

# The use of warehouse receipt finance in agriculture in transition countries



FAO INVESTMENT CENTRE

WORKING PAPER



THE WORLD BANK





# The use of warehouse receipt finance in agriculture in transition countries

**Frank Höllinger,**

Economist, Investment Centre Division, FAO

**Lamon Rutten**

Managing Director and Chief Executive Officer,  
MCX India

**Krassimir Kiriakov**

President, VOCA Consult Ltd

## WORKING PAPER

presented at the

**World Grain Forum 2009**

St. Petersburg / Russian Federation

6-7 June 2009



**THE WORLD BANK**



**European Bank**  
for Reconstruction and Development



**Food and Agriculture Organization**  
of the United Nations

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned. The views expressed in this information product are those of the author(s) and do not necessarily reflect the views of FAO.

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial purposes are authorized without any prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holders. Applications for such permission should be addressed to:

**Director**

Investment Centre Division

FAO

Viale delle Terme di Caracalla, 00153 Rome, Italy

or by e-mail to: [Investment-Centre@fao.org](mailto:Investment-Centre@fao.org)



# TABLE OF CONTENTS

|      |   |           |
|------|---|-----------|
|      | Acronyms  | 4         |
|      | Acknowledgements  | 5         |
|      | Preface   | 6         |
|      | Executive Summary   | 7         |
|      | Introduction  | 14        |
| <br> |   |           |
| 1    | <b>Warehouse receipt financing: core features and enabling conditions</b> | <b>16</b> |
|      | 1.1 Core features of warehouse receipt financing                          | 16        |
|      | 1.2 Practical applications of warehouse receipt finance and key issues    | 17        |
|      | 1.3 Core elements of a warehouse receipt financing system                 | 23        |
|      | 1.4 Additional preconditions for warehouse receipt financing              | 34        |
| 2    | <b>Warehouse receipt financing in ECA: current status and potential</b>   | <b>36</b> |
|      | 2.1 Current status  | 36        |
|      | 2.2 Opportunities for further development and support                     | 45        |
|      | 2.3 Possible next steps   | 46        |
| <br> |   |           |
|      | Annex 1: Selected examples from Asia and Africa                           | 50        |
|      | Annex 2: Case study – Bulgaria  | 54        |
|      | Annex 3: Major producers of storable crops in transition countries        | 58        |
| <br> |   |           |
|      | References  | 59        |



## ACRONYMS

|       |   |
|-------|---|
| ACDI  | Agricultural Cooperative Development International      |
| CFC   | Common Fund for Commodities                             |
| CIS   | Commonwealth of Independent States                      |
| EBRD  | European Bank for Reconstruction and Development        |
| ECA   | Eastern Europe and Central Asia                         |
| EU    | European Union  |
| FAO   | Food and Agriculture Organization of the United Nations |
| GUAM  | Georgia, Ukraine, Azerbaijan, Moldova                   |
| GIDP  | Grain Industry Development Project                      |
| IFC   | International Finance Cooperation                       |
| IMF   | International Monetary Fund                             |
| MCX   | Multi Commodity Exchange of India                       |
| NGFA  | National Grain and Feed Association                     |
| NGO   | non-governmental organization                           |
| SFMR  | State Fund for Market Regulation                        |
| SPV   | special purpose vehicle                                 |
| USAID | United States Agency for International Development      |
| USDA  | United States Department of Agriculture                 |
| VAT   | value-added tax   |
| VOCA  | Volunteers in Overseas Cooperative Assistance           |



## ACKNOWLEDGEMENTS

This report has been produced by Frank Hollinger (FAO), Lamon Rutten (MCX India) and Krassimir Kiriakov (VOCA Consult Ltd) as a technical background paper for the World Grain Summit on 6/7 June 2009 in St. Petersburg, the Russian Federation. It is based on earlier draft documents prepared under the FAO World Bank Cooperative Programme. The final version has been prepared with funding from the FAO-EBRD Cooperative Programme.

The authors would like to thank the experts who made useful comments on the final version and earlier drafts of the report, including Alexander Belozertsev (consultant), Viktor Andrievski (Agrarian Markets Development Institute) Peter Bryde (EBRD), Heike Harmgart (EBRD), Mark Van Strydonck (EBRD), Hans Boogard (Rabobank), Andrew Shepherd (FAO), Eugenia Serova (FAO), Emmanuel Hidier (FAO), and Jonathan Coulter (Natural Resources Institute).



## PREFACE

If agriculture is to contribute to the development of the economy, and farmers are not to be left behind, then agriculture needs a proper credit system. Post-harvest credit in the form of warehouse receipt finance has proved to be a critical component for agriculture sector growth in emerging economies. Efficient warehouse receipt finance allows farmers to avoid selling directly after harvest, when prices are depressed. It encourages storage by reducing the cost and by increasing liquidity in entire commodity chains, which in turn reduces price volatility. By giving farmers access to a new financing tool, it enhances their ability and incentives to invest in production. This paper discusses the state of warehouse receipt finance in countries of Eastern Europe and Central Asia (ECA), and possibilities for enhancing its use. It describes legal and regulatory issues that need to be resolved, and how the international community can help in the process. Annex 1 summarizes some experiences with warehouse receipt finance in Africa and Asia. It is hoped that this paper will encourage all those interested in agricultural development in ECA and other regions to improve the conditions for and use of warehouse receipt finance, and that it will assist them in doing so.





## EXECUTIVE SUMMARY

This study discusses possibilities for warehouse receipt finance in the agribusiness sectors in Eastern Europe and Central Asia (ECA). Warehouse receipt financing is a proven instrument for allowing farmers, traders, processors and exporters to obtain finance secured by goods deposited in a warehouse. The warehouse operator issues a receipt for the stored goods, which can be used as a form of portable collateral to request a loan from a financial institution. Warehouse receipt financing is especially interesting for rural small and medium enterprises, which are often unable to secure their borrowing requirements owing to lack of sufficient conventional loan collateral.

Warehouse receipt finance has a long tradition in many Western countries and in parts of the developing world, but in most ECA countries it has only been introduced since the collapse of the Soviet system. So far, results have been mixed and there remains considerable scope for enhancing warehouse receipt financing. Despite several donor-supported initiatives to introduce a legal framework and other elements of a warehouse receipt system, and practical applications of collateralized commodity financing by international and domestic banks in various ECA countries, little consolidated and up-to-date information is available on experiences, current status in different countries and lessons learned. This study contributes to closing the gap. Part 1 provides an overview of the different types and applications of warehouse receipt finance and discusses key issues and the core elements of a warehouse receipt financing system. Part 2 reviews experiences and the current status of warehouse receipt financing in a number of ECA countries and sets out possible areas for further support.

### Practical applications of warehouse receipt financing and key issues

Warehouse receipt finance can be provided under different warehousing arrangements:

- In a **private warehouse**, manufacturing and warehousing take place under the same roof, and both activities are controlled by the same company. The warehouse is just a part of the overall company operations, which may be manufacturing, wholesaling or retailing. It is very risky to use commodities in private warehouses as collateral for loans: other than spot checks by the bank, there is little to ensure that the goods are really present.
- A **field warehouse** is an arrangement where a collateral management or credit support company takes over the warehouse of a depositor (producer/customer) or a public warehouse by leasing it (or part of it) for a nominal fee, and becomes responsible for the control of the commodities to be used as collateral.
- A **public warehouse** is normally a large storage area that serves many businesses, for example in a port or major transit centre. It is owned (or rented for a long period) and operated by a warehouse operator, which stores commodities for third parties for a fee and acts as the commodities' custodian.

Public warehouse operators often issue warehouse receipts that are acceptable as collateral by banks. However, the quality of the receipt as collateral depends on many factors, particularly the legal and regulatory regime in the country, and the financial status and integrity of the warehouse operator.

The comparative advantages of different warehousing arrangements depend on several factors such as: i) the availability and integrity of public warehouses in rural areas; ii) cost structures; iii) types and sizes of transactions; and iv) quality of the legal and regulatory environment. Especially in countries where no well-functioning legal and regulatory framework is in place and where reliable public warehouses are in short supply in rural areas, field warehousing can be an attractive instrument for collateralized commodity financing. As the field warehouse is on or near the premises of the firm depositing the commodities, there is little disruption in the firm's day-to-day business; in effect, instead of the goods being moved to the warehouse, the warehouse is moved to the goods. This form of warehouse receipt finance is therefore particularly useful where the borrower needs ready access to the commodities, such as for processing operations.

Nevertheless, the existence of a network of reliable public warehouses in rural areas has substantial benefits: Whereas financing against the security of field warehousing is a bespoke transaction, with relatively high banking charges (and little possibility for a commodity firm to make banks compete with each other), public warehouses that are acceptable to banks can be used by a wide range of commodity owners to obtain ready access to finance. A well-developed public warehousing system also contributes to broader commodity and rural financial market development. For example, the use of public warehouses involves independent grading and quality certification of stored goods by the warehouse operator, enhancing transparency in commodity marketing. With tradable warehouse receipts, commodity transactions become easier and faster. A good system of warehouse receipts also facilitates the development of commodity exchanges, which require quality certification and delivery points. For financial institutions, warehouse receipts constitute at least a possessory pledge, which is superior to the pledging of assets in the borrower's possession.

### **Elements of a warehouse receipt financing system**

A well-functioning warehouse receipt financing system based on public warehouses therefore has the potential to reduce risks and transaction costs in collateralised financing, which may result in broad-based access to such financing and low costs. However, for this to be achieved, an enabling legal environment and institutional set-up need to be in place to instil trust in the system among financiers and commodity market participants and to safeguard its integrity. Only when the financial community has a high degree of confidence in the system will it lend against warehouse receipts, and interest rates will be reduced. Core elements of a well-developed warehouse receipt system include:

- an enabling legal and regulatory framework;
- a regulatory and supervisory agency;
- licensed and supervised public warehouses;
- insurance and financial performance guarantees;
- banks familiar with the use of warehouse receipts.

Despite the differences among countries and legal traditions, an enabling legal framework should clearly define the following issues and related rules and procedures: i) the warehouse receipt's legal status as a document of title or pledge; ii) rights and obligations of the depositor and the warehouse operator; iii) perfection of security interests (registration of the warehouse receipt or pledge); iv) protection of the warehouse receipt against fraud, and financial performance guarantees; v) priority for the claims of the holder of the warehouse receipt in case of borrower default or bankruptcy; and vi) clear procedures in case of bankruptcy of the warehouse operator and for the administration of financial performance guarantees.

A well-functioning mechanism for the control and oversight of public warehouses helps to ensure that the warehouse receipts they issue are acceptable collateral for the financial community. This is commonly accomplished through the creation of a government regulatory agency in charge of licensing and inspecting public warehouses. Public warehouses are required to maintain high levels of technical and financial performance, which needs to be monitored by a regulatory agency (which can be a self-regulatory structure). In addition, a public warehouse has to meet several technical standards and must prove its financial stability.

Insurance is critical for all warehouse receipt finance. A warehouse operator must insure not only its premises and the goods therein, but also the risks related to its staff. Each entity issuing warehouse receipts must have professional indemnity insurance, protecting the depositor and bank against such risks as theft, fraud or negligence by the warehouse operator's staff. Banks need to verify that the limits of the insurance cover provided by the warehouse operator give them an adequate level of coverage. If warehouse receipts are not issued by reputed, international warehousing companies or collateral managers, the credit quality of the local warehouse operator can be upgraded by using insurance bonds or letters of guarantee, or by developing indemnity funds. The choice of the most appropriate method should be based on analysis of the local market infrastructure, evaluation of the risks, and the availability of financial and insurance services and products.

Finally, warehouse receipt financing requires a stable and predictable market and policy environment that preserves the incentives for private storage and financing. A certain level of seasonal price fluctuation is needed to attract commodity market participants and enable them to recover storage and financing costs. To nurture trust in the system, governments should therefore refrain from heavy market intervention and ad hoc and erratic policy measures. A good market information system reduces uncertainties regarding the value of the stored goods.

### **Warehouse receipt financing in ECA**

In the early 1990s, banks in many ECA countries started to experiment with various new forms of finance, including receivables finance (in which farmers assign the proceeds of their future crops to a bank, which in return finances the farmers' inputs) and some forms of warehouse receipt finance. In some countries (especially those of the Former Soviet Union), warehouse receipt finance was based on the Soviet era Form 13 warehouse certificate, combined with direct collateral management by the banks or their agents. In other countries, it relied on old rules and regulations dating from the late nineteenth and early twentieth centuries. In

several countries of the ECA region, governments and international agencies were soon making considerable efforts to improve the warehouse receipt system. The focus has generally been on developing proper legislation and regulations and strengthening the institutional support structure (e.g., creating indemnity funds).

However, only a few countries have introduced all or most of the core legal and regulatory elements of a full-fledged warehouse receipt system. A larger group of countries have not yet finalized warehouse receipt legislation and/or still lack several other fundamental elements of a warehouse receipt system; and an equally important number have not yet started developing warehouse receipt legislation. Part 2 provides a broad classification of countries into three groups, according to their level of development of an enabling legal and regulatory framework along with the other structural elements of an enabling environment for warehouse receipt financing:

- Countries with an advanced warehouse receipt financing system are Bulgaria, Kazakhstan, Hungary, Slovakia, Moldova and Lithuania. These countries have had a proper legal framework and several other elements of a warehouse receipt system in place for about ten years, and warehouse receipts issued by public warehouses play a significant role in commodity-based financing. They have been able to build initial consensus among key stakeholders, institutionalize all the important elements of a warehouse receipt system, and involve the financial sector in utilization of the system. Consistent donor support has been instrumental.
- Countries with a partially developed warehouse receipt system include Poland, the Russian Federation, Turkey, Ukraine, Romania, Serbia and Croatia. Most of these countries have adopted at least primary legislation but, for various reasons, initial efforts to create a legal framework and to pilot warehouse receipt finance have not developed into full-scale implementation. In many cases, core elements of a warehouse receipt system, such as a proper institutional framework for the licensing and inspection of public warehouses, or financial performance guarantees, are still missing, preventing the use of warehouse receipt finance based on public warehouses.
- A considerable number of ECA countries do not yet have warehouse receipt legislation in place and have received little or no support from international donor agencies in this regard. These include smaller countries in the Balkans, the Caucasus and Central Asia. There is need for careful assessment of the potential for developing warehouse receipts and of the interest of key public and private stakeholders in these countries, especially those in Central Asia and the Caucasus where commodity markets and financial service sectors are still little developed.

Although in several ECA countries efforts to improve the legal and regulatory conditions have met with only limited success, banks and commodity companies have found ways around the resulting obstacles, and use warehouse receipts as part of structured supply chain finance. This makes it possible for aspects of the financing structure to compensate for weaknesses in the legal/regulatory structure. Over the last ten years or so, Western banks have provided quite a lot of finance based on “quasi warehouse receipts” and repurchase agreements (repos) to international and large local exporters and importers in countries of the Commonwealth of Independent States (CIS). These “quasi warehouse receipts”, which have been common in not only the Russian Federation, but also Kazakhstan and until 2002, Ukraine, normally involve the issuance of Form 13 warehouse certificates by a local warehouse.

However, although international inspection agencies or collateral management departments of banks typically provide some monitoring and regular checks, this does not constitute “continuous, notorious and exclusive possession of the goods on behalf of the lender”, and the financier therefore remains exposed to considerable risk (there has been quite a lot of fraud, in both exports and imports).

### **Potential for introduction or expansion of warehouse receipt financing**

The greatest benefits from a warehouse receipt system can be expected in those countries that are major producers of storable agricultural commodities such as grain, sunflower seeds and sugar. The Russian Federation, Ukraine and Turkey present the highest potential, given the size of their grain markets. Significant prior work has been accomplished in the Russian Federation (although progress on the legal front has been very slow) and is ongoing in Ukraine. Poland and Romania also have large market potential, but past attempts were constrained by limited commitment from government and other key stakeholders. Initial feasibility assessments conducted by donor agencies have revealed considerable potential in some smaller countries such as Croatia and Serbia. There is need for an in-depth assessment of the current state of warehouse receipt implementation in each of these countries, to identify the type of follow-up assistance required to build on earlier initiatives. Some of the countries in this group, such as Ukraine and Turkey, require limited, more focused interventions aimed at introducing missing structural components (e.g., performance guarantees) or at training and awareness raising among private sector participants. Others, such as the Russian Federation, Serbia and Croatia, require full-scale assistance programmes, including for completion of the legal framework.

Other countries where warehouse receipt financing could be introduced include smaller countries in the Caucasus (Azerbaijan, Georgia) and Central Asia (Kyrgyzstan, Tajikistan). Several of these countries have expressed interest in developing a warehouse receipt system, and might present some potential. For example, an improved warehouse receipt system in Central Asia could contribute to enhancing the efficiency of cotton marketing and financing. The opportunities for introducing warehouse receipt systems should be further assessed through a detailed analysis of commodity markets. Major difficulties could arise from relatively low commodity production volumes, net imports of some commodities, and issues related to the transparency and governance of proper warehouse receipt systems.

### **Possible next steps**

In view of the potential for warehouse receipt finance in many ECA countries, further efforts for introducing or enhancing warehouse receipt financing would be warranted. Donor assistance could include the following elements:

- feasibility studies and regional workshops;
- policy dialogue and awareness raising among key stakeholders;
- technical assistance and implementation support;
- training and capacity building for users;
- investment support.

The specific activity mix and focus depend on the specific country situation. However, key experiences and lessons from the past should be taken into account in the design of new support activities. The main reason for incomplete implementation or partial development of the system is a lack of initial consensus among government institutions, donors and the private sector about the key priorities and essential components of a system. Donor approaches were often top-down, focusing on changes at the central level rather than working with (local) banks bottom-up to develop pragmatic warehouse receipt financing schemes. Owing to a lack of political commitment and limited interest from organized groups of commodity market participants, core elements were not implemented quickly enough, and the momentum declined. In some cases, donor assistance was too limited in time and content; donors often tried quickly to replicate models that had worked well elsewhere, without providing sufficiently consistent and timely technical assistance to institutional building. In other cases, such as in Poland, development programmes accomplished all their technical assistance objectives, but did not attract enough support from government institutions and the private sector.

Experience also shows that comprehensive, well-balanced programmes are the most likely to succeed. Focusing primarily on legal and regulatory reform is risky, because government stakeholders are likely to have little or no knowledge of warehouse receipt finance and its relevance to development of the agriculture sector, and few incentives for supporting implementation of the proposed improvements. In this approach, the private sector (including farmers' groups) is excluded from much of the programme, and has little interest in it (for various reasons, ranging from lack of awareness of warehouse receipt finance to scepticism about programmes for government policy reform), so it too is unlikely to lobby for speedy implementation. On the other hand, a programme that focuses primarily on working with selected private sector groups to identify and implement "low-hanging fruits" in warehouse receipt finance fails to capitalize on the goodwill that can be created by a successful system and the possibilities for leveraging this into broader policy, legal and regulatory reform. The two extremes need to be balanced, according to the specific conditions of the country concerned.

In view of this, a two-track approach of introducing proper legislation and developing understanding, skills and capabilities in warehouse receipt finance among local commodity sector participants and financiers could be followed. The initial focus could be on limited and focused assistance in drafting the enabling legislation necessary for proper implementation of the system. Once the national authorities involved in the process have confirmed their commitment to approving this legislation, a full implementation programme can be initiated.

Strong local support from banks and commodity firms is crucial for the implementation of legal and regulatory reforms – reforms that merely make it easier for international banks to lend to local exporters may not achieve the desired results. If the local banking industry is unfamiliar with warehouse receipt finance and other forms of structured commodity finance, the programme should include a strong awareness raising and training component for selected local banks, followed by the development of pilot cases.

Decision-makers in all sectors – farmers, bankers, entrepreneurs and policy-makers – are more likely to be convinced by real examples of warehouse receipt finance, particularly when they can see how these can be replicated in their countries' particular circumstances. Any programme for enhancing a warehouse receipt system should therefore expose decision-makers to real-life experiences from relevant countries and industry sectors, and should include a pragmatic component for reaching agreement as early as possible in the project.

Although strong local support is necessary, there is no need to involve all or even the majority of local banks and commodity groups. Consensus building is fraught with obstacles, and broad industry consultations may be futile if many of the people involved cannot imagine how warehouse receipt finance would work in their country. It is more effective to work with one or a few dynamic groups, and assume that when these front-runners start showing results others will follow.



# INTRODUCTION

This report discusses possibilities for providing collateralized finance against inventories of agricultural commodities to agricultural producers, traders, processors, importers and exporters in Eastern Europe and Central Asia (ECA).

Farmers, traders, processors and exporters seeking access to finance for working and investment capital purposes are often unable to meet banks' demands for collateral. The types, quality and amounts of collateral that these enterprises can provide often do not meet banks' criteria, leaving such enterprises unable to secure their borrowing requirements. Adding to the problems, legal restrictions and institutional shortcomings for establishing, perfecting and enforcing security interests on company assets such as land, movable assets or accounts receivables limit the acceptability of such assets as collateral. The use of stored commodities as collateral is one way of overcoming collateral constraints and enhancing agricultural lending, and provides a valuable addition to the traditional use of real estate and land as loan collateral. In addition, having in place a reliable and cost-efficient system for issuing warehouse receipts not only enhances commodity financing, but also contributes to improving the efficiency and transparency of commodity marketing by providing independent grading and quality certification to all the actors involved in commodity chains. It allows commodity producers, processors and traders more flexibility in the timing of their sales and purchasing, by enabling easy refinance for the goods that they have in storage – for example, farmers are no longer forced to sell their produce directly after harvest to meet urgent financial needs.

Warehouse receipt financing is used in many countries around the globe, and the underlying principles of lending against stored commodities date back to ancient times (the first written records come from ancient Mesopotamia). In the United States, systems for bank lending against warehouse receipts have been in existence since the mid-nineteenth century. The introduction of a proper legal and regulatory system in 1913, with the first warehousing law, made it possible for warehouse receipt finance to be generalized and expanded. Their function as delivery guarantees for futures contracts helped make warehouse receipts instrumental in the establishment of the first futures markets in the mid-nineteenth century. In Latin America, financing against warehouse receipts became commonplace by the late nineteenth century. In Western Europe, it had become a fairly standard practice in the financing of internationally traded commodities far earlier. Once independent, Asian countries replicated the warehouse receipt rules and regulations of their former colonial rulers, or relied on their own long-established legal systems, as in China and Viet Nam, for example. Over the past 15 years, efforts to improve warehouse receipt systems have been made in several ECA countries, with support from international donor organizations such as the United States Agency for International Development (USAID), the European Bank for Reconstruction and Development (EBRD) and the World Bank. Moreover, international and domestic banks have used warehouse receipt financing and related structured finance instruments in several ECA countries. Despite these



initiatives, little consolidated and up-to-date information is available on experiences, current status in different countries and lessons learned. This study contributes to closing the gap.

This report is divided into two parts. Part 1 provides an overview of the key features and enabling conditions for warehouse receipt financing. It starts by illustrating the basic transactions underlying warehouse receipt finance. It then discusses how a warehouse receipt system can be improved and expanded by appropriate legal, regulatory and institutional conditions. The following section highlights economic preconditions for warehouse receipt finance in terms of commodity characteristics and market conditions. Part 2 provides an overview of the experience of introducing warehouse receipt systems in ECA countries, and a broad classification of countries according to their level of development of warehouse receipt finance. It then identifies countries that could be assisted with introducing or upgrading warehouse receipt finance, and suggests possible next steps.



# 1. Warehouse receipt financing: Core features and enabling conditions

## 1.1 Core features of warehouse receipt financing

Warehouse receipt finance uses securely stored goods as loan collateral. It is sometimes called “inventory credit” (e.g., in FAO, 1995). It allows clients, such as farmers, traders, processors and others,<sup>1</sup> to deposit commodities in a secure warehouse against a receipt certifying the deposit of goods of a particular quantity, quality and grade. Clients can then use the receipt as a form of portable collateral to request a loan from a financial institution.

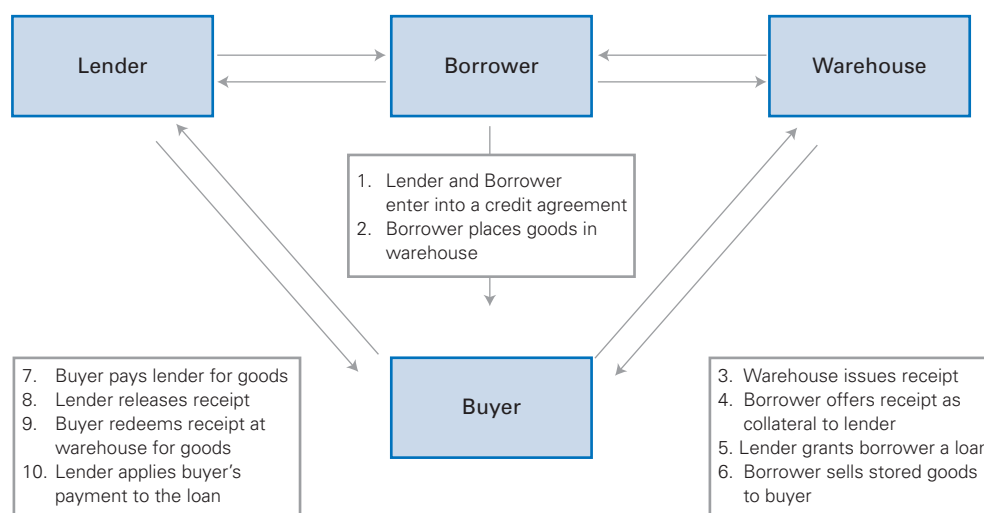
The basic features of warehouse receipt finance are relatively simple and straightforward, as illustrated in Figure 1: the client deposits a certain amount of goods into a warehouse in exchange for a warehouse receipt. The warehouse receipt conveys the right to withdraw a specified amount and quality of the commodity at any time from

the warehouse. The warehouse manager is liable for guaranteeing the safety and quality of the stored commodity. The warehouse receipt can then be transferred to a bank, which provides a loan equivalent to a certain percentage of the value of the stored commodity. At maturity, the client (e.g., a farmer) sells the commodity to a buyer who then either pays the bank directly, or pays the borrower who then repays the bank. On receipt of the funds or an acceptable payment instrument (e.g., a confirmed Letter of Credit), the bank surrenders the warehouse receipt to either the buyer or the seller (depending on the specifics of the transaction), who then submits the warehouse receipt to the warehouse, which releases the commodity. In case of default on the loan, the bank can use the warehouse receipts in its possession to take delivery of and sell the commodity stored in the warehouse, to offset the amounts it is due.

The rest of this chapter discusses different practical applications of warehouse receipt financing depending on the type of warehouses, the purpose of financing and the strength of the legal

<sup>1</sup> The system can be used by exporters as well as importers, such as for storing inputs and raising finance against these stocks, and for purposes of domestic trade and processing.

**Figure 1**  
Basic features of a warehouse receipt financing transaction



Source: Kreshavan, 2008

and regulatory framework. Section 1.3 highlights the advantages of a proper legal and regulatory environment and discusses core elements of a comprehensive warehouse receipt system.

## 1.2 Practical applications of warehouse receipt finance and key issues

In practice, the prospective borrower usually first agrees with the financier on the use of the warehouse receipt finance mechanism, and then agrees on which actual warehouse receipt arrangements are acceptable – particularly which warehouse(s) and/or collateral managers (see Box 1 for terminology) are to be used. The financier then agrees directly with the warehousing company or the collateral manager that the latter will act as an agent of the financier in accepting the deposit of commodities. It is also possible, but unusual, for a bank to use a warehousing company or collateral manager as its agent, and to finance automatically all the commodities deposited by third parties in one of the warehouses that are part of the scheme<sup>2</sup>. In certain instances, a company may first deposit its goods in a warehouse, and then find a bank willing to provide finance against the collateral of the warehouse receipts (e.g., in a scheme set up by Malaysia's Pepper Marketing Board to provide pepper farmers with easier access to finance).<sup>3</sup>

The use of warehouse receipts as collateral for financing takes several different forms, depending not only on the purpose of the financing, but also on the nature of the warehouses involved, the financial strength of their warehouse operators, and the legal and regulatory regime under which the financing is structured.

### 1.2.1 Nature of the warehouses

The basic principle of warehouse receipt financing is that commodities stored in a warehouse are used as collateral for a loan. However, it must be remembered that moving commodities tends to be expensive (most commodities are bulky, and the logistics systems and road network of many countries underdeveloped), so borrowers prefer using

warehouses along the “normal” supply chain – including warehouses on their own premises. It becomes particularly unattractive to move goods into a warehouse away from the borrower's premises if the borrower still needs to process those commodities before they can be sold. The further away good, reliable public warehouses are, the less attractive it becomes to use them (and in many ECA countries, such warehouses are scarce, particularly in rural areas).

From the financier's perspective, the rationale for shifting risk from a borrower to goods in a warehouse is that it reduces the risks for the financier, but this is only true if the warehouse operator is more reliable than the borrower, and the country's legal and regulatory system allows the financier to make use of its supposedly superior rights to the goods in case of borrower default.

For all these reasons, warehouse receipt finance can be arranged under different warehousing arrangements. It is possible to distinguish three types of warehouse (which in this paper are deemed to include silos/elevators and storage tanks): private warehouses, public warehouses (also called terminal warehouses) and field warehouses.

In a private warehouse, manufacturing and warehousing take place under the same roof, and are controlled by the same company. The primary business of the company controlling the warehouse is not warehousing, but manufacturing, wholesaling or retailing, and the warehouse is operated as part of its overall business. There is therefore a close relationship between the warehouse and the owner of the stored commodities. In certain countries (e.g., the Philippines), these companies are allowed to issue warehouse receipts as evidence of the presence of goods in their warehouses, and banks accept these as collateral for loans. However, it is very risky to use commodities in private warehouses as collateral for loans: other than spot checks by the bank, there is little to ensure that the goods are really present, and even if they are, the bank has no control over their movement out of the warehouse. When the goods are present in the warehouse, there is still a legal risk in the case of bankruptcy of the borrower, because the bank will not be given priority over other creditors.

<sup>2</sup> India's National Bulk Handling Corporation, which has agency agreements with 34 banks, provides the major example of this

<sup>3</sup> This and other examples of the use of warehouse receipt finance are discussed in UNCTAD, 2002.

A **public warehouse** is normally a large storage area that serves many businesses, for example, in a port or major transit centre. It is owned (or rented for a long period) and operated by a warehouse operator, which stores commodities for third parties for a set fee. The warehouse operator does not obtain title to the commodities it stores: the operator does not own them, but acts as their custodian. Large independent warehousing companies both own and operate their own warehouses, but many public warehouses are operated under long-term contracts by independent operators. The owner gets a fixed rental fee; the operator earns warehousing and other charges. In order to obtain access to bank credit, a farmer or trader may move his/her goods into a public warehouse. Public warehouse operators often offer warehouse receipts that banks accept as collateral, but whether this is sound collateral depends on many factors, particularly the legal and regulatory regime in the country, and the status of the warehouse operator

Warehouse receipts can be issued as either single- or double-component documents. An ordinary warehouse receipt is a bearer document, and a document of title. The holder of the document has the right to withdraw the goods from the warehouse and dispose of them. The holder also has the right to pass on the receipt to another party, by merely endorsing it to the new holder. Banks can use ordinary receipts to obtain direct ownership control over the commodities, but commodity sector players tend to be wary of receipts that convey such strong rights – there are no checks and balances, and the potential for fraud and abuse is relatively strong (unless an electronic registry is used).

Double receipts (a standard civil law instrument) consist of two parts: the pledge certificate and the warehouse certificate, which can be separated from each other. The warehouse will release the goods only when both documents are presented together. When they are separated, the pledge certificate indicates that its holder has the right to demand repayment of the loan by the pledger (the depositor of the commodities).

#### Box 1

##### **Service providers in warehouse receipt finance: the terminology**

The companies that provide services to financiers in warehouse receipt finance are referred to by several different names: inspection agencies, warehousing companies, freight forwarders, collateral managers, and credit support agencies. How do these differ from each other? In many respects, they offer the same services – for example, three of them normally offer inspection services – but they can be differentiated in terms of how broad a range of services they provide.

Inspection agencies inspect the quality, quantity and/or weight of goods, often on demand from a financier. Letter of Credit-based transactions generally require an inspection certificate, but such a certificate is established for one point in time, and the inspection company does not provide any guarantee or assume any liability for the continuing presence of the goods. Monitoring services (repeated inspections to verify that the goods are still in place) are generally provided over longer periods, but these too

give no guarantee on the continuing presence of the goods: the monitoring company merely certifies the presence of goods of the agreed quality.

Warehousing companies may provide warehousing services to third parties. There are some risks here (in ascertaining what security the company provides against the risk that goods disappear), but with a good legal and regulatory framework, a warehouse receipt issued by a reputable warehousing company can be good collateral for any form of transaction. In such conditions, warehouse receipts (or the corresponding silo receipts or tank receipts for bulk or liquid storage respectively) can be pledged or traded by both the commercial and the financial communities.

Many freight forwarders offer collateral management services as an extension of their logistics operations, often through their open cargo insurance policies (but a client is well advised to study the details of the forwarder's insurance coverage). The collateral management will be in the forwarder's own warehouse, and will cease once the commodity leaves its premises.

Collateral managers offer a variety of services for ensuring the integrity of warehouses and the quality of commodities: quality inspection and grading, ensuring proper warehouse operations and storage, insurance against loss, damage or theft, etc. Collateral managers either own or lease warehouses, or they co-manage and supervise field and other warehouses owned by third parties. Their services cover the discharging of goods into the warehouse, their actual storage, and their discharge from the warehouse.

Credit support agencies provide all of these services, and can also secure the goods as they move through a supply chain, including as they are being processed. A credit support agency identifies all the risks associated with a transaction, proposes mitigants for each risk for the financier, implements some of the mitigants, and controls the entire transaction from when the bank releases funds to when the loan is repaid in full. Credit support is generally provided along the supply chain – for example, it can encompass a transaction cycle from an upcountry warehouse to the export warehouse, or from one country to another.

The holder of the warehouse certificate has the right to dispose of the goods stored (the holder of the pledge certificate does not), but can only withdraw the goods from the warehouse when the loan has been repaid.

**Public warehouses** dominate warehouse receipt finance in the United States, Western Europe and other countries such as Singapore and South Africa. These countries tend to have good infrastructure with warehouses at key locations along the marketing chain: cooperative silos/elevators near railway lines and rivers in the grain producing regions; and public warehouses owned by entrepreneurs or large cooperatives in the main processing and consumption centres and in the export ports, where they are frequently part of major international warehousing and shipping groups. The warehouse receipts issued by these warehouses tend to be the delivery instruments for major international commodity exchanges, making it even more attractive for owners to store their commodities in these public warehouses. Sound legal and regulatory systems, sufficient competition in commodity supply chains, availability of the funding necessary to construct the warehouses, and predictable trade flows all contribute to the success of these public warehousing systems. In other parts of the world, public warehousing has been much less important (e.g., in Latin America) or, when present, has not had a major impact on commodity finance (e.g., in India).

A **field warehouse** is an arrangement in which a collateral management or credit support company takes over the warehouse

of a depositor (producer/customer) or a public warehouse by leasing the storage facility (or part of it) for a nominal fee, and becomes responsible for controlling the commodities to be used as collateral (employing its own staff, controlling movements in and out, etc.). In most cases, the warehouse belongs to the firm that wishes to obtain the credit, but control over the warehouse is relinquished to an independent operator. As the field warehouse is on or near the premises of the firm depositing the commodities, there is little disruption in the firm's day-to-day business; in effect, instead of the goods being moved to the warehouse, the warehouse is moved to the goods. This form of warehouse receipt finance is therefore particularly useful where the borrower needs ready access to the commodities, such as for processing operations. The credit support company issues warehouse receipts that – as long as a number of conditions are met – are good collateral from a bank's perspective.

When the financing is for a processor, the financier can choose whether to finance only the raw and processed goods in the warehouse controlled by the collateral manager, or also the goods that are being processed.<sup>4</sup> In the latter case, the mechanism most commonly used is a trust receipt (there is an equivalent Islamic finance instrument). This is a bilateral arrangement between a bank and a borrower that provides the bank with a security interest in the commodity

4 In most legal systems, only specific goods can be pledged or otherwise assigned to financiers. When such goods are transformed, such as by undergoing processing, the financier's collateral disappears and it has no rights to the transformed goods, unless it puts into place a trust or agency arrangement with the borrower.

## Box 2 Warehouse receipt financing based on Form 13 in the Russian Federation

In the grain sector of countries of the Former Soviet Union, many banks (both local and international) have been using warehouse receipts issued by public warehouses as collateral for loans. These are called Form 13 and date from Soviet times. However, in the absence of additional collateral management or credit support arrangements, these receipts give very little security; even when the warehouses are well-capitalized or part

of a financial guarantee scheme, Form 13<sup>1</sup> gives banks, which are not the original depositors, very few means of recourse if the commodities disappear. Form 13 is merely a warehouse slip issued as a receipt confirming that the warehouse has accepted certain commodities for storage. It does not give the holder any specific rights, and cannot be the subject of a pledge. The stored commodities can be pledged, however, according to the broad rules for the pledge of movable property, but for this to make sense for a financier, the financier has to put its own agents in control of the warehouse.

1 Form 13 (official designation: Standard Form ZPP 13) is a warehouse receipt that applies only to grain and its by-products. In the Russian Federation, it is regulated by Order No. 20 of the government State Grain Inspection, dated 4 April 2003 (which replaced earlier similar orders), and is binding to all legal entities and natural people buying, storing, processing and selling grain and its by-products. A person who has transferred grain for storage may receive it back only on presentation of Form 13, which certifies only the right to receive the stored commodities, and not a right of ownership. Form 13 is not transferable to third parties (Lang-Anderson and Rymko, 2006).

– in a way, the borrower acts as the financier’s agent for processing the commodity (a similar arrangement can be used if the commodity is being transported from one location to another). However, the borrower retains physical possession of the commodity, which entails significant operational risks and can be difficult to enforce. Trust receipts are therefore only accepted by banks if borrowers have established a long-standing track record, and/or complementary guarantees are in place, and/or a collateral management company keeps tight control over the borrower’s processing operations.

Field warehousing might be an attractive instrument in many ECA countries. Box 3 sets out the main determinants of the costs of field warehousing and public warehousing arrangements. Field warehousing played an important role in the financing of agriculture in the United States and Canada until the early 1950s, when the Unified Commercial Code came into force. It continues to be widely

accepted as a practical and safe security device in France, Belgium and many Latin American countries (EBRD, 2004), and even in the United States is still used in some industries, particularly by processors and distributors. Field warehousing arrangements are used in ECA countries, especially in the grain and oilseeds industry. In the Russian Federation, for example, in the absence of a proper legal and regulatory regime for public warehouses, banks either deploy in-house collateral security services or contract specialized collateral managers (usually international firms such as Baltic Control, Cotecna, Drum Resources or Société Générale de Surveillance).

Figure 2 gives a simplified overview of the relative attractiveness of field warehousing versus public warehousing arrangements, according to the nature of the borrower on the one hand and the strength of the legal systems and financial strength of public warehouses on the other.

**Box 3**  
**Public warehouses and field warehouses: cost comparison**

Although the operational costs for both public and field warehousing include variable and fixed costs, the cost structures can be quite different, resulting in different user charges (fees).

Field warehousing is a bespoke financing tool. The financier uses a collateral manager to manage the commodities in a client’s warehouse. The variable cost component is related to the risk premium covering the risks that the collateral manager takes by assuming responsibility over the commodities. (Part of this reflects the insurance that the collateral manager has to pay, such as to cover against fraud by staff, and part reflects a retention to cover eventual smaller losses that would not be claimed on insurance.) The risk premium depends on the value of the goods under management and the perceived riskiness of the transaction – a typical range is 0.1 to 0.25 percent of the value of the goods per month.

Fixed costs (per warehouse) comprise a charge for the costs to the collateral manager of posting one or more

temporary security guards at the site, the inspectors assigned to the job, due diligence, issuance of certificates, fumigation, and other items. Infrastructure costs in field warehousing are close to nil (the collateral manager signs a lease agreement with the client for a nominal amount, such as US\$1 per month).

Variable costs of public warehouses reflect handling costs (for the movement of goods into and out of the warehouses, the issuance of warehouse receipts, etc.) and a per tonne or per bag/bale charge for storage charges (calculated to give the warehouse operator a profit at the end of the year, after deducting fixed and variable charges). Public warehouses generally have to be reserved in advance by depositors, particularly during the busy post-harvest period, and their pricing reflects this. The contract generally specifies a set cost (often between US\$0.10 and US\$0.20 per tonne per day) for an agreed quantity, and an agreed period, say 45 days; if the quantity stored is less than agreed, the depositor has to pay penalties, and if the commodities stay in the warehouse longer than agreed, daily storage charges shoot up. Fixed costs include the capital

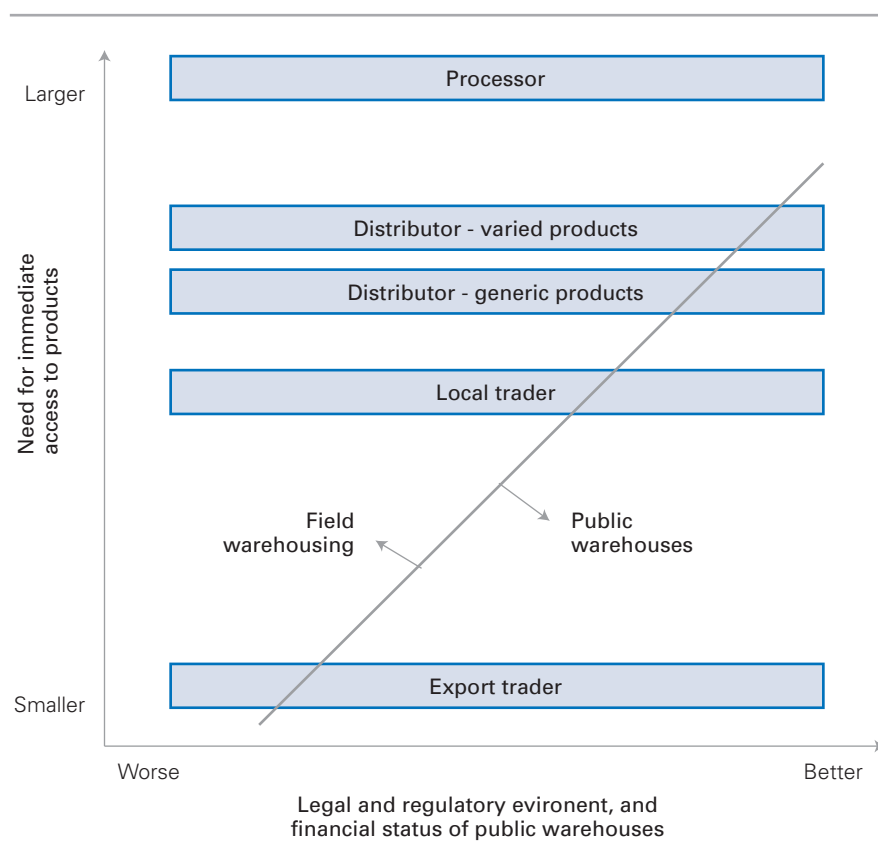
recovery costs of warehouse owners or rental fees in the case of lease arrangements.

Price ranges for the two kinds of warehousing arrangements therefore vary widely. The depositor also has to consider the extra transport costs incurred when using a public warehouse. This is not a major issue if a public warehouse is on a natural route for the depositor (e.g., near a railway used to transport the product further), but in other situations, particularly for bulk commodities, transport costs can make the use of public warehouses uncompetitive. Public warehouse charges have a more significant variable component and lower fixed costs than field warehouse charges, and therefore public warehouses (if available) can be the more attractive option for small and medium enterprises, such as importers of manufactured goods. However, the key factor might be the transport costs to and from the public warehouse. Nevertheless, in Africa, for example, cooperatives and traders still use field warehousing extensively for relatively small volumes of cocoa, coffee or maize, at an overall charge that varies between US\$2 000 and US\$4 000 per warehouse per month.

As indicated on the vertical axis of Figure 2, while processors have great need for immediate access to products, exporters generally build up stocks prior to shipments, and thus have little need for instant access. Distributors of varied products keep limited amounts of each item in their showrooms, and need to be able to replace sold items immediately. The greater the need for instant access, the larger the premium on field warehousing (on the borrower's premises). The horizontal axis indicates how the financial status of public warehousing companies and the strength of the legal and regulatory system (which together determine how safe the warehouse receipts issued by public warehouses are) influence the attractiveness of field warehousing versus public warehousing. In a risky environment, even if field warehousing is more costly, the financier will prefer it to public warehousing, because the collateral manager providing the field warehousing services can offer high-quality international guarantees. In a well-regulated environment with highly creditworthy warehousing companies, field warehousing will be limited mostly to the financing of processors.

In general, the nature of the warehouse receipt finance depends on the logic of the transaction. For example, the ideal arrangement for providing post-harvest finance to farmers, to give them greater flexibility in deciding when to sell, would be to use a public warehouse that can also act as the aggregator of physical stocks. However, although such facilities are common in developed countries, because farmers' cooperatives have made large investments in them – creating professional, independent storage companies in the process – conditions in ECA countries is less well-developed, so banks are likely to have to resort to field warehousing. If the purpose of the loan is to enable a trader to build up sufficiently large stocks, it may make sense for the bank to use a collateral manager to enable the issuance of warehouse receipts at up-country field warehouses, while simultaneously accepting warehouse receipts issued by a public warehouse in a port. To finance a processor, a field warehousing operation has to be used. To finance a distributor, arrangements depend on the distributor's need for immediate access to the stock; for example, for financing equipment parts,

**Figure 2**  
Relative attractiveness of field and public warehousing, as a function of the borrower's logistics needs and the external environment





a field warehouse operation at the equipment dealer's premises may be optimal, while for financing fertilizer, a public warehouse could be used. To finance an exporter, a public warehouse strategically located along the supply chain (such as a silo collecting grain from surrounding farmers, a warehouse near to the railway line or river, or a silo near an export terminal) probably provides the best tool (although if the financier also finances the exporter's local procurement operations, this can be combined with field warehousing arrangements in small rural centres). If readily accessible public warehouses are lacking (e.g., public warehouses are distant from producing regions, or have inadequate capacity), banks and their clients have little choice but to use field warehousing arrangements – governments may wish to consider whether there is a case for promoting public warehouses in producing regions as a tool for improving farmer finance.

### 1.2.2 Integrity of the warehouse operator

In warehouse receipt finance, the bank shifts its credit risk from the borrower to the entity issuing the warehouse receipt – the warehouse operator. The financial strength of the warehouse operator is therefore crucial for the proper functioning of a warehouse receipt system. Most Western countries have strong public warehouse operators, and the warehouse receipts they issue are widely accepted by banks as collateral for finance. In other parts of the world, however, the situation is not as good. Public warehouses show weaknesses in management, poor financial backing, or poor acceptance of the needs of international collateral management (independent inspections, audits, provision of guarantees, etc.).

For example, in one of the largest cases of warehouse receipt finance fraud of recent years, a Czech bank, Komerční Banka, in the late 1990s lost more than US\$250 million from financing a Geneva-headquartered trading company, Stone and Rolls, ostensibly for the purchase of grains in the Russian Federation and Ukraine. The bank relied on warehouse receipts ("warrant lists") issued by public warehousing companies, which typically read "We, as the seller's [Stone and Rolls] warehouse holder, herewith confirm and state that goods under consignment LC no... are lying in our warehouse and are held only in favour of Komerční Banka. We irrevocably confirm that respective goods will be released to final consignee only upon authorization of Komerční

Banka." However, when the bank found that the grains did not exist, the manager of the warehouse that issued most of the warrants claimed that it had no liability, as "warrant lists were nothing more than the expression of the willingness on the part of the warehouse to obtain and store goods of the relevant description and to supply them, provided that they received payment in advance from Stone and Rolls."<sup>5</sup>

Although probably the largest warehouse receipt fraud in ECA, this case is not unique. For example, in late 2008, several Hungarian banks found that they had provided finance against warehouse receipts that they thought were issued by public warehouses, but that were really issued by private warehouses (including cooperative warehouses). This would not have been a problem if the banks had conducted proper due diligence on the warehouse operators or recruited a collateral manager to control the private warehouses, but they had failed to do so. United States banks lost money financing commodity imports into the Russian Federation against warehouse receipts, when they found that the receipts were fake.

From the public policy perspective, these experiences clearly indicate a need to improve the legal and regulatory framework, including establishing a licensing system for public warehouses that would result in a warehouse company being banned from issuing warehouse receipts if its managers acted as the ones quoted above did. They also indicate a need to raise banks' awareness, so that they do not use financing models that depend on having properly regulated environments and proper public warehouses in countries and with warehouses that lack these necessary conditions.

For the immediate term, however, in countries with weak public warehouses, banks need to have a careful accreditation process in place to approve the warehouse operators they are willing to work with. In some countries (e.g., Turkey), banks have decided to start their own warehousing operations, to store the commodities they have accepted as collateral for their own loans. Banks often bypass the problem

<sup>5</sup> Royal Courts of Justice, Case No. 2000 Folio No. 1198, between Komerční Banka, A.S. (claimant) and (1) Stones and Rolls Limited (2) Zvonko Stojevic (defendants), London, 15 November 2002.



by working with an acceptable international collateral management agency, which takes over operation of the warehouse and puts its own credit against that of the borrower; the collateral manager is responsible for taking effective custody over the goods, and taking into account local practical and legal/regulatory conditions.

There is also fraud by the staff of collateral management companies. If the losses are not too high, the collateral manager will compensate the depositor or the bank from its own capital; if the losses are high, the collateral manager's insurance will cover them. The insurance cover carried by international collateral managers is much higher than the amounts that could feasibly be stolen from each warehouse or by each fraudulent staff member (banks make sure that this is so), so clients are well protected (except for fraud by their own staff). However, the collateral management company itself is highly vulnerable; if it is the victim of a large fraud and has to call on its insurance, its insurance premiums will rise so much that it is effectively priced out of the market.

There are two possible approaches to improving this aspect of the warehousing system: setting up an indemnity fund that guarantees the warehouse receipts issued by (certain) warehouses; or insisting that warehouse operators put their own bonding and insurance arrangements in place. This is discussed in section 1.3.4.

### 1.2.3 Differences in the legal and regulatory system

Warehouse receipt finance requires an in-depth knowledge of the legal and regulatory system, and tailoring of the loan structuring and documentation to the specifics of each deal. There are legal and regulatory differences from country to country that make certain tools more or less effective. This tailoring process has costs that can easily make certain transactions unviable, and governments are advised to use internationally acceptable templates rather than trying to develop home-grown approaches. Legal and regulatory issues are discussed in section 1.3.

## 1.3 Core elements of a warehouse receipt financing system

Although the basic transactions underlying warehouse receipt finance are simple and

straightforward, they benefit greatly from a proper legal and institutional framework that allows them to function smoothly and to attract a wide spectrum of commodity market participants and financial institutions. Such a framework contributes to reducing transaction costs and the risks of fraud, thereby instilling trust among stakeholders. Figure 3 gives an overview of the core elements of a well-developed warehouse receipt system, which are:

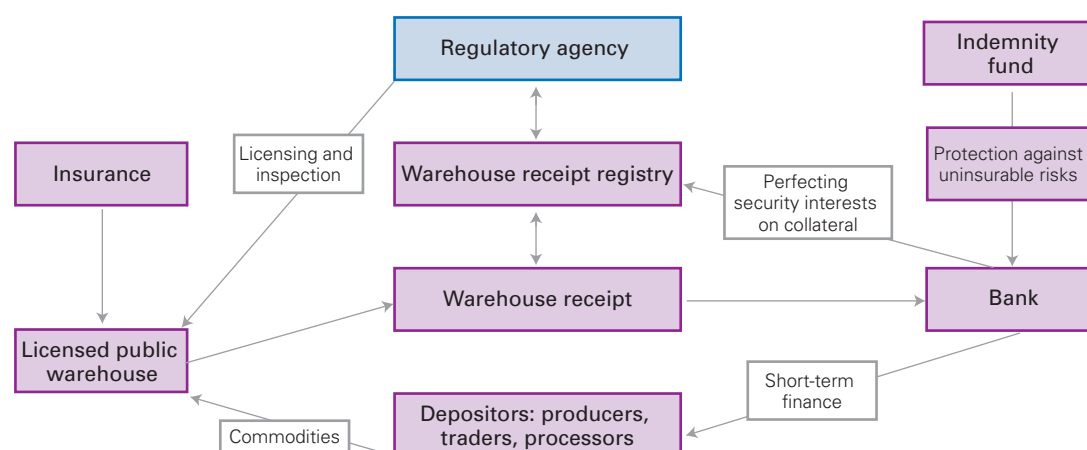
- an enabling legal and regulatory framework;
- a regulatory and supervisory agency;
- licensed and supervised public warehouses;
- insurance and financial performance guarantees;
- banks familiar with the use of warehouse receipts.

Trust is a key ingredient for warehouse receipt finance, because the financial community must have a high degree of confidence in the system before it will undertake lending activities. Not all of the elements in Figure 3 are necessary for the proper functioning of warehouse receipt finance, especially if there is sufficient trust among core actors in the transaction (warehouse operator, client and financier) or if reputable collateral managers or credit support agencies are employed. However, as pointed out in section 1.2, transaction costs for setting up individual financing arrangements can be substantial, and the use of collateral managers or in-house collateral management services may increase operating costs.

A well-developed system of licensed public warehouses and the use of warehouse receipts for storage and marketing of agricultural commodities provide a number of advantages for actors involved in physical and financial transactions within agricultural value chains. These benefits and advantages go beyond individual transactions because they improve the transparency and efficiency of commodity marketing and financing at large. They may also spur the introduction of more advanced marketing and financing instruments. These systemic benefits are summarized in the following paragraphs.

**Enhancing transparency and efficiency in commodity marketing:** Warehouse receipt systems require independent weighing and

**Figure 3**  
Possible elements of a well-developed warehouse receipt system



Source: Authors.

quality testing or grading of the commodity, which is usually carried out by a third party such as a warehouse manager or a specialized inspection agency. Independent grading enhances the transparency of commodity transactions, especially in cases of unequal bargaining power between small sellers and large buyers. With tradable warehouse receipts, commodity transactions become easier and faster. A good system of warehouse receipts also facilitates the development of commodity exchanges, which require quality certification and delivery points. Access to safe storage allows farmers, traders and processors to manage price volatility and obtain working capital without having to sell their crops at times of low prices.

**Addressing collateral and liquidity constraints in commodity financing:** For financial institutions, warehouse receipts constitute secure collateral. In the United States, the Federal Reserve has a special discount window for loans backed by warehouse receipts, making them a very liquid instrument; in the United Kingdom, the Bank of England has a similar discount window. (Both of these are open to refinancing warehouse receipt finance in other countries.)<sup>6</sup> Because

commodities are stored outside the borrower's premises, warehouse receipts constitute at least a possessory pledge, which is superior to pledging assets in the borrower's possession. In case of default, the lender should have easy recourse to the commodity, which means that it can in principle be liquidated without much delay or high transaction costs. Moreover, in a well-developed warehouse receipt system, the priority of the claims of the holder of the receipts is clearly established and easily enforceable, protecting the lender against other claims in case of borrower default or bankruptcy. Farmers, traders and other commodity market participants can obtain working capital finance without having to sell their commodities, providing them with access to liquidity while they benefit from inter-temporal arbitrage.

### 1.3.1 Enabling legal framework

An appropriate legal framework is a prerequisite for a functioning warehouse receipt system. Although warehouse receipt finance is possible even in very poor or virtually inexistent legal environments,<sup>7</sup> in such conditions transaction costs are higher and bank credit committees

6 Although these discount windows were set up in the early decades of the twentieth century to provide liquidity to agricultural finance in their own countries, the facilities do not discriminate as to the origin of the paper that is offered for discounting. This means that warehouse receipts issued by Latin American, African or ECA warehousing companies and avalized (guaranteed) by a bank are eligible, as are forward contracts issued by farmers and avalized by a bank. These discount windows have performed well throughout several economic crises and provide very low-cost credit refinancing

possibilities to the rural sector worldwide, as long as the credit is structured through the issuance of trade-related papers. As well as being low-cost, these facilities do not require any mandatory reserves or provisioning. In other words, they allow banks to engage in rural credit without tying up their own capital. The existence of such discount windows can protect core economic sectors from the contagion effects of unrelated financial crises.

7 For example, during the civil war in Liberia in the 1990s, rubber exporters continued to be financed on the basis of warehouse receipts issued in Liberian ports.

will be more reticent to approve transactions. The better the legal framework, the wider the range of possible transactions. Bank risk controllers and credit committees in particular feel more comfortable when there is strong legislation in place protecting the integrity of the system, establishing clear procedures in case of bankruptcy and default, and allowing the perfection of security interests.

The legal framework governing commodity warehousing and warehouse receipts, and the related terminology differ among countries, depending on, *inter alia*, their legal traditions. For example, many civil law countries<sup>8</sup> have specific laws for commodity warehousing, although they may not have a comprehensive regulation on warehouse receipt financing. In common law countries, warehousing regulations tend to be based on general rules, pledges or long-standing business practice. Nevertheless, common law countries such as the United States, India and the Philippines have comprehensive legal frameworks (FAO, 1995).

Several differences can also be found among the ECA countries that have warehouse receipt legislation in place. For example, Poland and Serbia have developed broader legislation encompassing various commodities and different commercial practices, while other countries such as Hungary, Slovakia, Bulgaria and Kazakhstan have introduced specialized warehouse receipt legislation for grain warehouse receipts. Specific warehouse receipt legislation might be preferable in instilling trust in the system, as it is more able to take into account specific storage and marketing issues of the crops concerned. Ideally, a warehouse receipt system should allow easy out-of-court procedures for the resolution of disputes, but market realities are often quite different from the best-case scenario.

<sup>8</sup> Civil law countries derive their legal traditions from the post-revolutionary system in France and include most of Latin America and French-speaking Africa. Common law countries follow the United Kingdom's legal traditions and include English-speaking countries. The legal basis of the warehouse receipts used in international loans is generally determined in the contract. For example, a loan agreement between a German bank and an Indonesian buyer can have clauses that say the agreement will be ruled by English (United Kingdom) law, with commercial arbitration to take place in London, so English law prevails, even though neither Germany nor Indonesia have a common law system. Nevertheless, in case of problems with the loan, enforcement of the bank's rights or an eventual arbitration committee decision relies on local (in this case, Indonesian) law, and a local law opinion is always needed to confirm whether the agreement is sound in these aspects.

Despite the differences among countries and legal traditions, an enabling legal framework should clearly define the following issues and related rules and procedures:

- legal status of the warehouse receipt as a document of title or pledge;
- rights and obligations of the depositor and the warehouse operator;
- perfection of security interests (registration of the warehouse receipt or pledge);
- protection of the warehouse receipt against fraud, and financial performance guarantees;
- priority of the claims of the holder of the warehouse receipt in case of borrower default or bankruptcy;
- clear procedures in case of bankruptcy of the warehouse operator and for the administration of financial performance guarantees.

**Legal status of warehouse receipt:** The first major issue relates to the legal status of a warehouse receipt and how it can be used to create a security interest in the commodity. Warehouse receipts themselves may not convey ownership over a commodity. In the United States, a warehouse receipt provides evidence of storage of a commodity in a warehouse, and under the prevailing legislation (United States Warehouse Receipts Act of 2000) it is considered a document of title. In contrast, a warehouse receipt in the United Kingdom is a non-negotiable instrument simply notifying that at a certain point in time a certain amount and quality of a commodity were delivered into a warehouse.

There are two ways for a lender to obtain a security interest in stored commodities through warehouse receipts:

1. The warehouse receipts can be used to provide the lender with a pledge on the commodity.
2. The warehouse receipts can be used to shift ownership (title) of the commodity to the lender.

The use of warehouse receipts as a pledge instrument is the more common. In this case, the warehouse receipt conveys only a security interest in the commodity should the borrower default while ownership remains with the depositor. This entails additional risks for the bank, as a transfer of the warehouse receipt does not automatically imply a transfer of

possession. Even if the warehouse receipt has been transferred from the depositor to the lender, the warehouse operator may still release the commodity to the original depositor if not given proper notice of the transaction. This legal ambiguity is accommodated through tripartite arrangements among the lender, the borrower and a warehouse, whereby the warehouse operator explicitly acknowledges that it is holding the commodities on the lender's behalf, which is equivalent to possession. This tripartite arrangement, called attornment or constructive possession, makes a warehouse receipt functionally equivalent to a title document and allows quick access to the commodity if the borrower defaults (UNCTAD, 1996).

Warehouse receipts in such tripartite arrangements are generally marked as non-negotiable, which limits the rights of the receipt holder. If the original depositor transfers the warehouse receipt to another party, this other party does not automatically become the new owner. Instead, the original owner must also notify the warehouse operator that it has transferred the receipt. The warehouse receipt is therefore an expression of a bilateral contractual relationship. The specifics of the warehouse receipt and the regulations under which it is ruled determine whether the holder is allowed to transfer, sell or pledge it.

If the warehouse receipt is to be used to transfer ownership, it has to be negotiable. In this case, the title to the goods themselves can be transferred from one person to another via the passing of the related warehouse receipt. In English law, a negotiable warehouse receipt is commonly called a warrant.

Currently, in most countries warehouse receipts are non-negotiable. Negotiable receipts allow easier trade and refinancing, but many warehousing companies prefer to issue only non-negotiable receipts, as this protects them against some types of fraud (e.g., a company trying to take delivery with fake warehouse receipts). In electronic warehouse receipt finance systems, this disadvantage of negotiable receipts is eliminated, so negotiable receipts are likely to grow in importance as warehouse receipt systems are modernized.

Ownership-based warehouse receipt finance is often structured as repurchase agreements (repos). While warehouse receipt financing consists of a loan secured by the commodity, a repo transaction is based on sale of a commodity (commonly represented by warehouse receipts) for cash, and its repurchase at a later stage. Strictly speaking, the lender does not provide a loan, but purchases commodities from a client against cash. At the same time, the lender signs a repurchase agreement specifying the date and amount at which the borrower can repurchase the commodity. The repo rate is based on the difference between the purchase and the repurchase prices and is determined by the interest rate. There are different types of repos, for example, with fixed or open maturities.<sup>9</sup>

Ownership of the commodity puts the financial institution in a stronger position in case of default or bankruptcy, because it eliminates any requirement to justify the financial institution's right to repossession should the beneficiaries – the ultimate buyers for trading or processing purposes – fail to meet their financial obligations at maturity. In commodity repo transactions, the financial institution has actual title, but usually not possession, of the commodities financed.

In the absence of licensed and supervised public warehouses, the financial institution is exposed to the risks related to the warehouse operation, such as improper handling, damage or loss of the collateral, or fraud. These operating risks are normally mitigated through a highly selective choice of warehouses and close monitoring by specialist collateral managers. The financial institution still enjoys at least the same level of protection as it would under a government-regulated and monitored system (EBRD, 2004). However, there are a number of additional risks under the repo structure, mainly related to legal risk<sup>10</sup> and the fact that it does not normally allow recourse to the borrower's assets (unlike a loan arrangement) so the safekeeping of

<sup>9</sup> In fixed assets financing, the equivalent to a repo is a leaseback arrangement.

<sup>10</sup> In particular, the risk that in case of bankruptcy, a court of law decides that the repo was not a true sale, but rather a hidden loan. This may happen (and has happened, for example, in the United States) if the prices at which the commodities were transferred (sold to the bank, then resold by the bank to the client) are far from market prices (i.e., it was not a "true sale"), or if the client had kept effective control over the commodities (e.g., for transport or processing). The court can then decide to reclassify the repo transaction as a loan, and any claims the bank has are part of the overall bankruptcy proceedings and no longer secured.

the commodities becomes even more important.

**Protection against third-party interests:** The legal validity and practical value of warehouse receipts as collateral require that the priority interests of a lender holding warehouse receipts against claims from third parties are effectively protected. This implies clear legal provisions regarding the priority of claims in case of borrower default and bankruptcy of the borrower or the warehouse operator, and clear and simple procedures for the perfection and enforcement of security interests. This requires that the legislation concerning warehouse receipts is harmonized with the commercial code and other laws dealing with bankruptcy procedures, to avoid ambiguities.<sup>11</sup> However, experience shows that this can be challenging, as establishment of the priority status of warehouse receipts often meets strong resistance from certain government institutions (particularly tax authorities and the departments dealing with labour affairs, which feel that taxes and salaries should have priority over other creditors in case of insolvency).

The lender also needs to be able to perfect its security interest in the commodity by giving notice to the public. This is most commonly done through the registration of security interests in warehouse receipts in a centralized public registry. Properly registered warehouse receipts provide the lender with a priority claim in case of default by the borrower, even if the latter had wrongfully sold the collateral to a third party.

An alternative way for a lender to protect itself is through physical possession, such as through storage in warehouses owned by the lending bank; this approach is still used for the pawning of jewellery and other items. Some banks, especially in certain Latin American countries and Turkey, still run their own warehouses through subsidiary companies, because in these countries, particularly Turkey, title does not give a priority claim over the other (even minor) creditors of a warehouse.

**Transferability of warehouse receipts:** To serve as collateral, the warehouse receipt and the attached right to withdraw the commodity from the warehouse have to be transferred from the borrower to the lender. A related but broader issue refers to the general tradability of

warehouse receipts among different parties and on secondary markets.

As already discussed, warehouse receipts can be negotiable or non-negotiable (also referred to as tradable or non-tradable). A non-tradable warehouse receipt is issued to a specific party (a person or an institution), and only this party can authorize the release of goods from the warehouse or transfer the goods to another party, for example a bank. The non-tradable warehouse receipt itself does not convey title and cannot be used as possessory collateral, unless transfer to the bank has been explicitly acknowledged by the warehouse company.

A tradable warehouse receipt is issued to a named person or a bearer and serves as possessory collateral. When the bearer of a properly endorsed receipt surrenders it to a warehouse company, the bearer receives the stored goods. Tradable warehouse receipts facilitate the transfer of ownership of stored commodities. They can also be traded on secondary markets, such as commodity exchanges, thereby attracting a larger pool of capital into commodity financing, beyond bank lending. If stored commodities have been properly graded, delivery of a tradable warehouse receipt may replace normal physical delivery. As such, tradable warehouse receipts form the basis for forward delivery of commodities and can be developed into futures contracts.

However, trade with warehouse receipts will only gain momentum if potential buyers have developed sufficient trust in the system. This underlines the importance of a proper licensing and inspection system for the warehouse operators permitted to issue tradable warehouse receipts. A tracking system also has to be in place to protect against fraud and to ensure that only one party has title to the collateral at any given moment (the easiest way of doing this is through an electronic registry). Trading of warehouse receipts is facilitated by a uniform format and standardized secure documentation requirements, which can be developed by either the warehousing industry or a government regulatory agency. Financial performance guarantees must be in place, and the receipts should be protected in case of bankruptcy of the warehouse (UNCTAD, 1995).

<sup>11</sup> For example, in some ECA countries, government receivables are first priority in case of bankruptcy.

All donor-supported warehouse receipt programmes in ECA are based on negotiable warehouse receipts (private sector initiatives normally involve non-negotiable receipts). So far, however, in ECA countries there has been only very limited trading of warehouse receipts on secondary markets. The only records of such use are in Hungary, where there is limited experience of trading receipts on the commodity department of the Budapest Stock Exchange, and Slovakia, where US\$6 million of warehouse receipts were traded through the Bratislava Commodity Exchange in 2001. This is partly owing to the immaturity of commodity exchanges in the region, where market participants are not actively involved in commodity exchange trade, and partly because the taxation systems in some countries, such as Bulgaria, require the application of value-added tax (VAT) to each transaction with a warehouse receipt (in Russia, this has been solved, and there are no longer any taxes on the turnover of warehouse receipts). Enhanced utilization of warehouse receipts on secondary markets in the future depends on further improvements to the legal framework and growing interest from market participants and commodity exchanges.

### 1.3.2 Licensing and oversight

Field warehousing operations require relatively little oversight. The bank can choose from several national and international collateral management and credit support companies. A bank is likely to have an accreditation process for evaluating the operational standards and credit standing of potential partners, and may also have a system of allocating set credit ceilings to certain collateral managers (e.g., the bank's total exposure to a collateral manager cannot exceed US\$X million). This is a strong "buyer beware" mechanism, and other than normal corporate oversight, there is little that governments can do to strengthen these companies. As long as collateral managers work only within tripartite agreements to secure collateral for financiers, there is also little justification for specific government regulation. However, the situation changes when a collateral manager starts to issue warehouse receipts for trading in the country's financial markets. The government then has a duty to protect investors, and the issuers of such traded warehouse receipts should be governed in a similar way to – for example – the companies that issue commercial papers.

The situation with public warehouses is different. With field warehousing, a financier has choice, but public warehouses are normally placed along the supply chain, and there are often few alternatives. It is therefore imperative for banks to understand how reliable and financially sound public warehouse operators are. A well-functioning mechanism for control and oversight of public warehouses helps to ensure that the warehouse receipts they issue are acceptable collateral for the financial community. Hence, public warehouses need to be approved (on technical and financial criteria) and then their performance needs to be monitored. Experience shows that the existence of a reliable regulatory agency increases confidence in the financial institutions. Such an agency helps to create an enabling environment for the country-wide use of warehouse receipt finance in a uniform and transparent way, beyond field warehousing arrangements. It also reduces transaction costs for the users of warehouse receipts. It protects the interests of all parties involved, thereby attracting a larger number of participants.

Regulatory agencies have the following core functions:

- organizing and implementing the licensing process;
- maintaining public registers of public warehouses;
- conducting initial, periodic and special examinations of the financial, operational and technical conditions of public warehouses, and of the quality and quantity of the stored goods;
- if the country maintains a system of paper warehouse receipts (which is not advisable), collecting orders for the printing of warehouse receipts;
- arbitration in case of conflict among warehouse operators, depositors and financial institutions.

Government agencies must ensure that the licensing system for public warehouses is clear and transparent, and that banks know which factors have and which have not been considered in the licensing process. The rights and obligations of public warehouses must be clear. For example, companies applying for a licence as a public warehouse must be obliged to disclose information about their financial



performance to competent authorities.<sup>12</sup>

The choice of the best body for the regulatory functions depends on the country situation: Many countries with a warehouse receipt system have established government regulatory agencies in charge of licensing and inspection of public warehouses. Experiences in Bulgaria and Kazakhstan have demonstrated that a well-structured and efficient government regulatory agency can make significant contributions to building and maintaining trust in the system. Box 4 describes some of the issues that would determine the organization of a licensing and inspection agency in Russia.

These agencies also play an important role as sources of reliable information for banks, as they conduct due diligence on the participating warehouses. However, government agencies are not always the best choice, as their staff can be subject to political pressure to approve certain warehouses even if they do not meet the formal criteria. On the other hand, a self-regulatory body of warehousing operators could put the bar too low, or perhaps do the opposite and put the bar too high to keep out competitors. If there is an independent entity with a strong interest in the reliability of the warehouse receipt system, such as a commodity exchange, then the exchange's licensing process can help sort out the sound from the less sound warehouses - but will this result in a sufficiently comprehensive warehouse approval and monitoring process? An autonomous, professional body would be the best, but establishing it could prove difficult.

Governments should also ensure that they do not confuse public warehouses with collateral managers; the latter normally have their own performance risk guarantees in place, which apply in any location where they are active, and government regulators should not try to impose financial guarantee rules similar to those applied to individual public warehouses. Instead, collateral managers should be regulated under the rules that determine which entities are allowed to issue warehouse receipts (the financial surface and insurance coverage of the collateral manager would then be the main criteria). Governments also need to establish clear rules

on the specific nature of the warehouse receipts that can be issued in the country. Preferably, they should also ensure that there is a central electronic registry of all warehouse receipts.

### 1.3.3 Public warehouses

Although warehouse receipt finance can be arranged through field warehousing and collateral managers, the existence of a network of reliable public warehouses in rural areas has substantial benefits. Financing against the security of field warehousing is a bespoke transaction, with relatively high banking charges (and little possibility for a commodity firm to make banks compete with each other). By definition, public warehouses can be used by any clients (including those without their own storage facilities), thereby broadening smaller companies' access to storage and warehouses or financing. If there are public warehouses that are acceptable to banks, a wide range of commodity owners can simply deposit their goods and obtain ready access to finance. A well-developed public warehousing system can also have important dynamic benefits in terms of commodity and rural financial market development.

It is not easy to build a reliable public warehousing system. The history of public grain warehousing in the United States – now a success story – provides some sobering insights. In the United States, public warehouses became important in the grain sector in the nineteenth century, as the country's rail network developed. However, a few industry groups rapidly built up dominant market shares, with hundreds of warehouses/silos in key locations eliminating their smaller rivals. Only collective power among farmers managed to break the resultant storage monopoly. In the 1880s and 1890s, cooperatives around the country started to invest in their own elevators. Although they met with stiff resistance from the large grain merchants, the public's anti-trusts mood of the time gave the cooperatives the power to prevail (Barron, 1997). Are the conditions in ECA countries similarly dynamic and conducive to competition? If not, can governments do anything to create a more competitive environment (e.g., by following India, where the government subsidized cooperatives' construction of warehouses)? A public warehouse is open to everybody and is professionally managed by an independent

<sup>12</sup> United States legislation and regulations at the federal and state levels provide a good model that has been successfully used as a basis for developing regulatory and supervisory institutions in several countries, subject to adjustments to accommodate country- and market-specific conditions.

#### Box 4

##### **Certifying elevators: various options, the case of Russia**

In a warehouse receipt finance system, risks are shifted from individual borrowers to elevators. Warehouse receipt finance thus relies on the integrity of elevators. It can be difficult and time-consuming for individual banks to evaluate the risks of individual elevators, and monitor this risk on a continuous basis; in effect, this will really be worthwhile for rather large-scale operations.

Thus, if a warehouse receipt finance system is to work properly, one needs an independent agency responsible for certifying and monitoring the quality of individual warehouses. All banks can then rely on this agency's assessment. This implies, of course, that banks are shifting key responsibilities to this agency, and this agency therefore needs to be trusted by the banks.

In the case of Russia, there are several possibilities with respect to the institutional location of this agency:

- The Law on Russian Grain Inspection already prescribes that every grain elevator has to be licensed. The government agency that does this licensing could, in principle, introduce a "double" system – a basic license, and a "top grade" license, with the latter meeting much stricter criteria which

presumably could be made to match the needs of a futures exchange or of commodity financiers. However, it could be difficult for such a government agency to move much beyond a "rubber-stamping" procedure.

- The Bread Inspection already checks physical facilities. But the feeling in grain trade seems to be that it has no experience in checking financial or managerial competence, and is not well-placed to develop the necessary expertise. Nevertheless, in the Samara Grain Receipts Pilot Project, undertaken in 1999-2001 and funded by the Common Fund for Commodities, the Samara Bread Inspection was selected as the agency responsible for inspecting elevators; it also registered and monitored outstanding warehouse certificates.
- The Federal Agency for Market Intervention selects, out of the many elevators in the country, a small number with which it will work for its procurement programme. Participating elevators need to meet a number of criteria – e.g., have the right technical equipment, and be free of tax liabilities. These criteria could be expanded. However, the Federal Agency has a specific objective – procurement. It is not in the business of elevator evaluation or monitoring.
- The Grain Union has been working on elevator standards – it already published guidelines on technical standards, and is working on

financial standards. It should be able to formulate criteria for certification that provide sufficient comfort for the private sector. It has also been given the authority by the Bread Inspection to set up a voluntary certification scheme. However, it does not currently have the resources to set up and operate a certification unit; nor does it have, for the time being, the authority necessary to check elevator finances.

- Private surveyors are becoming increasingly active; and collateral management companies also exist. In principle, these could develop a certification system – but for the time being, they are not working on evaluating the financials of elevators, nor do they have the required powers to do so.
- A new public or public/private agency, or a private agency empowered by the Government for this specific purpose, could be created to certify elevators.

At the end, a system where the Grain Union, with support from the Ministry of Agriculture, formulates certification criteria, and a new independent agency (with joint oversight by the government and private sector) is in charge of the certification process would seem to provide the largest potential for success. Such a certification body could also be responsible for managing an eventual Indemnity Fund that would secure depositors in case of a default by one of the licensed elevators.

warehouse operator. Most warehouse operators are licensed as limited liability or joint stock companies. Public warehouses are required to maintain high levels of technical and financial performance, which needs to be monitored by a regulatory agency (which can be a self-regulatory structure). These characteristics make public warehouses ideal counterparts for commodity exchanges, which need to offer their users safe and efficient delivery mechanisms for the commodities they trade.

To ensure the integrity and solvency of public warehouses, licensing requirements usually include:

- minimum capital requirements;
- minimum storage capacity;
- performance guarantees (backed by bonds

and/or insurances), or participation in an indemnity fund;

- periodic reporting requirements on business operations to the regulatory agency;
- publication of storage fees;
- insurance against fire, flood and earthquake;
- the public warehouse should not provide loans or loan guarantees.

In addition, a public warehouse has to meet several technical standards and must prove its financial stability. For example, the warehouse should have a laboratory, or access to one, for grading the commodity. Depositors and warehouse operators should also have access to an independent laboratory for dispute resolution.



To accept the warehouse receipts issued by public warehouses, banks need to trust the companies that have issued them and be satisfied with the technical and financial conditions for storage of the commodity used as collateral. Trust is built up gradually and, initially, banks may employ conservative lending limits, use their own specialists for informal inspections, and rely on independent collateral managers to give credit support.

### 1.3.4 Financial performance guarantees: indemnity funds, bonds and insurance

In ECA countries, the ownership of warehouses, elevators and silos is shared by large State-owned firms (e.g., the entities responsible for strategic reserves); local groups, most of which are small; and, increasingly since the late 1990s, international trading companies. Not all of these warehouse owners are interested in operating their facilities as public warehouses; they use them for only their own operations. Those that are interested in offering public warehousing facilities tend not to be part of large integrated groups, so may not offer the financial standing that financiers desire.

To accept warehouse receipts from such warehouses, financiers therefore want an upgrading of the operator's credit risks. There are two major approaches to this, which are not mutually exclusive: use insurance, or create an indemnity fund.

Insurance is critical for all warehouse receipt finance. A warehouse operator must insure not only its premises and the goods therein, but also the risks related to its staff. Each entity issuing warehouse receipts needs to have professional indemnity insurance, protecting the depositor and bank against such risks as theft, fraud or negligence by the warehouse operator's staff. For international collateral managers, such insurance is typically in the range of US\$10 million per person, with a sub-limit of US\$6 million for fraud. In addition, the operator can offer cargo insurance, covering the main risks related to storage of the goods;<sup>13</sup> for an international collateral manager, this cover is normally limited to US\$20 million per warehouse/silo, but can be

increased when necessary. Banks need to verify that the limits of the insurance cover provided by the warehouse operator give them an adequate level of coverage; when the insurance company is a local firm, a bank also needs to verify that the insurance can be assigned to it, and that eventual payments can be transferred abroad.

If warehouse receipts are not issued by reputed, international warehousing companies or collateral managers, the credit quality of the local warehouse operator can be upgraded by using insurance bonds or letters of guarantee,<sup>14</sup> or by developing indemnity funds. The choice of the most appropriate method should be based on analysis of the local market infrastructure, evaluation of the risk, and the availability of financial and insurance services and products. In the United States, types of financial performance guarantee vary: at the federal level, insurance bonds are widely used for performance guarantees; while at the state level there are 15 indemnity funds.

Raising the start-up capital for an indemnity fund is often a challenge – in some countries, governments provide the funds. The indemnity fund has to be carefully designed so that it does not result in good warehouse operators paying for the mismanagement and fraud of competitors.<sup>15</sup> However, although creating a sound indemnity fund can be difficult, there may be no easier alternative, for example because there are no institutions in the country able to issue performance bonds at an acceptable cost, or because such bonds are simply not covered under national laws and regulations.

14 The purpose of a bond or financial guarantee is to compensate a third party (e.g., a warehouse's depositors) for any losses suffered as a result of the insured's (the warehouse operator's) failure to perform certain tasks, such as the safekeeping of the deposited goods. As well as bonds to guarantee its performance towards a depositor, the operator of a bonded warehouse may also need to provide bonds to custom authorities, to compensate customs if duties have not been paid on goods that were allowed to leave the warehouse.

15 In the United States, the National Grain and Feed Association (NGFA), in a presentation to the National Association of State Departments of Agriculture Warehouse Meeting on 13 November 2002, stated that "The NGFA has never been enamoured with the concept of indemnity funds... Our concern is that – either in appearance or reality – indemnity funds can encourage a mindset in the producer that he or she does not need to apply prudent business practices when choosing which warehouses to do business with or what contracting practices in which to engage." NGFA thus advocates that indemnity funds should leave a significant portion of the risk with the depositors – they should compensate less than the 80 to 90 percent of losses (the percentage that is currently common in the United States).

13 Such insurance covers, for example, spontaneous combustion, condensation and mould risks, frost, losses linked to mysterious disappearance of goods (i.e., when there is no sign of break-in), contamination, and substitution of goods.

Based on its experience, EBRD advocates a pragmatic approach: “it may be preferable to have a club approach whereby the better or financially stronger warehouses initially join forces. In countries where the implementation of an indemnity fund raises too many hurdles, it may be more practical and no more risky for the Bank to use collateral managers in the selection and monitoring of warehouses, irrespective of their certification by a government agency” (EBRD, 2004). In Kazakhstan, the 15 largest grain elevators have created an indemnity fund. In Bulgaria, the system is guaranteed by a combination of bank letters of guarantee and an indemnity fund.<sup>16</sup>

However, whatever the tool selected, countries need to deal with the financial risks of warehouse operators in one way or the other. In Ukraine, the warehouse receipt system started operating without performance guarantees. Although substantial financial resources were lent against warehouse receipts during the first two years, the integrity of the system was challenged by several cases of default that were not covered by performance guarantees. Now Ukraine is making serious efforts to create an indemnity fund.

### 1.3.5 The warehouse receipt and warehouse receipt registry

Warehouse receipts are special security papers (which can be in an electronic format) issued by a warehouse operator (a warehousing company or a collateral manager) that prove that the commodity has been deposited, the ownership of the commodity, and the warehouse’s obligation to deliver the commodity to the legitimate holder of the receipt. The basic legal features of warehouse receipts have already been discussed; this section describes some important physical and technical features.

Warehouse receipts should provide the following information:

- location and amount of the commodity in storage;
- year, harvest and quality of the commodity;
- information about insurance;
- information about endorsements of the receipt;
- any other important information related to

the contractual agreement between the depositor and the warehouse operator.

In many ECA countries, and as global industry practice, warehouse receipts also indicate acceptable amounts of losses and shrinkages for grain (this is partly to cover for the effects of moisture losses, and partly for the losses that result from the physical handling of grain). In some markets, there is a strong trend towards introducing electronic warehouse receipts.

There are different types of physical warehouse receipt, consisting of either one or two parts. In the United States, the warehouse receipt is a single document. Two-part receipts, which originate from the Napoleonic Code, are more common in continental Europe and Latin America, and have also been adopted elsewhere. The idea behind two-part receipts is to allow trading on both commodity and stock exchanges: one of the parts is related to the ownership of the commodity, and the other to the pledge.

The choice of the most appropriate type of warehouse receipt should be based on an evaluation of the commodity market situation in each country. Experiences in some developing markets suggest that starting a sophisticated system from scratch may not yield the expected results, at least not in the short term. A gradual approach, initially targeting more simple transactions, may be preferable. More advanced applications of warehouse receipts can be introduced as the system expands and matures. A single-part receipt is a more convenient tool for commercial transactions and the collateralization of credit. Creating a secondary market for warehouse receipts based on two-part receipts is an ambitious development goal to which countries that have considerable international support have subscribed. Success has been limited so far. Countries such as Bulgaria and Ukraine have introduced two-part warehouse receipts, but the dual functions are not being used in practice owing to the immaturity of the organized commodity markets – the two parts tend to be held and traded together. Banks often require the borrower to deposit both parts of the receipt, to avoid any potential risk of misuse of the commodity part.

When it comes in a physical paper form, the warehouse receipt should be protected against fraud. The system should also develop a reliable

<sup>16</sup> In Bulgaria, costs for financial performance guarantees are US\$10 per ton of licensed capacity, as a form of bank guarantee, and US\$0.15 per month per ton of actual commodity stored in a public warehouse, as a contribution to the indemnity fund.

mechanism for keeping track of warehouse receipts both at the licensed warehouse level and for the overall system. Some recent efforts focus on creating a central electronic register of warehouse receipts. One positive example is Ukraine's Central Electronic Warehouse Receipt Register, which uses software to keep track of the receipts (which are still issued in paper form) and to perform various regulatory and control functions.

The continued use of paper warehouse receipts is already outdated, however. As printed physical warehouse receipts require all the security features of printed banknotes, they can become expensive. Furthermore, the process of "dematerializing" warehouse receipts (i.e., incorporating them into an electronic depository) and then "rematerialize" them later (so that a buyer can take physical delivery of the commodities by handing over the physical warehouse receipt) can be cumbersome and can cause buyers unnecessary logistics costs. As the experience of South Africa's Electronic Silo Certificates system shows, it is possible to keep the whole process, from issuance to trade and pledging, in an electronic format. Under this system, certified elevators/warehouses input information on commodity deposits into an interface provided by the system, and the information is recorded in an electronic database. The database serves as a basis for exchange delivery systems, as well as for warehouse receipt finance (as an interface with banks), trading of dematerialized warehouse receipts (as an interface with traders and investors) and information supply (to clients, government agencies, etc.). Most of the grains stored in South Africa pass through the system, at a fraction of the cost for paper warehouse receipt systems.

In the United States and Western Europe, central registers for warehouse receipts are not common. Commodity exchanges generally have their own registers to ensure an efficient delivery mechanism; in the United States, there is one such register for cotton warehouse receipts. Nevertheless, it would be advisable for ECA countries to introduce registers. Doing so is not costly, and registers introduce a significant level of protection against risks of fraud, by preventing the double use of warehouse receipts to obtain finance from two different banks, the transfer of previously pledged receipts, or attempts to take delivery with a fake receipt when the real receipt has already been

sold or pledged. Although commodity exchanges often take the lead in building registers for their approved delivery warehouses, it is better for a warehouse receipt register to be managed by an industry association (as long as firewalls can be built to prevent leakage of confidential commercial information), a professional group (e.g., of notaries, initially financed by key stakeholders such as banks), or a government department.

### 1.3.6 Financial institutions

Banks' understanding of warehouse receipt finance and their willingness to engage in it are critical conditions for the success of a system. Banks engaged in warehouse receipt finance often develop in-house commodity expertise that allows them to follow market trends and value the loans properly. If all the elements of a warehouse receipt system described are in place and commodity markets are functioning well, warehouse receipts constitute high-quality collateral, and banks face limited risks. However, financial institutions' confidence in extending finance against warehouse receipts has to be built gradually. Initially, banks may only be willing to lend up to 55 to 65 percent of the collateral value. As confidence in the system grows, this level may increase to 80 percent or even higher, as in the many cases where it is possible to manage the commodity price risk. At the same time, interest rates will gradually go down.

For example, in the first year of operation of Bulgaria's warehouse receipt system, only two commercial banks provided credit against receipts. Eight years later, more than ten banks were competing on the market. Interest rates for warehouse receipt lending were initially 16 percent, and gradually declined to 7 to 8 percent as the warehouse receipt system matured and competition for new clients increased.

Once banks have developed expertise in warehouse receipt lending and established efficient internal procedures, the mechanism becomes relatively simple with comparatively low administrative costs. When banks have gained experience of short-term lending against receipts, they tend to move towards more complex commodity trade financing for large warehouse operators and domestic and international traders. The advantage for exporters is that they obtain access to substantial revolving capital without any other assets used as collateral.

With a well-functioning warehouse receipt system in place, central banks should regard loans collateralized with warehouse receipts as first class collateral, and the loss provisioning requirements of commercial banks should be adjusted accordingly. This is the case in Western countries that are applying Basel II provisioning rules. However, except in Ukraine, it has not yet been achieved in ECA countries, not even in those with advanced warehouse receipt systems. The major advantage to banks has therefore been the ability to expand their portfolios in the agriculture sector.

Banks are not the only possible financiers of warehouse receipts. Globally, there have been several securitizations of agricultural commodities in which investors (such as pension funds) provide finance against the security of commodity stocks. The standard mechanism is for the prospective borrower to transfer the commodities into a special purpose vehicle (SPV), which purchases the commodity and sells it on to the investors. This structure has been used in large grain financings in South Africa and the United States. The major downsides of these transactions are their relatively high transaction costs and the time required to set them up on a case-by-case basis. Transaction costs are related to the inspection and supervision of warehouses and/or the involvement of collateral managers and lawyers. The resulting high costs for customers mean that only larger companies can use these instruments.

#### 1.4 Additional preconditions for warehouse receipt financing

As well as the legal and institutional preconditions already discussed, basic economic conditions and conducive government policies are also important for warehouse receipt finance. This section discusses the main commodity and market characteristics required to create sufficient incentives for market participants to use warehouse receipt finance.

The quality of a commodity as collateral is determined by:

- its storability;
- the existence of quality certification and grades;
- market transparency;
- price volatility;
- liquidation costs;

- costs of finance;
- government policies.

**Storability of the commodity:** Only commodities that can be stored with minimal quality losses and shrinkage over several months can be used as collateral. In ECA countries, warehouse receipt finance has mainly been used for grains and sunflower seeds, and to a lesser extent for cotton exports and sugar imports. However, in principle, warehouse receipt finance could also be used for many other commodities, and for inputs such as fertilizers, seeds, equipment or spare parts, as long as their value can be preserved (such a varied use of warehouse receipt finance is common in Africa, for example).

**Quality certification and grades:** A well-established quality certification and grading system is an important basis for depositors and warehouses to determine the quality of the commodity at entrance and for the bank to evaluate the collateral value. A reliable grading system can provide a reference base for any disputes related to quality. If possible, local grades and standards should reflect those used in international markets so that the latter can be used as price discovery mechanisms. Quality standards and grades need to be sufficiently specific to give a clear description of the quality of the stored goods without the need for physical inspection. This is especially important for tradable warehouse receipts, to ensure that the quality withdrawn equals the quality deposited.

In several ECA countries where large numbers of very small farms are involved in commodity production, grading at the primary production level is limited. The lack of established grades and standards makes small operators' access to warehouse receipt finance difficult. In particular, it makes bulk storage impossible. For commodities such as cocoa or coffee, it can be important to trade identity-preserved goods (e.g., the bag of coffee delivered by a farmer is marked, and buyers are willing to pay a premium for reputable suppliers). However, for many other commodities, including grains and pulses, bulk storage is preferred, in which the commodities delivered by each farmer are added, in bulk, to the relevant silo, and the farmer receives a warehouse receipt based on the quality of his/her products relative to what is common in the market – with a premium or discount.

**Price volatility:** Warehouse receipt finance works best for commodities with predictable seasonal price fluctuations. Price increases after harvest periods allow farmers to cover the costs of storage and interest and lead to appreciation of the crop's collateral value. Under such conditions, banks are more comfortable financing larger shares of the value of commodities assessed at entry. High and unpredictable short-term price volatility adds risk to the system, as the price may be low at the end of the loan term, affecting both the borrowers' repayment capacity and the collateral value. When prices are highly volatile, banks may only be willing to finance relatively low shares of the average crop value.

**Market information:** An efficient and reliable market information system is needed to monitor price movements and trends and allow banks and depositors to make informed decisions. Market information and price forecasting allow these stakeholders to select the best periods for deposit and sale and to structure loans accordingly. A commodity exchange with sufficient volumes of spot, forward and futures contracts is an ideal price information and forecasting mechanism. If no liquid commodity exchange for the commodity exists, other independent and transparent price information systems should be in place.

Market information is also important for banks determining the value of the collateral. Where there is no reliable spot or futures market for price discovery, financial institutions should find alternative ways of acquiring such information. One way is to establish a price discovery network that includes major domestic buyers. Buyers quote daily purchasing prices to banks, which use these prices to determine the commodity value for collateral.

Adequate market information requires the existence of an efficient and reliable grading and quality certification system to minimize discrepancies with the actual values of stored commodities.

**Liquidation costs:** The costs of liquidating collateral depend on the speed and ease with which commodities can be sold in case of default. Liquidation costs are influenced by the location of the warehouse, the nature of the commodities, the liquidity of the market, and other factors. High liquidation costs reduce the amounts banks are willing to lend against the stored commodity.

**Financing costs:** Owing to the additional charges involved, such as storage costs and costs of transport to the warehouse, warehouse receipt financing is only attractive for commodity market participants if it results in relatively low interest rates. Evidence shows that in a well-established system, banks face few risks and competition tends to decrease interest rates to acceptable levels. However, where the warehouse receipt system is still in its infancy, banks often have little understanding of the benefits of warehouse receipt finance in terms of risk reduction, and are thus not keen on reducing interest rates. This is particularly true of banks that have previously faced little or no pressure to develop internal systems for linking target returns on loans to the loans' risks.

**Predictable government policies:** Governments should limit their interventions in commodity markets, as a certain level of price fluctuation is needed for warehouse receipt financing to function effectively and attract participants. In addition, any government interventions should be predictable and follow clear and established rules. Erratic and ad hoc interventions increase uncertainty and undermine both the incentives for depositing commodities and the collateral value.

## Box 5

### **Bulgaria: introducing a market information system complementing the warehouse receipt system**

In Bulgaria, the USAID-funded Grain Industry Development Project (GIDP) successfully introduced a prototype market information system complementing development of

the warehouse receipt system. The implementation agency ACDI VOCA<sup>1</sup> created a weekly grain marketing information service, based on direct information collected from a sample group of traders and grain processors in the country. The information is processed and distributed to a subscription list consisting of banks, licensed public warehouses, producers, and domestic

and international traders. In parallel with this effort, the project supported development of the National Agricultural Information Agency, which provides more sophisticated quarterly grain reviews and situation analyses.

<sup>1</sup> Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance



## 2. Warehouse receipt financing in ECA: Current status and potential

### 2.1 Current status

In the early 1990s, banks in many ECA countries started to experiment with various new forms of finance. These included receivables finance (farmers assign the proceeds of their future crops to a bank, which in return finances the farmers' inputs) and some forms of warehouse receipt finance. In some countries (especially those of the Former Soviet Union), warehouse receipt finance was based on the Soviet era Form 13 warehouse certificate, combined with direct collateral management by the banks or their agents. In other countries, it relied on old rules and regulations dating from the late nineteenth and early twentieth centuries.

In several countries of the ECA region, governments and international agencies were soon making considerable efforts to improve the warehouse receipt system. The only ECA country with an uninterrupted use of warehouse receipt finance since the nineteenth century is Turkey. In the transition countries, the focus has generally been on developing proper legislation and regulations and strengthening the institutional support structure (e.g., creating indemnity funds). Results have been mixed so far. A few countries have introduced all or most of the core legal and regulatory elements of a full-fledged warehouse receipt system. A larger group of countries have not yet finalized warehouse receipt legislation and/or still lack several other fundamental elements of a warehouse receipt system; and an equally important number have not yet started developing warehouse receipt legislation.

Assessment of the current situation regarding implementation progress and the status of warehouse receipt systems in different ECA countries is constrained by lack of access to publicly available statistics, analytical reports and other sources of information.<sup>1</sup> This section of the report therefore draws

mainly on information obtained experts which have been involved in warehouse receipt system development activities in several ECA countries and commodity bankers which have been engaged in warehouse receipt and other forms of collateralized commodity finance in the region.<sup>2</sup> It may not fully reflect the most recent developments in all countries. A more comprehensive and systematic review would be desirable but would require more time and fieldwork, or the organization of a regional workshop involving key industry stakeholders from several countries.

Despite these caveats, this section provides a first overview and classification of warehouse receipt implementation efforts in several ECA countries. The main criteria classified are the existence of a proper legal and regulatory framework, along with the other structural elements of the warehouse receipt system outlined in part 1, and available information on the importance of warehouse receipts in commodity financing. Table 1 provides an overview of the current status of warehouse receipt system development in ECA countries, and the potential impact of a fully functional system.

The rest of this section provides additional information on warehouse receipt systems in the countries listed in Table 1. It also lists the countries that have not yet embarked on introducing legislation and other elements of the warehouse receipt system, and provides a brief assessment of the potential for introducing such a system, or upgrading it in those countries with partial development.

#### 2.1.1 Countries with advanced warehouse receipt systems

This category comprises countries where a proper legal framework and several other elements of a warehouse receipt system have been in place for about ten years and where warehouse receipts issued by public warehouses play a significant role in commodity-based

<sup>1</sup> The only available document covering more recent implementation experiences of warehouse receipt legislation and systems in ECA countries is EBRD's Evaluation of the Commodity Finance Programme (2004).

<sup>2</sup> Staff of international banks.



**Table 1**

Development of key elements of warehouse receipt systems in selected ECA countries

| Country   | Overall level of warehouse receipt development <sup>1</sup> | Existence of       |                           |                        | Future potential |
|---|---|--------------------|---------------------------|------------------------|------------------|
|   |   | proper legislation | licensing and supervision | performance guarantees |                  |
| Countries with a fully developed warehouse receipt system     |   |                    |                           |                        |                  |
| Bulgaria  | High  | Yes                | Yes                       | Yes                    | Good             |
| Kazakhstan  | High  | Yes                | Yes                       | Yes                    | Good             |
| Hungary   | High  | Yes                | Yes                       | No                     | Good             |
| Slovakia  | High  | Yes                | Yes                       | Yes                    | Good             |
| Moldova   | Medium  | Yes                | Yes                       | Yes                    | High             |
| Lithuania   | Medium  | Yes                | Yes                       | Yes                    | Good             |
| Countries with a partially developed warehouse receipt system |   |                    |                           |                        |                  |
| Poland  | Low   | Yes                | No                        | No                     | Limited          |
| Russian Federation  | Low   | Not final          | No                        | No                     | High             |
| Romania   | Low   | Yes                | No                        | No                     | Limited          |
| Ukraine   | Medium  | Yes                | Yes                       | No                     | High             |
| Turkey  | Medium  | Yes                | Yes                       | No                     | High             |
| Croatia   | Low   | Draft              | No                        | No                     | Medium           |
| Serbia  | Low   | Draft              | No                        | No                     | High             |

<sup>1</sup> Authors' assessment

financing. These countries have been able to build initial consensus among key stakeholders, institutionalize all the important elements of a warehouse receipt system, and involve the financial sector in utilization of the system. Consistent donor support has been instrumental. To begin with, EBRD provided most or all of the funds for warehouse receipt finance, but private sector banks have since taken over. These countries have established complete structural mechanisms, which reflect local market specifics, thereby creating conditions for the sustainable use of warehouse receipts.

These countries are:

- Bulgaria;
- Kazakhstan;
- Hungary;
- Slovakia;
- Lithuania;
- Moldova.

In terms of developing warehouse receipt systems, Bulgaria and Kazakhstan are the most advanced countries in the ECA region, and the only ones with functioning indemnity funds

in place. In Kazakhstan, it is estimated that international banks lend more than US\$1 billion a year against warehouse receipts, and local banks even more than that (Bryde, 2008). Hungary also has a well-developed system, although it still lacks a financial performance guarantee mechanism. In all three countries, a significant number of banks participate in warehouse receipt finance, and EBRD's role as the provider of funds for such finance has become marginal. In Lithuania, comprehensive legislation was passed in 2002, and the design for an indemnity fund was completed. More recent information on the system could not be obtained. Slovakia is considered to have one of the best legal frameworks for warehouse receipt finance, but a long period of heavy intervention by the State Fund for Market Regulation (SFMR) crowded out the participation of private financial institutions.

The experience of these countries suggests that warehouse receipt finance continued to play a role during the early years of European Union (EU) accession and facilitated links between financial institutions and the agriculture sector. It is expected that warehouse receipt systems will

continue to play an important role during the next decade of EU membership, until financial market conditions in the newly accepted countries improve further and the agriculture sector gains access to a greater variety of financial tools that service commodity markets.

Key features of the warehouse receipt systems in these countries are briefly discussed in the following paragraphs.

In **Bulgaria** the programme started in 1998, with the complex tasks of drafting proper primary and secondary legislation, starting a government regulatory agency, and creating awareness of the benefits of using the system among grain producers, processors and bankers. The 2000 harvest marked the first year of industry-wide use of the system. Some 22 licensed public warehouses offered grain depositors more than 250 000 tonnes of licensed capacity. Currently the system is in full operation, with 47 licensed public warehouses and more than 500 000 tonnes of licensed capacity. Bulgaria has one of the few operational indemnity funds outside the United States.

For the last eight years, the system has established itself as a major factor in stability of the grain market, and there have been no defaults related to the activities of licensed public warehouses. The financial sector lends an annual 10 to 50 million euro against warehouse receipts, depending on market prices. Some local traders finance their grain trading operations completely on the basis of warehouse receipts and off-take contracts, without any fixed assets required by the banks. The warehouse receipt law of Bulgaria was recently amended to include commodities other than grains that are currently of great marketing interest, such as rapeseed. One of the requirements for warehouses that provide services to the newly established grain intervention agency is that they must be licensed as public. The government incentive of providing storage fees to producers only, and only for milling-quality wheat, proved successful in improving farmers' access to the system. The Bulgarian Ministry of Agriculture's decision of 1999 to provide a three-year interest-free loan of US\$2.5 million for the initial capitalization of an indemnity fund was another important condition that supported the successful expansion of the system.

In **Kazakhstan**, local banks started financing grain traders against warehouse receipts in the early 1990s. Experiences were not ideal – more than once, a bank found that the elevator was empty after it tried to take possession of grain evidenced by warehouse receipts when its borrower had defaulted – but warehouse receipt finance continued, sometimes in cooperation with international banks for export finance transactions. Banks often managed their risks by setting up their own field warehousing operations, and putting their own agents on the elevator premises (such practices continue).

In 2001, a warehouse receipt programme was initiated with support from EBRD and USAID. Primary and secondary warehouse receipt legislation was developed under this project, and was approved in 2002. This legislation gives banks the right to take possession of the goods in cases of borrower default: no court order is needed to get the goods out of the warehouse, and the bank can dispose of the goods as it sees fit. Since this improved legal system was put in place, warehouse receipt finance has increased in volume.

Several banks now provide financing against warehouse receipts, and the country has a functioning indemnity fund under public-private management. EBRD has provided a US\$55 million credit line for local commercial banks. In 2003, total lending against warehouse receipts amounted to US\$20 million. The most active banks are JSC Narodni Bank, JSC Bank Center Credit and JSC Bank TuranAlem. Kazakhstan is considered the second most successful country after Bulgaria; its system contains all necessary elements and has been steadily gaining strength for the last six to seven years. The indemnity fund is a good example of effective organizational structure. After the success of utilizing grain warehouse receipts, the industry is investigating the introduction of a similar mechanism for cotton. However, the Government of Kazakhstan's decision to put a ban on grain exports has raised serious concerns among members of the financial community. As already explained, warehouse receipts function most efficiently in liberal markets without government intervention.

**Hungary** was one of the first countries in Europe to introduce warehouse receipts, in the late nineteenth century. Its 1875 Trade Act, which



regulated public warehousing, was replaced in 1996 by the public warehousing and warehouse receipts law, which covers various commodities including wine, sugar, fertilizer and cigarettes. The Hungarian government's pro-export agrarian policy supported the warehouse receipt system mainly to help finance grain for exports. Storage subsidies along with exports support provided sufficient incentive for grain traders to use and benefit from the system. A large spectrum of banks (more than ten) are now involved in the public warehousing system.

In Hungary, the warehouse receipt system offers storage in customs warehouses (for imports, re-exports, etc.) and in warehouses that are leased by warehouse companies. One of the development specifics in Hungary was a lack of enforceable financial performance guarantees. This obstacle was resolved by increasing the technical and financial requirements for licensed warehouses that are eligible to participate in the system. As a result, only three large warehousing companies with substantial storage capacity were involved in the system. As the market developed, these warehousing companies act as guarantors for smaller companies seeking access to warehouse receipts. As the experience of 2008 shows, however, this system is not fool-proof: several banks and trading companies lost money when private warehouses that had issued warehouse receipts did not have the commodities they had financed in stock.

Warehouse receipt finance in Hungary has been adapted to EU agricultural policies. Several banks now offer farmers public warehouse loans related to intervention purchases: farmers can borrow against products (that are part of EU intervention purchases) stored in public warehouses, until they receive money from the EU.

In **Slovakia**, the law on warehouse receipts was adopted in April 1998. Through the years, the development of a warehouse receipt system has been strongly supported by the government. There are 60 licensed warehouses in the country, and financing against warehouse receipts is an annual US\$55 million. Several banks are engaged in warehouse receipt financing, but the major role is played by the Agricultural Bank, which finances warehouse receipts according to agreements with EBRD and SFMR. In these tripartite agreements, SFMR covers the exchange rate

risk. The warehouse receipts law of Slovakia is considered one of the best from a banking standpoint, because financial institutions were heavily involved in its drafting process. However, government interference through SFMR was preventing the proper functioning of the system. SFMR provided subsidies, subsidized the interest rate of loans provided against warehouse receipts, and guaranteed the purchase of warehouse receipts that were not marketed before maturity at a set price. Some years, the price was set so high that it disrupted the market. More important, SFMR provided cheap loans against warehouse receipts, which made the system uncompetitive for commercial banks. Despite policy-related obstacles, Slovakia is an example of the successful application of warehouse receipts mainly because of the very well structured programme – operational until the early 2000s – between EBRD and the Agricultural Bank, which designed a warehouse receipts-based credit line for the bank's customers. The lack of a well-established national licensing and inspection agency was overcome by increasing the local commercial bank's responsibility to provide due diligence of the warehouses that used EBRD financing, and involving surveying companies hired by the local bank to monitor operations.

In **Lithuania**, in autumn 2001, the Ministry of Agriculture created a working group to develop a warehouse receipt system with EBRD and industry participants. EBRD provided the working group with Slovakia's, Poland's and Kazakhstan's warehouse receipt laws as examples. A warehouse receipt law was drafted during the winter of 2001/2002, and was passed and implemented (including the funding and creation of an indemnity fund) in time for the 2002 harvest. In October 2002, an Indemnity Fund for Licensed Warehouses was set up. The authors did not have access to more recent information on other elements of the system and its functioning.

In **Moldova**, efforts to introduce warehouse receipts spring from EBRD's attempts to expand its lending portfolio, based on successful operations in other ECA countries. Having established a warehouse receipts programme in 2003, its efforts were supplemented by USAID, which in the period 2004-2006 funded a project through which the Agrarian Markets

Development Institute from Ukraine provided technical assistance for development of a draft law specifically for the grain sector, and initial institutional building of the necessary structural components. The primary legislation was approved by the government in August 2005 and provides a good legal basis for implementation of the system. Key institutions such as an Inspection Agency, an Indemnity Fund (2007, with seed funds provided by the government) and an electronic warehouse receipt registry (2006) were also established. Because the grain market in Moldova is very closely related to that in Ukraine, a current development initiative is focusing on integrating the two warehouse receipt systems.

### **2.1.2 Countries with a partially developed warehouse receipt system**

Countries in this group have started to develop their warehouse receipt systems; most have adopted at least primary legislation. As have the countries in the first group, all the countries in this group have received considerable donor support. Nevertheless, for various reasons, initial efforts to create a legal framework and to pilot warehouse receipt finance have not developed into full-scale implementation. In many cases, core elements of a warehouse receipt system, such as a proper institutional framework for licensing and inspection of public warehouses, or financial performance guarantees, are still missing, preventing the use of warehouse receipt finance based on public warehouses (although there is some financing based on field warehouse arrangements, particularly for grain and oilseed exports and various imports).

These countries include:

- Poland;
- the Russian Federation;
- Turkey;
- Ukraine;
- Romania;
- Serbia;
- Croatia.

The main reason for incomplete implementation or partial development of the system is a lack of initial consensus among government institutions, donors and the private sector about the key priorities and essential components of a system. The typical donor approach was very top-heavy, focusing on changes at the central level rather than working with (local) banks bottom-

up to develop pragmatic warehouse receipt finance schemes. Owing to a lack of political commitment and limited interest from organized groups of commodity market participants, core elements were not implemented quickly enough, and the momentum declined.

In some cases, donor assistance was too limited in time and content; donors often tried quickly to replicate models that had worked well elsewhere, without providing sufficiently consistent and timely technical assistance to institutional building. In other cases, such as in Poland, development programmes accomplished all their technical assistance objectives, but did not attract enough support from government institutions and the private sector.

While efforts to improve the legal and regulatory conditions have met with only limited success, banks and commodity companies have found ways around the resulting obstacles, and use warehouse receipts as part of structured supply chain finance. This makes it possible for aspects of the financing structure to compensate for weaknesses in the legal/regulatory structure. Over the last ten years or so, Western banks have provided quite a lot of warehouse receipt finance to international and large local exporters in countries of the Commonwealth of Independent States (CIS). As noted in a 2002 World Bank study (Csáki et al., 2002), "While warehouse receipts as liquid and tradable instruments are not used in Russia, 'quasi warehouse receipts' are widely used to collateralize inventories in a number of different types of transactions. They are commonly used in pre-export transactions for grains and oilseeds, and for pre-import transactions for standard processed commodities (meat products, milk powder, tobacco, vegetable oil, beverages) and to a lesser extent grains."

These "quasi warehouse receipts", which have been common in not only the Russian Federation, but also Ukraine and Kazakhstan, normally involve the issuance of Form 13 warehouse certificates by a local warehouse. An international inspection agency or the collateral management department of the bank then monitors the presence of the goods in the warehouse, and the loading and unloading of scheduled cargoes. However, although monitoring involves regular checks, even if these

are undertaken every day (and weekly checks are more common in CIS countries), they do not constitute “continuous, notorious and exclusive possession of the goods on behalf of the lender”, and the financier therefore remains exposed to considerable risk (there has been quite a lot of fraud, in both exports and imports). Even when monitoring responsibilities are outsourced to an international agency, that agency has no liability if the goods disappear.

Key features of the warehouse receipt systems in this category of countries are briefly discussed in the following paragraphs.

In **Poland**, donor assistance focused closely on legal and regulatory reform. A new warehouse receipt law was developed over many years, and was approved by Parliament in 2000. One of the main implementation problems was the coexistence of two different legislative initiatives in Parliament. These contradicted each other in several areas, and prevented the reaching of proper consensus (Allen, 1999). One of these initiatives lobbied for specific grain warehouse receipts legislation, while the other favoured a general warehouse receipts law for agricultural and non-agricultural commodities. The law eventually passed by Parliament was of a general type. After the law was enacted, the momentum was lost and there was no driving force for implementation – the first warehouse receipts under the law were not issued until 2003. Prior to this, USAID funded a large development programme, which introduced the concept to the Polish grain market. This project covered all elements of a warehouse receipt system, but its duration was too short and it ended before the system could be implemented under real market conditions.

In addition, several interventionist agricultural policies executed by the Agricultural Marketing Agency contributed to reducing the system’s potential efficiency, and there was insufficient political will to remove disruptive market interventions. A high intervention price blocked further development of the system, while high interest rates for loans made borrowing against warehouse receipts unattractive for producers.

In 2000, EBRD tried to revive interest in the market application of grain warehouse receipts and reached an agreement with the United States Embassy for providing assistance in

setting up an indemnity fund. The National Bank of Poland did not support this idea. At the time, the government’s agenda was fully focused on EU accession, and there was not enough support from public institutions to develop the warehouse receipt programme.

This failure to implement warehouse receipt legislation despite considerable technical assistance from donors yielded important lessons about the importance of political support and government commitment for future donor initiatives. Donors should provide only limited initial funding for development of the primary legislation and, once the government has shown commitment to adopting this legislation, further development efforts can be supported. This approach has proved appropriate, and could be considered for future projects.

The **Russia Federation** has a history of warehouse receipts. The concept of warehouse documents appeared in Russia’s Trade Code at the end of the 19th century. Grain Warehouse Receipts were introduced in Tsarist Russia during the reforms of Prime Minister Stolypin in 1906–1911. In 1925, as part of the Soviet Union’s New Economic Policy (1921–1929), grain warehouse receipts were re-introduced by Resolution of the Council of the People’s Commissars and the Central Executive Committee of the USSR. The end of this Policy put the end to usage of these documents as documents of title.

When the liberalization of Russia’s economy started, the concept was again introduced. However, in recent years, in spite of being a large grain producer with great potential for using warehouse receipts and much interest from international traders and financial institutions, it has made little progress in establishing proper warehouse receipt laws and regulations. However, the private sector has been using warehouse receipt finance with its own controls (i.e., field warehousing) encouraged by the vast opportunities on the commodity export and import market.

Regulations introduced in the Russian Federation between 1994 and 1996 differentiated among three types of warehouse receipt:

- warehouse receipts (or Form 13), which give their holders the right to receive certain commodities (but not ownership over the commodities);

- simple warehouse certificates: physical possession of these bearer certificates gives the holder evidence of ownership over the commodities;
- double warehouse certificates, consisting of a pledge certificate and a warehouse certificate.

A major problem with this regulatory regime is that in cases of borrower default, enforcement of the financiers' rights can be difficult, and involves courts and sale by auction, which can be a very slow and unreliable process. In the Russian Federation, this has even occurred with repo-based financing, when banks have made losses primarily because they failed to establish direct control over the actual commodities.

A new comprehensive warehouse receipt law which would solve some of these problems was drafted in 2000 and 2001. This law "On Negotiable and Non-Negotiable Warehouse Receipts" was approved by the Duma (Russia's Lower House of Parliament) in April 2001, and went to the Council of Federation. There, it was vetoed, and then was under discussion in the "conciliation commission" for a few years. A new version was supposed to be re-submitted to the Duma in 2004, but this did not happen, and since, there has been little movement on the regulatory front.

Further efforts to improve the public warehouse receipt system were initiated by a Common Fund for Commodities (CFC)-funded project in Samara region, which piloted all the important components and relationships among market participants. Primary legislation was approved by the lower chamber of the Duma in 2003, but did not achieve final approval after that.

Small donor-funded initiatives have made several attempts to move the process on. In 2005, USAID (which had financed a project to develop field warehousing in cooperation with Cargill in the late 1990s) funded a programme to support Russian decision-makers, including by providing comprehensive technical information on warehouse receipts and organizing a study tour to Hungary for members of the Duma. EBRD also continues to provide support. To date, however, there is no information about any progress made in implementing the system.

In **Romania**, the law on warehouse receipts was approved by Parliament in June 2000. Prior to

this, USAID provided limited technical assistance through various implementers. The successful experience in Bulgaria was demonstrated to Romanian stakeholders, who were also involved in several training and awareness events. In 2003, efforts were made to create secondary legislation, dealing with licensing and regulatory issues, financial performance guarantees and the necessary components of the system. A World Bank-funded project in 2005 focused on implementation of these structural components, but did not result in implementation of the system. The causes of this were insufficient institutional support from the government, lack of involvement of private sector participants, and lack of coordination among various donor activities regarding timing and technical assistance resources. Romania has proven potential for utilizing commodity-based financing and is one of the markets where future efforts in that direction are worth considering.

**Ukraine's** first law on grain warehouse receipts was submitted to Parliament in 1998.<sup>3</sup> After it was incorporated into the umbrella Law on Grain and Grain Markets in Ukraine, it was adopted by Parliament in June 2002. EBRD and USAID provided technical support during this period. This law, inter alia, replaced the Form 13 receipts of the former Soviet Union (which were basically only the warehouse operator's confirmation that it had received a certain quantity of commodities from a depositor) with documents of title. In December 2004, a further law was adopted, on "Certified Warehouses and Ordinary and Double Warehouse Receipts", which covered all agricultural commodities and specified the following possible warehouse documents (Levenets and Grushyn, 2006):

- a grain certificate or warehouse slip, which just confirms that the warehouse has received relevant commodities for storage, but does not confer any specific rights to the depositor;
- an ordinary or double warehouse receipt, depending on the wishes of the depositor.

The law spells out the possibilities and procedures for transferring warehouse receipts, and there is no risk that courts hinder such transfers or deem them invalid (which has been a problem in other countries with more ambiguous laws). However, in other respects, Ukraine's laws and regulations

<sup>3</sup> The authors acknowledge Victor Andrievsky's useful contributions to the section on Ukraine.

may still need to be improved, as there are inconsistencies between the 2004 warehouse receipts law and the older certificates law.

The national Bread Inspection Agency provides certification and inspection oversight. Currently, Ukraine maintains one of the ECA region's two central electronic registers for warehouse receipts (the other one is in Moldova, established by Ukrainian experts), which is relatively sophisticated and managed by the State Registrar. The central registry is connected to the individual registries of each of the approved warehouses in its network. When grain or oilseeds are deposited in one of the approved warehouses, data are entered into the warehouse's own registry system and automatically transferred to the central registry. The process creates an electronic receipt on the basis of which the depositor receives a printed warehouse receipt. When approached by the depositor, e.g. for a loan, banks and others can check the validity of the printed receipt with the Registrar.

At present (June 2009), there are 697 licensed warehouses, with more than 29 million tonnes of storage capacity. The number of warehouse receipts issues has increased steadily since the electronic system started, in 2004, increasing from 65 single and double receipts in 2005 to 4 243 in 2007 and 4 404 in 2008; 5.5 million tons of products were held under these receipts. Nevertheless, there are concerns, borne out by experience in the private sector, about the facilities and reliability of some of the elevators. Large traders have actively invested in the acquisition of elevators, and where they use third party elevators for storage and financing purposes, they have an active inspection and monitoring programme, sometimes even using their own staff to manage these warehouses. The State Registrar's system for certifying the elevators that can issue warehouse receipts does not take fully into account their financial or managerial capacities (by law, it does not have the necessary powers, although it does consider factors such as status of payment of staff salaries); it has also been reported that outside interference in the licensing process has created doubts about the technical standards of approved warehouses.

Financial institutions' initial enthusiasm for capturing the great opportunities in Ukraine's grain market led EBRD in 2004-2005 to commit

US\$250 million for financing against warehouse receipts, and local commercial banks matched this amount. However, the country was unable to establish a sound performance guarantee mechanism during the programme's inception phase. In 2005, two licensed warehouses owned by the State company Bread of Ukraine defaulted in their use of warehouse receipts. The depositors were not covered by an active performance guarantee mechanism, and this severely damaged trust in the system and its overall integrity. Nevertheless, international banks continued aggressive lending against warehouse receipts for large local grain exporting and oilseed crushing companies.

To make the system safer, the donor community continues to support the development of an indemnity fund, but political disturbances in the country in 2005 to 2008 delayed the process. The EBRD-funded development project ended in May 2008, raising questions about local stakeholders' ability to move the performance guarantee concept forward. A draft indemnity fund law has been presented to the Agricultural Committee of Parliament.

In **Turkey**, banks have traditionally been large users of warehouse receipt finance. For many decades, the country's important tobacco exports have been financed through warehouse receipt finance, and many Turkish banks have set up their own warehousing subsidiaries to store the goods that they are financing. Turkish banks are also active in providing warehouse receipt finance to other ECA countries, particularly those around the Black Sea and surroundings. Exporters of commodities such as hazelnuts have also benefited from warehouse receipt finance provided by international banks.

Nevertheless, for the large domestic grain market, which was heavily regulated until the late 1990s, warehouse receipt finance was rare. To support policy liberalization, development of a warehouse receipt system in Turkey was made part of the World Bank-funded Agricultural Reform Implementation Project. The objective of this project was to help implement the government's agricultural reform programme, which aimed at dramatically reducing artificial incentives and government subsidies, and substituting these with a support system to provide agricultural producers and agro-industries



with incentives for increasing productivity in response to real comparative advantage. The project also included measures for mitigating the potential short-term adverse impacts of subsidy removal, and facilitating the transition to efficient production patterns. In the late 1990s, the grain market in Turkey was heavily influenced by government interventions through the State agency TMO. These were leading to artificially high domestic prices, disturbing the country's market infrastructure.

By introducing warehouse receipts into traditionally government-dominated sectors, the government sought to provide alternative support to market participants and to move away from heavy price support that requires enormous financing from the State budget. Turkey developed proper licensing and inspection procedures, and built up institutional capacity in this area. A licensed warehouses law was adopted in February 2002.

A distinctive feature of the programme in Turkey is the special attention it paid to the spot commodity exchanges. These organized markets (most of which already owned a warehousing infrastructure) received financial and technical support in improving their capacity and using warehouse receipts in their daily transactions. The large exchanges also invested in building more storage facilities with the potential for utilization in the warehouse receipt system. However, although good legislation is in place and licensing and inspection agencies function well, the warehouse receipt finance system is not yet fully operational. There is need for a performance guarantees mechanism and further political support in nationwide implementation.

In **Croatia**, efforts to promote the use of a warehouse receipt system started with a feasibility study conducted by a team of United States commodity market specialists in the late 1990s. The specific nature of the grain market in Croatia supports the introduction of warehouse receipts. There have been sporadic attempts to develop and introduce a system, but these have not yet resulted in the establishment of organized warehouse receipt finance. EBRD has made loans against agricultural commodities, using fiduciary transfer of ownership. Croatia should be seriously considered for future development efforts, especially given its pre-accession status to the EU.

As demonstrated in other countries, warehouse receipts are a very efficient tool for establishing transparent and organized commodity markets in countries in transition to EU accession.

In **Serbia**, development efforts were initiated under the Regional Commodity Exchange Initiative funded by USAID in 2002 to 2003. A comprehensive feasibility study conducted as part of this initiative indicated that the development of warehouse receipt systems in Balkan countries could assist the establishment of a common platform for developing commodity market infrastructure in the region.

Serbia was identified as one of the countries with the greatest potential for developing a warehouse receipt system. In 2005, USAID provided a small grant to ACDI/VOCA and VOCA Consult to provide the Ministry of Agriculture with technical advice in developing the primary legislation, which covered licensing criteria, inspection procedures and performance guarantees. The draft law is for general agricultural commodities, and includes grains, frozen fruits and vegetables, herbs and other products. In 2006, the draft law was ready to be presented to the Parliamentary Agricultural Committee, but changes in the government and elections in the country delayed further advancement. The draft law has been discussed with international donors, and EBRD believes it provides a very solid foundation for development of the system. Serbia is one of the countries where future efforts in this area should be seriously considered.

#### **The new GUAM initiative**

In 2007, Ukraine's Agrarian Markets Development Institute, which is the local implementer of the warehouse receipt system, initiated a project to integrate the grain markets of Georgia, Ukraine, Azerbaijan and Moldova (GUAM). The concept is based on the Black Sea Regional Commodity Exchange project and focuses on creating a common trading platform among these countries, using the warehouse receipt system in Ukraine as a model. The concept is in its development stage and needs further clarification of its design, and appropriate implementation. The governments of three of the countries as well as three industry bodies have signed a Memorandum of Understanding in support of the concept.

### 2.1.3 Countries without warehouse receipt systems

A considerable number of ECA countries do not yet have warehouse receipt legislation in place (but it should be stressed that this does not stop the use of warehouse receipt finance in these countries), and have received little or no support from international donor agencies in this regard. These include smaller countries in the Balkans, the Caucasus and Central Asia. There is need for careful assessment of the potential for developing warehouse receipts and of the interest of key public and private stakeholders in these countries, especially those in Central Asia and the Caucasus where commodity markets and financial service sectors are still little developed. EU member countries tend to have higher levels of public intervention in agricultural commodity markets, which reduces seasonal price fluctuations. They also have more advanced legal systems and financial sectors, easing the use of other assets to secure finance.

The economies of several of the countries in this category are generally poorly developed, and their banking systems weak. Governments continue to play a large role in commodity production, trade and finance. Although it is always useful to make decision-makers aware of the benefits that market-based mechanisms such as warehouse receipt finance can have, simple awareness raising programmes are likely to have only a limited impact – decision-makers need to be shown that such financing mechanisms can work in their own countries. With this in mind, when it announced a collateral management-backed loan to an oilseeds processor in Bosnia-Herzegovina in September 2008, EBRD argued that “The promotion of agricultural commodities as collateral for loans creates a base for the EBRD to initiate a dialogue with the Bosnia-Herzegovina authorities, agribusiness entities and banks about warehouse receipt financing” (EBRD press release, 3 September 2008).

Awareness raising programmes (and the programmes for building a proper legal and regulatory system that follow them) should therefore adopt a bottom-up approach, focusing on supply chains where warehouse receipt finance can make a tangible impact. This means developing pilot projects, such as in the cotton sector, which is important in several of these countries. Positive experiences in this area

include those of a German bank, which arranged cotton pre-export financing combined with cotton warehouse financing in Uzbekistan (and in the main buying countries in the Baltic and the Islamic Republic of Iran), to be repaid through the export sale of cotton to end-buyers.

## 2.2 Opportunities for further development and support

In view of the potential for warehouse receipt finance in many ECA countries, further development assistance could be warranted, to build on previous initiatives and complete the missing elements of the systems.

The greatest benefits from a warehouse receipt system can be expected in those countries that are major producers of storable agricultural commodities such as grain, sunflower seeds and sugar. Table 2 shows the major producers of cereals in ECA; data on oilseeds and sunflower can be found in Annex 3. Of the top producers, only Kazakhstan and Hungary have well-functioning warehouse receipt systems in place, with well-established public warehouses. All the other countries could be targeted by further efforts to introduce or upgrade warehouse receipt finance in a pragmatic manner. Some countries have already made substantial attempts to introduce better conditions for warehouse receipt finance.

The Russian Federation, Ukraine and Turkey present the highest potential, given the size of their grain markets. Significant prior work has been accomplished in the Russian Federation and is ongoing in Ukraine. Poland and Romania also have large market potential, but past attempts were constrained by limited commitment from government and other key stakeholders. In view of these countries’ EU membership status, government priorities may currently be for other agricultural policy instruments, and government interests need to be assessed. Belarus and Uzbekistan are characterized by high levels of government intervention in agricultural and financial markets, and there may be limited scope for the improvement and expansion of their warehouse receipt finance schemes.

Initial feasibility assessments conducted by donor agencies have revealed considerable potential in some smaller countries such as



**Table 2**  
Top cereal producers in ECA (thousand tonnes)

|                    | 2005   | 2006   | 2007   | 2008    |
|--------------------|--------|--------|--------|---------|
| Russian Federation | 76 564 | 76 866 | 80 495 | 109 000 |
| Turkey             | 36 354 | 34 637 | 30 212 | 28 900  |
| Ukraine            | 37 258 | 33 511 | 28 035 | 52 000  |
| Poland             | 26 928 | 21 776 | 27 365 | 25 700  |
| Kazakhstan         | 13 728 | 16 462 | 20 495 | 15 700  |
| Hungary            | 16 212 | 14 467 | 14 047 |         |
| Romania            | 19 350 | 15 760 | 7 461  | 16 834  |
| Czech Republic     | 7 668  | 6 386  | 7 066  |         |
| Belarus            | 6 089  | 5 686  | 7 016  | 9 000   |
| Uzbekistan         | 6 531  | 6 511  | 6 372  | 6 000   |

Source: FAOStat. May include official, semi-official or estimated data. 2008 figures are industry estimates based on official reports, as of April 2009.

Croatia and Serbia. There is need for an in-depth assessment of the current state of warehouse receipt implementation in each of these countries, to identify the type of follow-up assistance required to build on earlier initiatives. Some of the countries in this group, such as Ukraine and Turkey, require limited, more focused interventions aimed at introducing missing structural components (e.g., performance guarantees) or at training and awareness raising among private sector participants. Others, such as the Russian Federation, Serbia and Croatia, require full-scale assistance programmes, including for completion of the legal framework.

Other potential candidates include Moldova and other smaller countries in the Caucasus (Azerbaijan, Georgia) and Central Asia (Kyrgyzstan, Tajikistan). Several of these countries have expressed interest in developing a warehouse receipt system, and might present some potential. For example, an improved warehouse receipt system in Central Asia could contribute to enhancing the efficiency of cotton marketing and financing. The opportunities for introducing warehouse receipt systems should be further assessed through a detailed analysis of commodity markets. Major difficulties could arise from relatively low commodity production volumes, net imports of some commodities, and issues related to the transparency and governance of proper warehouse receipt systems.

## 2.3 Possible next steps

### 2.3.1 Feasibility studies and regional workshops

First, an in-depth assessment of the current situation should be conducted in those countries that have initiated improvements of their warehouse receipt systems and where key government and private sector stakeholders express interest in the completion of these efforts. Feasibility studies could be conducted in selected countries where no prior efforts have yet been made. A regional workshop could be a useful instrument for consolidating knowledge and information on experiences so far and to building linkages among key stakeholders in different countries.

### 2.3.2 Policy dialogue and awareness raising among key stakeholders

Once feasibility and interest have been established in a country, further efforts to introduce a warehouse receipt system or upgrade an incomplete one should start with policy dialogue and broad-based awareness raising. Government officials, commodity market participants and financial institutions need to be fully aware of all the short- and long-term benefits of a properly functioning warehouse receipt system and its advantages over localized, bilateral and private arrangements. Evidence suggests that unless key government and private sector stakeholders have a clear understanding and are strongly committed, efforts to introduce

enabling legislation and the other institutional preconditions may not be pursued vigorously enough and may stop before completion. Policy dialogue should also create a full understanding of the importance of an enabling policy and market environment for a well-functioning warehouse receipt system, specifically the use of only limited and predictable government interventions in commodity markets.

### **2.3.3 Technical assistance and implementation support**

Efforts should then focus on assisting countries, following a two-track approach of: i) introducing proper legislation; and ii) developing understanding, skills and capabilities in warehouse receipt finance among local commodity sector participants and financiers. Whether the first or the second track should receive stronger donor support depends on the situation at hand. Technical assistance can help national stakeholders to understand what is involved in improving the legal framework, including the options for developing a legal framework and designing key elements of the system, such as the regulatory agency and financial performance guarantee mechanism. Experience suggests that a promising approach is to start with limited and focused assistance in drafting the enabling legislation necessary for proper implementation of the system. Once the national authorities involved in the process have confirmed their commitment to approving this legislation, a full implementation programme can be initiated.

It is imperative to involve representatives of all major private stakeholders in the drafting of key legal provisions and in discussions of the types and features of warehouse receipts and licensing requirements for public warehouses, the type and structure of financial performance guarantee mechanisms, etc. Participation of the financial sector and commodity market stakeholders (farmers, traders, processors, warehouse operators, exporters, etc.) in this process is not only important for developing their full understanding and trust in the system and its main components, but it also helps legislators and advisors to adjust international experiences and best practices to the realities of domestic markets and institutions and to the interests and requirements of the system's prospective users. Although it is essential to introduce all the core

components of a warehouse receipt system to ensure its proper functioning, care should be taken to avoid the automatic application of blueprints and to allow sufficient time for adjustments and consensus building.

### **2.3.4 Training and capacity building for users**

Finally, efforts should be made to enhance the understanding of financial institutions and market participants in how to use warehouse receipt finance. Understanding is a key ingredient for trust; given most banks' lack of familiarity with warehouse receipt finance, improvements to legal, regulatory and institutional conditions will only be effective if they are accompanied by a programme for strengthening banks' understanding. This may require training and capacity building to overcome banks' initial reluctance to lend against warehouse receipts. Although small farmers are likely to benefit indirectly from improved efficiency, transparency and liquidity in commodity markets, efforts could be made to enhance their direct participation in warehouse receipt finance: this requires institutional strengthening and capacity building of farmers' associations and cooperatives, which could play important roles in bulking supplies and serving as intermediaries between small farmers, public warehouses and banks. In some instances, associations and cooperatives could become licensed warehouse operators on behalf of their members.

### **2.3.5 Investment support**

In addition to technical assistance, some elements of the warehouse receipt system may require investment support. The initial capitalization of indemnity funds may require public seed funding, which can be repaid once sufficient users' fees have accumulated. Investment programmes could support the upgrading of public warehouses in rural areas, including through investments in infrastructure, quality assessment and grading, and improved storage technologies, for example.

### **2.3.6 Recommended approaches for technical assistance**

The following are suggestions for adapting the various areas of possible donor assistance described in the previous subsections into effective programmes that suit the particular conditions of a country:

- Comprehensive, well-balanced programmes are the most likely to succeed. Focusing primarily on legal and regulatory reform is risky, because government stakeholders are likely to have little or no knowledge of warehouse receipt finance and its relevance to development of the agriculture sector, and few incentives for supporting implementation of the proposed improvements. In this approach, the private sector (including farmers' groups) is excluded from much of the programme, and has little interest in it (for various reasons, ranging from lack of awareness of warehouse receipt finance to scepticism about programmes for government policy reform), so it too is unlikely to lobby for speedy implementation. On the other hand, a programme that focuses primarily on working with selected private sector groups to identify and implement "low-hanging fruits" in warehouse receipt finance fails to capitalize on the goodwill that can be created by a successful system and the possibilities for leveraging this into broader policy, legal and regulatory reform. The two extremes need to be balanced, according to the specific conditions of the country concerned.
  - Strong local support from banks and commodity firms is crucial for the implementation of legal and regulatory reforms – reforms that merely make it easier for international banks to lend to local exporters may not achieve the desired results. If the local banking industry is unfamiliar with warehouse receipt finance and other forms of structured commodity finance, the programme should include a strong awareness raising and training component for selected local banks, followed by the development of pilot cases. Again, the approach should be pragmatic. There is no reason to wait until legal and regulatory conditions are ideal – globally, warehouse receipt finance has been made to work in very difficult environments.
  - The demonstration effect is strong; without it, the whole debate on warehouse receipt systems remains very abstract for most government and private sector managers, who tend to have many other more urgent calls on their attention. Decision-makers in all sectors – farmers, bankers, entrepreneurs and policy-makers – are more likely to be convinced by real examples of warehouse receipt finance, particularly when they can see how these can be replicated to their countries' particular circumstances. Any programme for enhancing a warehouse receipt system should therefore expose decision-makers to real-life experiences from relevant countries and industry sectors, and should include a pragmatic component for reaching agreement as early as possible in the project.
  - Although strong local support is necessary, there is no need to involve all or even the majority of local banks and commodity groups. Consensus building is fraught with obstacles, and broad industry consultations may be futile if many of the people involved cannot imagine how warehouse receipt finance would work in their country. It is more effective to work with one or a few dynamic groups, and assume that when these front-runners start showing results others will follow. This also applies to support institutions such as indemnity funds; it is better to start with a handful of warehouse operators that are willing to contribute than to try and build an industry-wide fund immediately; proper marketing should ensure that banks and depositors understand the difference in risk profile between the warehouse operators inside and those outside the indemnity fund.
  - Donor-supported programmes for the development of warehouse receipt systems can be hijacked by consultants and government officials, who see such programmes as an easy, long-term source of revenue. They may seek to isolate a project from the private sector, and instead of developing pragmatic approaches that build on the strengths and reduce the weaknesses of the country and its commodity and financial industry, are likely to propagate novel schemes inspired by theoretical considerations or, at best, international examples. Government decisions made under these conditions can be counterproductive for the development of warehouse receipt finance in the country, and can hinder the operation of existing warehouse receipt schemes.
- Warehouse receipt finance has to be a profitable proposition for all those involved. Benefits can come from more abundant, cheaper and/or longer-term finance for depositors, better risk-adjusted returns on capital for banks, access to new groups of clients for banks, better use of capacity for warehousing companies, etc.

However, there are also transaction costs. When designing a programme, donor agencies should ensure that for all groups, including local banks, the expected benefits are significantly higher than the costs. This can best be done by targeting a broad range of commodity firms, from small producers to very large private corporations, rather than just the small producers who are usually the main development interest of donor agencies.



## ANNEX 1

### Selected exemples from Asia and Africa

**Africa:** Warehouse receipt finance is used widely in Africa, from Egypt to Zambia, from Liberia to the Sudan, in all parts of the supply chain, for commodities and for manufactured products. Generally, it is based on field warehouses, mostly at ports (for international trade) but also inland. Financiers are local, regional and international banks, and clients include local, regional and international traders, cooperatives, processors, distributors and manufacturers. Both local and international collateral management companies are active. Products that have benefited from warehouse receipt finance include barley (for beer production), cars and car parts, cashew nuts, ceramics, cocoa, coffee, copper (ore and metal), cotton, fertilizers, fish, logs and timber products, maize, mobile phones, paper (and the school books printed on it), petroleum products, pharmaceuticals (and the chemicals used to produce them), rice, rubber, sesame seeds, steel products, tea and vegetable oils.

Public warehouses in Africa tend to be owned by governments or poorly capitalized local firms. These may not be interested in playing an active part in warehouse receipt finance, and even when they are, they may not have the credit ratings that banks require. Nevertheless, over the last ten years, donor agencies have supported several projects for enhancing the use of warehouse receipts issued by public warehousing companies, to improve agricultural finance. So far, however, these efforts have not resulted in any country adopting the comprehensive licensing and regulation functions that an efficient public warehousing system requires. South Africa comes closest, but even here those who accept warehouse receipts take considerable counterparty risks on the issuer.

A significant part of bulk food imports into Africa, and a smaller part of fertilizer imports are financed through field warehousing arrangements. Typically, local importers do not have the ability to raise enough hard currency funding to finance a cargo of fertilizers, maize, rice, sugar or wheat; their local banks do not have enough international credit lines to fund such imports; or local funding is prohibitively expensive compared with international funding. International traders then extend their own credit lines to the importers, by positioning products in bulk in the importing country and delivering in smaller quantities to the importers. To mitigate risks, the products are kept in warehouses that may belong to the importers, but that are under the control and the credit risk umbrella of an international collateral manager. These arrangements are used not only for commodities in port warehouses, but also in landlocked countries, with a collateral manager taking responsibility for the risks of overland transport. In Eastern and Southern Africa, in countries such as Zambia where maize is a major crop and a crucial food commodity, warehouse receipt finance is common, at least among larger companies in the maize sector. As harvests are concentrated in one or two months but consumption is throughout the year, processing plants and traders have to carry large stocks. Banks finance

these through collateral management arrangements, often on the premises of large cooperative farms or processors. In Zimbabwe, before the country's economy collapsed, there was an active secondary trade in warehouse receipts, both over-the-counter and through the country's (then) commodity exchange. Similar arrangements for processors can be found for paddy rice, for example in Egypt.

Warehouse receipt finance can also be found for most significant export crops, although less frequently than for imports or major domestically consumed crops. The reasons for this difference are that many export crops tend to move rapidly from farmer to export port, and do not stay in a single warehouse much longer than necessary; and that a significant part of Africa's commodity exports is in the hands of major international traders that have alternative sources of capital. Nevertheless, there are cases where it is important. For local processors and exporters (private traders and cooperatives) warehouse receipt finance is often the only source of affordable funding. It may also be important where finance is needed for the full crop season, from input supply to processing and exports – as is often the case for cotton (cotton production requires a financial outlay, for seed, fertilizers, pesticides, fungicides, etc., which is larger than that for, say, cocoa or coffee production). One example is Côte d'Ivoire, where most of the cotton sector is financed through an international loan; this loan, which starts with the funding of seeds and inputs and is reimbursed through the payments from international buyers, is secured (in various parts of the crop cycle) through warehouse receipts on inputs, raw cotton and processed cotton, from cotton ginnery to port warehouse.

South Africa has the continent's most developed warehouse receipt system, even though it does not have all the characteristics of a fully fledged public warehousing system as discussed in the report. There is no specific warehousing act; rather, warehouse receipts fall under contract law. There is no fidelity fund or any special bonding arrangement for warehouses issuing warehouse receipts – it is "buyer beware" scenario. Warehouse operators may store their own grains and grains deposited by third parties, and can issue warehouse receipts on both. Banks manage their risks by allocating specific credit limits to each issuer of warehouse receipts. On the other hand, delivery on the country's futures exchange is through warehouse receipts, as long as they are issued by exchange-approved warehouses; these receipts are managed through an efficient and low-cost electronic silo certificates system that allows an active secondary trade.

Although the private sector has been fairly successful in implementing bespoke warehouse receipt finance schemes, donor initiatives to improve systems and boost the role of public warehouses have not yet had a significant impact.

Schemes focusing on farmer-controlled warehouses (commonly called cereal banks) have been tried many times by several different donor agencies (including NGOs), mostly in West Africa but also in Madagascar. Using funds made available by banks (under donor agency guarantees) or directly by donors, cereal banks were supposed to receive grains from farmers, then hold the grains on behalf of the financiers until their sale during the "lean" season; some cereal banks obtained their start-up capital through grain aid that they then sold. It was expected that cereal banks would enable farmers to avoid having to sell directly after the harvest when prices are low, and permit food-deficit farmers to buy food at a fair price during the pre-

harvest period. Their performance has been highly controversial. One report is entitled Community-level grain storage projects (cereal banks) – why do they rarely work and what are the alternatives?<sup>1</sup> On the other hand, organizations such as the World Food Programme (WFP) consider that such village-based grain warehouse finance schemes can be successful.

A mid-term evaluation report on implementation of warehouse receipt systems in Southern and Eastern Africa, funded by CFC and conducted by the Natural Resources Institute, provides information about Coffee Market Development and Trade Promotion in Eastern and Southern Africa (CFC/ICO/03FA) and Improvement of Cotton Marketing and Trade Systems in Eastern and Southern Africa (CFC/ICA/12FA). Uganda, the United Republic of Tanzania and Zimbabwe are the participating countries. As well as the project design and implementation weaknesses described in detail in the report, one of the major causes of lack of significant success seems to be the selection of smallholder farmers as the major target beneficiary group (on the other hand, this was understandable as larger market players, say those needing more than US\$50 000 of financing, already had access to finance through field warehousing arrangements). The ability of a warehouse receipt system to overcome the credit access problems faced by small and poor farmers is limited (larger farmers tend to have larger surpluses available as collateral). Experiences with well-functioning warehouse receipt systems around the globe show that warehouse receipts are initially used by larger and more financially viable entities. As the system expands, the effects gradually spread over to smaller producers and operators. The major driving forces behind a sustainable warehouse receipt system are traders, large producers and processors.

A recent report from the Emerging Markets Group (Andrews, Munro and Field, 2007) provides information on efforts in Zambia. USAID Zambia sought a way of supporting the development of a warehouse receipt programme that would involve smallholders and allow them to participate in the market. When an initial intervention through the Zambia Agricultural Commodity Agency was unable to establish an effective warehouse receipt system, USAID used the Production, Finance and Improved Technology project to work with the private sector and establish a new entity, the Zambia Agricultural Commodity Exchange, with a stronger commercial focus and links to a regional commodity exchange. Again, this report identifies the major focus on small farmers as one of the reasons for only limited success.

**Asia:** This region is considered to have significant potential for the development of warehouse receipt systems. Countries such as China, Viet Nam, Cambodia, the Philippines and Indonesia produce large volumes of various commodities suitable for warehouse receipts, and have economies geared towards the free market, and reform-oriented governments that support the modernization and development of commodity infrastructure. These countries can also take advantage of international experience and regional commodity-based models from India and Thailand, which proved to be quite successful.

---

<sup>1</sup> Notes from a workshop organized by Catholic Relief Services, Dakar, Senegal, 19 to 22 January 1998, [www.foodsecuritynetwork.org/resources/food\\_aid/commodity/grainstorageworkshop.pdf](http://www.foodsecuritynetwork.org/resources/food_aid/commodity/grainstorageworkshop.pdf).



In **Indonesia**, work on warehouse receipt finance, which has been ongoing since the mid-1990s, has recently seen a boost with support from the International Finance Corporation (IFC) for implementation of a broader warehouse receipt system. Warehouse receipt finance based on field warehousing arrangements probably dates back to more than a century ago, involving both international and local banks. After almost a decade of discussions, Parliament approved a primary warehouse receipt law in 2006, which provides a good legal foundation for the introduction of a viable system. Implementation is under the auspices of the Ministry of Trade through the Commodity Exchange Regulatory Commission. In 2007, IFC Indonesia initiated a technical assistance project that mobilizes leading international expertise in several critical areas: commodity market evaluation, improvement of certification and licensing procedures, development of an integrated market information system, and introduction of a reliable performance guarantee mechanism. As was the case for similar projects in the late 1990s, the first group of priority commodities includes cocoa, coffee, maize, rice and paddy rice; palm oil, rubber, black pepper, plywood and others are under consideration. Currently, five licensed public warehouses in Indonesia issue warehouse receipts for rice and maize. The regulatory agency is focusing its efforts on introduction of a reliable performance guarantee mechanism and strengthening of inspection capacity.



## ANNEX 2

### Case study: Bulgaria

#### Background

The warehouse receipt system in Bulgaria is one of a few successful examples that include all the core elements. It may therefore serve as a reference for other countries. Development of the warehouse receipt system was supported by a USAID project implemented by ACDI/VOCA. The system has been operating for nine years and has attracted a large number of commodity market participants and financial institutions.

The first development efforts started in 1997, when a team of Bulgarian and United States experts completed a survey of the grain production and processing industry in Bulgaria. The survey was sponsored by USAID. Its main goals were to analyse the situation in the grain sector, identify major problems and constraints, and recommend a plan for assistance. Some 32 issues were identified by consensus among all the groups participating in the survey.

The priority constraints identified in the study were:

- lack of trade rules and developed infrastructure for the domestic market and for access to international markets;
- very high prices of quality seeds;
- high prices of agricultural inputs;
- lack of reliable grain storage facilities in the smaller production units, and limited access to reliable grain storage;
- lack of reliable standards for quality of grain;
- lack of access to commodity markets;
- very limited access to short-term financing for operational capital;
- lack of information about sources of financing;
- lack of access to reliable grain marketing information.

As well as these sector-specific constraints, the overall economic environment was extremely difficult. The country was just emerging from a very severe financial crisis, with ten private banks bankrupt, hundreds of thousands of depositors losing their savings, and conditions of hyperinflation. That year (1997), the International Monetary Fund (IMF) introduced a currency board, which enforced very strict budgetary and financial discipline on the country.

Under these circumstances the banks became extremely conservative, and one of the major constraints for grain producers and processors was access to short-term financing for operational capital. The majority of small and medium-sized producers and processors could not meet the banks' lending requirements. The sector was heavily influenced by the grey economy and corruption was widespread. Development efforts started just a year after a very severe grain shortage on the domestic market, which was a cause of the government's resignation in 1997. Transition to a liberal and transparent grain market was one of the most important efforts related to modernization of the agriculture sector and achievement of overall economic stability.

This strategic goal was supported by the Government of Bulgaria and international donors such as USAID, the World Bank, IMF and EBRD. As a result USAID launched the Grain Industry Development Program (GIDP), implemented by the cooperative efforts of ACDI/VOCA and the United States Department of Agriculture (USDA).

The programme's major components were:

- development and implementation of a warehouse receipt system in Bulgaria;
- development of grain commodity markets;
- assistance to providers of grain marketing information;
- assistance to grain industry trade organizations' efforts to consolidate and influence policy decisions and establish trade rules;
- technical assistance and training to private grain processing and storage companies.

The project covered all aspects of the grain marketing infrastructure, which was an important precondition for its success. As emphasized in the main report, implementation of warehouse receipt systems requires a complex approach that takes account of all the interrelated links in commodity markets.

The concept of developing a warehouse receipt system in Bulgaria was formalized on 29 July 1998, when Parliament passed a new law for the marketing and storage of grain. This was an important step forward after six months of public discussions among representatives of the grain industry – producers, processors and traders, bankers and experts from the Ministry of Agriculture and the Parliamentary Agricultural Commission. The priority given to development of the grain industry in Bulgaria was demonstrated by the involvement of the Minister of Agriculture and the head of the Parliamentary Agricultural Commission. The law provides the legal framework of conditions for implementing the warehouse receipt system and defines rules and regulations for the marketing and storage of grain. It also defines the authority of the government institutions that regulate this process and the rights and responsibilities of the individuals and legal entities involved in the storage and marketing of grain.

### **Public warehouses and grain storage facilities**

The grain law regulates two types of business entities involved in the storage of grain: public warehouses and grain storage facilities. Licensed grain storage facilities do not participate in the indemnity fund and are not allowed to issue warehouse receipts. They can only provide storage services for third parties and the performance risk is accepted by the depositor. According to the Bulgarian legislation, a public warehouse licensed for the storage of grain is a sole proprietor (trader) whose main business activity is the storage of deposited grain and issuing of warehouse receipts. These companies should be joint stock or limited liability companies registered under the commercial law.

The major licensing requirements for a public warehouse are:

- minimum capital for incorporation: 100 million lev (US\$55 000);
- minimum storage capacity: 3 000 tonnes (later reduced to 1 500 tonnes);
- must provide a bank deposit or irrevocable bank guarantee of 10 lev (US\$6.5) per tonne of capacity, at the Ministry of Agriculture's disposition; expiry of this deposit or bank guarantee must be at least two months after expiry of the public warehouse licence;

- must not be a creditor or provide guarantees for credit to a third party;
- must insure the grain storage against fire, flood and earthquake;
- must announce storage fees in a public place;
- must provide information about its business operations to the National Grain Service.

As well as these major requirements to prove its financial stability, the public grain warehouse must also meet several technological standards.

These requirements provide the first level of protection for the system, and define the conditions under which licensed public grain warehouses can participate, thereby guaranteeing the appropriate storage of grain in terms of quality and quantity. These conditions are very important for depositors and for the financial institutions that will accept the grain as collateral. The performance of public warehouses is crucial for the smooth operation of the system.

The grain law regulates for a second level of protection for the system. Within a year of the law's acceptance in parliament, public warehouses were obliged to form an indemnity fund, guaranteeing their performance. The Bulgarian indemnity fund is the first performance guarantee mechanism of this kind developed outside the United States.

### **Warehouse receipts**

The Bulgarian legislation describes a warehouse receipt as a promissory security issued by a public warehouse that proves the deposition of grain and the warehouse's obligation to deliver that grain to the legitimate holder of the receipt. Warehouse receipts are defined in the commercial law. Several important specifications are added to this definition regarding warehouse receipts for grain, which must stipulate:

- the location and bin number within the storage facility in which the grain has been deposited;
- the year, harvest and quality of the grain deposited.

A warehouse receipt is issued according to the warehouse register and consists of two parts: collateral and commodity. Ownership of the grain is transferred only with full endorsement of both parts.

These features of warehouse receipts create the third level of security for the system. The warehouse receipt has all the features of a security, and maintenance of a warehouse register builds additional trust in the system. The important function of a warehouse receipt is as the carrier of important information related to the value of the collateral, through providing a precise description of the quality and quantity of the grain and the right of ownership to it according to endorsements. Under the grain law, the holder of the receipt is entitled to make claims immediately after the State collectibles and storage fees owed to the public warehouse have been paid, and before any other creditors.

## National Grain Service

The National Grain Service is a specialized agency under the Ministry of Agriculture. It is based in Sofia and has regional offices. The major functions of the service are to:

- make recommendations on the licensing of public grain warehouses, and organize, implement and control the licensing process;
- keep public registers of public grain warehouses;
- carry out initial, periodic and special checks of the financial, operational and technical condition of public grain warehouses, and of the quality and quantity of the stored grain;
- collect orders for the printing of warehouse receipts.

The National Grain Service's operations create the fourth level of security for the system. The control and regulation of the performance of public warehouses and the use of warehouse receipts aim to establish a constant level of trust in the system among its users – producers and financial institutions. The Bulgarian regulatory body was modelled on and trained by the United States Kansas City Commodity Office, as a very well-organized and functioning supervisor of the system, which has established a good reputation among grain companies and within the financial sector.



## ANNEX 3

### Major producers of storable crops in transition countries

| 10 Largest Cereals Producers    |            |   |            |   |              |
|---------------------------------|------------|---|------------|---|--------------|
|                                 | 2005       |   | 2006       |   | 2007         |
| Russian Federation              | 76,563,560 | A | 76,866,050 | A | 80,495,490 A |
| Turkey                          | 36,354,000 | A | 34,636,645 | A | 30,211,943 A |
| Ukraine                         | 37,258,000 | A | 33,511,140 | A | 28,035,000 A |
| Poland                          | 26,927,924 | A | 21,775,931 | A | 27,365,200 A |
| Kazakhstan                      | 13,728,000 | A | 16,461,600 | A | 20,494,600 A |
| Hungary                         | 16,212,463 | A | 14,467,371 | A | 14,046,959 A |
| Romania                         | 19,350,464 | A | 15,759,724 | A | 7,461,392 A  |
| Czech Republic                  | 7,667,851  | A | 6,386,078  | A | 7,065,752 A  |
| Belarus                         | 6,089,181  | A | 5,686,108  | A | 7,016,000 A  |
| Uzbekistan                      | 6,530,940  | A | 6,511,297  | A | 6,372,000 A  |
| 10 Largest Oilcrops Producers   |            |   |            |   |              |
|                                 | 2005       |   | 2006       |   | 2007         |
| Russian Federation              | 2,923,371  | A | 3,148,344  | A | 2,685,442 A  |
| Ukraine                         | 2,177,516  | A | 2,602,378  | A | 2,287,807 A  |
| Turkey                          | 918,959    | A | 1,145,023  | A | 1,046,314 A  |
| Poland                          | 559,103    | A | 630,308    | A | 805,418 A    |
| Hungary                         | 589,292    | A | 631,197    | A | 624,532 A    |
| Czech Republic                  | 363,678    | A | 401,865    | A | 440,290 A    |
| Romania                         | 663,264    | A | 756,373    | A | 370,299 A    |
| Uzbekistan                      | 348,352    | A | 397,407    | A | 369,103 A    |
| Bulgaria                        | 397,899    | A | 504,324    | A | 269,611 A    |
| Serbia                          |            |   | 238,048    | A | 187,105 A    |
| 10 Largest Sugar beet Producers |            |   |            |   |              |
|                                 | 2005       |   | 2006       |   | 2007         |
| Russian Federation              | 21,420,110 |   | 30,861,230 |   | 29,000,000   |
| Ukraine                         | 15,467,800 |   | 22,420,700 |   | 16,978,000   |
| Turkey                          | 15,181,247 |   | 14,452,162 |   | 14,800,000   |
| Poland                          | 11,912,444 |   | 11,474,820 |   | 11,057,800   |
| Belarus                         | 3,065,182  |   | 3,980,286  |   | 3,624,000 *  |
| Serbia                          |            |   | 3,188,905  |   | 3,206,380    |
| Czech Republic                  | 3,495,611  |   | 3,138,326  |   | 2,598,676    |
| Hungary                         | 3,515,865  |   | 2,454,225  |   | 2,000,000    |
| Croatia                         | 1,337,750  |   | 1,559,737  |   | 1,582,606 P  |
| Slovakia                        | 1,732,612  |   | 1,370,908  |   | 855,343      |

A = May include official, semi-official estimated data  
Source: FAOSTAT | © FAO Statistic Division 2008

#### Oilcrops included:

hempeed, melonseed, mustard seed, groundnuts with shell, linseed, olives, poppy seed, rapeseed, safflower seed, seed cotton, sesame seed, soybeans, sunflower seed

# References

- Allen, J. 1999. *ACDI/VOCA Grain Storage and Marketing Project – Final Report*. USAID, Washington, DC.
- Alyoshin, O. 2008. Securing creditors; Interests under international commodities trade/ finance transaction in Ukraine. Vasil Kasil & Partners. Kiev.
- Andrews, R., Munro, R. & Field, M. 2007. *Building a warehouse receipts program that works for all stakeholders – notes from the field no.1*. USAID, November 2007. Washington, DC.
- Barron, H.S. 1997. *Mixed harvest: the second great transformation in the rural North, 1870–1930*. Chapel Hill, University of North Carolina Press.
- Bryde, P. 2008. WHR as secured collateral – the banking experience. National Seminar on Alternative Ways to Finance Commodity Trade through Warehouse Receipts, Jakarta, 4 November 2008.
- Csáki, C., Nash, J. et al. 2002. Food and agricultural policy in Russia, progress to date and the way forward. World Bank Technical Paper No. 523. World Bank, Washington, DC.
- Day Robinson, D. 2004. *Pilot system of warehouse receipts in the grain sector*. CFC Technical Paper No. 27. Samara, Russian Federation, CFC, Amsterdam.
- EBRD. 2004. *Special Study Grain Receipts Programme (Regional)*. Project Evaluation Department, London.
- ESCAP. 2006. *Trade finance infrastructure development handbook for economies in transition*. Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok.
- FAO. 1995. *Inventory credit: an approach to developing agricultural markets*. FAO Agricultural Services Bulletin. Rome.
- FAO/EBRD. 2002. *Lithuania: Financing of warehouse receipts/legal review*. Report Series No. 1. Rome.
- Keshevan, S. 2008. Study on approaches to agriculture finance and risk management in the ECA region (unpublished working paper), World Bank, Washington, DC.
- Kozár, L. 2004. *The role of public warehousing and the commodity exchange in the Hungarian grain market* (Ph.D. thesis). University of Debrecen, Centre for Agricultural Sciences. Debrecen.
- Lang-Anderson, R. & Rymko, A. 2006. Going soft. *Trade and Forfeiting Review*, 10 April 2006, London.
- Levenets, O. & Grushyn, A. 2006. Taking security in Ukraine. *Trade and Forfeiting Review*, 9(7), May 2006, London..
- Ulas, D. 2007. *EU market access: the way of licensed warehousing system for Turkish food producers and exporters*. Ankara University, Turkey.
- UNCTAD. 1996. *Collateralised commodity financing, with special reference to the use of warehouse receipts*. Report by the UNCTAD Secretariat, UNCTAD/COM /84, Geneva.
- UNCTAD. 2002. *Farmers and farmers' associations in developing countries and their use of modern financial instruments*. Report by the UNCTAD Secretariat, UNCTAD/DITC/ COM/35, Geneva.



**Please address comments and inquiries to:**

**Investment Centre Division**

Food and Agriculture Organization of the United Nations (FAO)

Viale delle Terme di Caracalla – 00153 Rome, Italy

[investment-centre@fao.org](mailto:investment-centre@fao.org)

[www.fao.org/tc/tci](http://www.fao.org/tc/tci)

Report No. 3 – October 2009