within forty-eight (48) hours of receipt of the request. The request may be made and the corresponding response sent by electronic means.

The national file includes, among others, an alphabetical list of natural and legal persons concerned by the form and dossier relating to the registration of collateral securities and leasing as well as statements of mortgages. It states any security interest registered against a person indicating the related data, all in alphabetical order.

With regard to Côte d'Ivoire, for example, this file is being set up at the commercial court of Abidjan and shall be operational soon.

The existence of this electronic and publicly-searchable registry would help to remedy some of, if not the main, concerns over the present security registration system and the way it may be consulted by the general public and encourage parties to register security.

That said, as discussed above, at present the common practice when taking pledges is to take possession (actual or constructive) of the goods, rather than relying on registration. Therefore, if the other problems with the registration system are not addressed, the introduction of electronic security registers might not have much practical effect in this area.



Annex 4: Mutual guarantee schemes

Background

The mutual aspect, whereby villagers in particular storage facilities are jointly and severally liable to the financier for their debts, accounts for much of the strength of Type A financing, with its high credit recoveries and low lending risks. It would be wise to build on this feature when trying to extend this approach to more communities and when trying to scale it up and make it more market-oriented.

Africa has some experience with Mutual Guarantee Schemes (MGS) also known as Mutual Guarantee Associations (MGA, or *Sociétés de Caution Mutuelle* or SCM in French), whereby members who are players in a particular trade subscribe to a fund that underwrites their individual borrowing from financial institutions. The MGS is constituted by a group of enterprises belonging to a particular trade, and with similar characteristics and needs, and who subscribe to a guarantee fund that collectively underwrites their individual borrowing from financial institutions. The State may support the institution with additional funds or a *counter-guarantee*. According to the theory behind this approach, an organisation composed of highly interconnected SMEs that are professional peers can overcome the information asymmetry which often exists between banks and borrowers, and thereby better manage the lending risks and allow the bank to lend much more cheaply. The peer review process can be a powerful mechanism for controlling risk and opportunistic behaviour. National financial regulators following the guidance of Basel II will qualify guarantee societies as guarantors if their guarantee product is in line with the regulatory requirement, and on this basis, allow banks to reduce regulatory equity on their loan portfolio.

MGS are concerned with the financing of a wide variety of activities. In the field of warehouse financing, French grain merchants and cooperatives established

an MGS (Caution Grainol) to guarantee financing against stocks owned by grain merchants and which allows them to access funds at low interest rates (EURIBOR +0.4-0.8%). However, it should be noted that Caution Grainol only guarantees loans against members' own stocks, not against stocks of third-party depositors. The indemnity schemes established by a number of American States (also in Bulgaria) do by contrast underwrite third-party stocks. These are State-owned schemes to which the licensed warehouse operators must contribute in compliance with their warehousing licenses and which protect the interest of both stock owners and financiers holding the warehouse receipts.

Caution Grainol has 100 active members, shareholder capital of € 27 million (the income from which covers operating costs), and a guarantee fund of € 300 million. Shareholder capital is constituted by requiring members to contribute of 1/30th of the credit they request. A member requiring financing must first make a stock declaration, following which it will issue promissory notes indicating stocks pledged to Caution Grainol, and against which the bank will lend. Caution Grainol and the regulatory institution, FranceAgriMer, carry out supervisory controls, most importantly an end of season stock-taking.

Literature on mutual guarantee schemes suggests they have not been particularly encouraging in developing countries. Areytey (2006) quotes adverse experiences in Senegal, Côte d'Ivoire and Burkina Faso, resulting mainly from governance and management weaknesses. OECD (2013), quoting examples from Senegal, said that many guarantee funds, especially MGS, have not had tremendous success, due to weak legal frameworks and non-competitive banking sectors among other problems. UNIDO describes its experiences as mixed (FAO, 2013). We know of no African schemes for financing of warehouse financing.

Developing a mutual guarantee scheme for warehouses in Africa

Given constraints at the level of resources, public institutions and law enforcement, an African MGS will need a great deal of self-reliance and solidarity between members. Operationally speaking, the MGS will need a strong training and supervisory function to ensure compliance with rules covering the physical attributes of stores, crops storage practices, commodity standards, management, accounting and reporting.

To achieve success, members of the MGS will need to: (1) be very highly motivated and prepared to contribute materially to the cost of the scheme from the outset; and (2) take firm action so as to recover sums paid out to

financiers under the guarantee, including expulsion, blacklisting and legal action. Hence, the first step for any promoter is to identify a group interested in the concept and to gauge their motivation to shoulder the risks involved and make the scheme work. He/she will also need to identify financiers willing to fund the stocks and reduce their interest rates substantially below those they would charge in the absence of the scheme.

External support might take the form of technical assistance in developing the necessary rules and partial funding for the guarantee fund and some initial operating costs, to match the members' own financial contributions.

Such an approach could be considered in various cases, such as:

- (a) Stakeholder groups affiliated to the Burkinabé Interprofessional Committee for Cereals and Cowpeas (CIC-B). One of its members, the producer organisation FEPA-B, is composed of local associations which would like to establish their own warehouses and these could provide the membership.
- (b) Producers of certified seed, who need financing against their stocks at different stages in the production cycle. Jonathan Coulter (author) identified opportunities for doing this with groundnuts and paddy rice Senegal during missions in 2002 and 2012, respectively.

In some francophone countries, notably Burkina Faso, significant effort has been devoted to organisation of value-chain players into groups by stakeholder type (*professions*); this might provide fertile ground for a MGS.

Any external agent interested in supporting such schemes should consider them against alternative means of providing funding, for example relying on collateral managers (of the kind that have also emerged in Burkina Faso) and to focus on strengthening their capabilities. In fact, there may be scope for both approaches. The mutual indemnity approach leverages local knowledge and peer pressure among members and the economics may be more favourable in smaller scale decentralised operations where collateral managers cannot generate the necessary scale economies. However, they require a high level of managerial and (above all) financial commitment in handling commodities which may be worth a large multiple of the individual members' net worth. Net worth is also an issue with collateral managers, but they have the advantage of professional independence vis-à-vis the borrowers and their internal politics.



The Technical Centre for Agricultural and Rural Cooperation (CTA) is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). Its mission is to advance food and nutritional security, increase prosperity and encourage sound natural resource management in ACP countries. It provides access to information and knowledge, facilitates policy dialogue and strengthens the capacity of agricultural and rural development institutions and communities.

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