COFFEE AND COTTON MARKET DEVELOPMENT AND TRADE PROMOTION IN EASTERN AND SOUTHERN AFRICA

INVENTORY-BACKED FINANCING FOR COFFEE AND COTTON IN TANZANIA: FINANCING MANUAL

Sponsored by the Common Fund for Commodities under a project managed by the Natural Resources Institute (UK)

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WRS

Natural Resources Institute

UNOPS United Nations Office for Project Services

Front Page Picture source[i]

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1 Introduction and background

1.1 Introduction

Coffee and cotton marketing systems in Tanzania have substantially changed since liberalisation of the sub-sectors in the 1980s. The changes created new marketing opportunities for producers and private traders but also accentuated financing problems in the production and marketing of coffee and cotton. This training manual sets out how warehouse receipts systems (WRS) can be used to help ease access to inventory-backed financing as well as improve trade in coffee and cotton in Tanzania. It has been prepared as part of a project funded by the Common Fund for Commodities (CFC) to promote “Commodity Trade Finance Systems based on Inventory Collateralisation and Warehouse Receipts” in three countries, namely: Uganda, Tanzania and Zimbabwe. The United Nations Office for Project Services (UNOPS) is the project executing agency and it contracted the Natural Resources Institute (NRI) of the University of Greenwich to provide technical advisory services in implementing the project.

The manual has been prepared primarily to guide financial intermediaries in financing receipt-backed inventories of coffee and cotton. The structures proposed may, however, be applied to similar durable commodities which are properly stored under similar receipt systems. The basic principles and procedures set in the manual are already being applied by banks financing coffee and cotton inventories in Tanzania.

In addition, the manual provides useful information on the requirements for accessing inventory finance under the WRS. It will therefore benefit farmers, farmer groups, small-to-medium scale traders, who are keen to obtain inventory finance as well as extension personnel and NGOs working with such groups to promote improved commodity production, marketing and finance.

The manual is not intended to be prescriptive, but to set out critical issues in the financing process, including risks and the mitigating procedures that can be adopted. It is suggested that banks and other lenders develop their own approaches, procedures and rules in line with their respective internal policies. The manual is structured as follows:

- We review changes in the coffee and cotton marketing systems in Tanzania in chapter 2, focusing especially on the impact on access to trade finance and how a warehouse receipt system can reduce financing constraints.
- In Chapter 3 we discuss how banks can lend against coffee and cotton inventories under collateral management agreements – this system pre-dates the CFC-funded WRS project.
- Discussions on how banks can lend against collateralised coffee and cotton under the regulated, widely-accessible WRS, promoted under the CFC-funded project, is in Chapter 4.
- Chapters 5 and 6 focus on internal inventory credit management systems that banks providing inventory finance need to institute, while in Chapter 7 we provide a glossary of inventory finance related terms.

1.2 Acknowledgements

The authors would like to thank all those who have contributed to the production of this manual in one way or another. In particular, thanks are due to Dr J.C.B. Kabissa, Director General of the Tanzanian Cotton Board, and Ms Elizabeth Kimambo, Coordinator of the Local Management Unit of the Warehouse Receipts System Project, for their encouragement and support during the production of this manual. In addition, we are also grateful to other stakeholders such as primary cooperative societies, cooperative unions, traders, ginners, and banks, which have all provided valuable inputs during the different phases of the project. Last but not least we would like to thank CFC and UNOPS for funding and executing this project.

2 Changes in commodity marketing, financing constraints and opportunities in Tanzania

2.1 Pre-liberalisation coffee and cotton marketing systems

Prior to liberalisation of coffee and cotton sectors in Tanzania in the 1980s, the state was the dominant player in the supply of inputs to farmers and marketing of their outputs, especially for the major export commodities such as coffee and cotton as well as important staples such as maize. The range of policy instruments and institutional arrangements used by the state in carrying out these functions included the following:

a. Pan-territorial and pan-seasonal pricing policies – where producers were paid the same price for their crop, regardless of the location from which the crop was purchased. Hence, the state implicitly subsidised the cost of assembling produce from distant regions, thereby making it profitable for production in those areas.
b. A single marketing channel involving the marketing boards as sole exporters and the involvement of cooperatives as the sole agents of the marketing boards, being responsible for distributing inputs to farmers, bulking produce supplied by the members and delivering the crop to the marketing boards.
c. Adoption and robust enforcement of formal commodity standards, making it possible to export coffee and cotton of such quality as to enable the country to enjoy a premium for its export commodities.

2.2 Trade finance under pre-liberalisation marketing systems

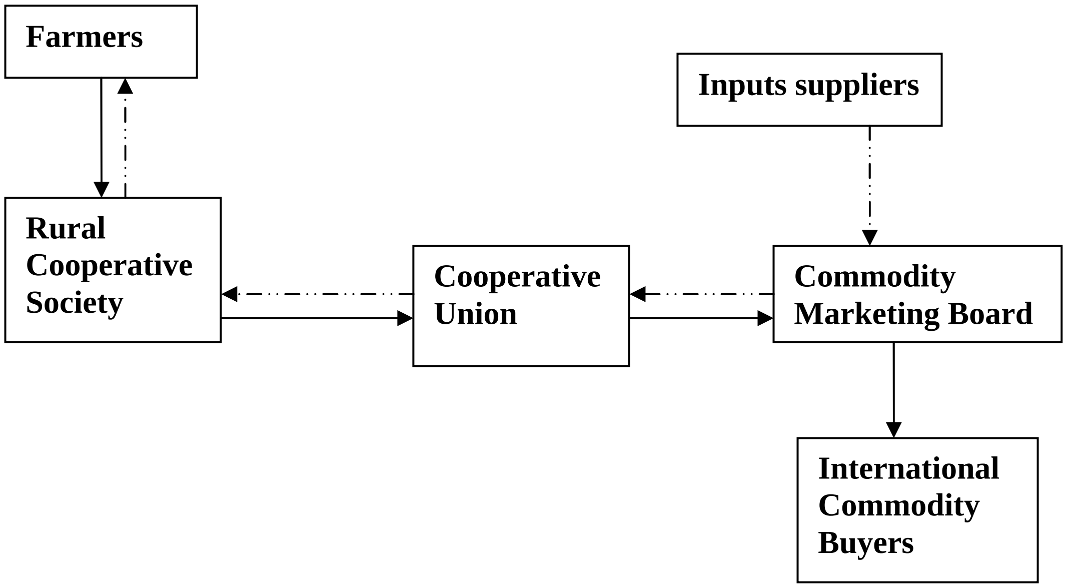
Figure 1 shows the supply chain under the state-controlled marketing systems. The process was as follows:

- Farmers sold parchment coffee or seed cotton that complied with officially-sanctioned commodity standards to the rural cooperative society (RCS).
- Officials of the RSC ascertained the quantity and quality delivered.
- Farmers are paid or receive “promissory notes” assuring payment.
- The RCS, which operated buying centres as close to the farmgate as possible, sold the parchment coffee or seed cotton to the cooperative unions (CU).
- The CUs run coffee curing factories and ginneries where the delivered crop was processed.
- After processing, the CUs sold the green coffee or lint to the relevant commodity marketing board (CMB) – for coffee or cotton.
- The CMB had sole responsibility for exports.

Under this state-controlled marketing system, government pre-announced producer prices, determined through a process that was, in principle, supposed to take account of farmers’ average cost of production. Government was also in a position to align domestic prices to international commodity prices through its control over exchange rates. The role of the state in fixing commodity prices ensured that farmers had certainty about where to sell, whom to sell to and what price they obtained for their produce. Furthermore, as illustrated in Figure 1, farmers had access to farm inputs and extension services delivered through the same channels through which the crop was marketed. Input prices were similarly controlled by government.

Financing for the procurement of coffee and cotton, as well as for distribution of farm inputs was, as earlier, provided by government and channelled through the CUs and the RSCs. Liquidity in the trade was dependent on the capacity of government to provide or guarantee financing. There was, therefore, little scope for private finance for the domestic trade, except through government.

Figure 1: Pre-liberalization coffee/cotton marketing system in Tanzania

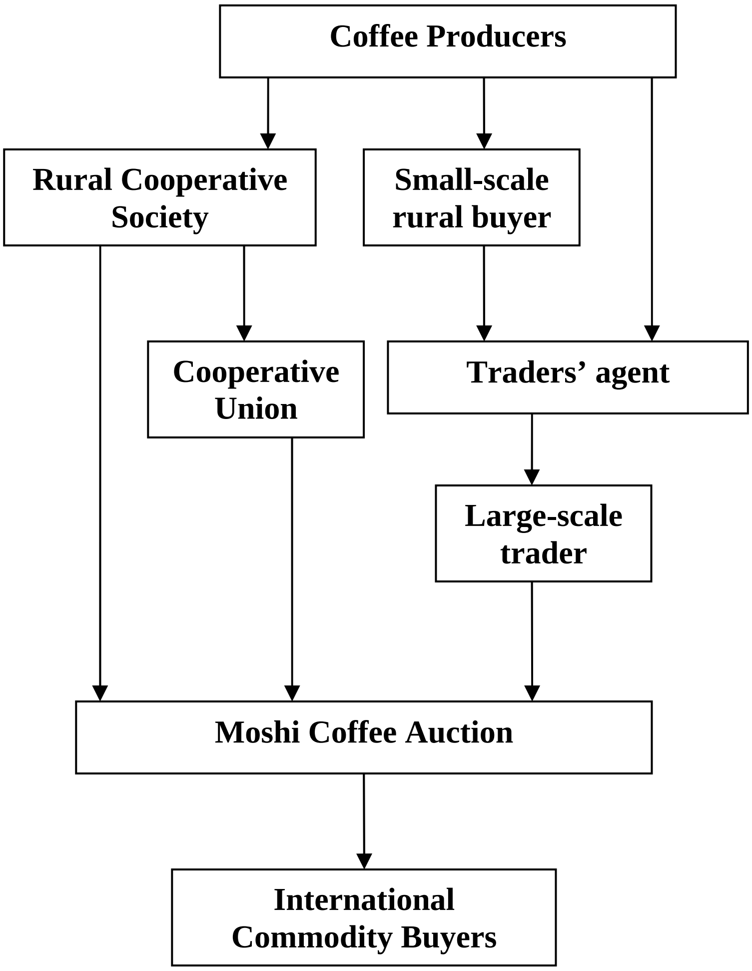


Post-liberalisation commodity marketing systems

Problems associated with the state-controlled marketing system, the discussion of which is beyond the scope of this Manual, led to the reforms in the 1980s. The reforms included the following:

- The role of marketing boards in commodity exports was gradually reduced – currently they have no significant involvement in direct export trading. This has allowed private traders, including large foreign companies to enter the market.
- The cooperative unions lost their domination in domestic procurement, as the private buyers, who also set up or bought out curing factories or ginneries, competed in domestic procurement and processing. The private traders were represented in the village level by either their agents or small-scale assemblers, who subsequently sold produce to their agents.
- Government discontinued fixing producer prices, limiting itself to setting indicative prices (for instance in the cotton sector) but leaving the market to determine prices paid to farmers at various levels in the supply chain.
- Government scaled back its involvement in the supply of farm inputs, the expectation being that the private trade will assure access to competitively-priced inputs.

Figure 2: Post-liberalization coffee marketing system in Tanzania



As shown in Figure 2, liberalisation has increased marketing options for farmers. They can sell to agents of private traders or small-scale village traders; to RSCs which market directly on their behalf or to RSCs which are agents of the CUs. In the coffee sub-sector, all the domestic buyers have to sell crop destined for the export market through the Moshi Coffee Auction. This is not the case in the cotton sub-sector, where the large private traders and CUs can export directly to international merchants.

Many studies, including those by Cooksey (2003)[1] and Baffes (2004)[2], conclude that these reforms have had rather mixed outcomes in terms of impact. Some of the constraints which have contributed to this situation include the following:

a) Lack of trade finance has limited price competition among traders, especially at the farmgate. For instance many CUs and RSCs have considerable difficulty accessing trade finance, thereby making it difficult for them to compete. Indigenous private buyers face similar problems and this situation has led to the

[1] Cooksey B. (2003) "Marketing reform? The rise and fall of agricultural liberalisation in Tanzania", *Development Policy Review*, 21(1): 67-91

[2] Baffes J. (2004) "Tanzania's cotton sector: reforms, constraints and challenges", *Development Policy Review*, 22(1): 75-96

apparent concentration of market power in a few foreign companies, which have access to relatively cheap offshore finance.

b) Producer price is very uncertainty. This problem originates in part from global price volatility and tends to make access to trade finance difficult for traders who are unable to obtain market-based price risk management instruments. The problem can be further accentuated by significant intra-seasonal price swings as producers are often compelled to sell because of household cash needs rather than by expected price movements.
c) Lack of certainty regarding counterparty performance, especially where traders from producer-countries like Tanzania lack required track record. The implication is that it is mainly the well-known international trading companies who are likely to obtain firm and remunerative off-take contracts that banks often require to mitigate price risks.
d) Decline in cotton quality, accompanied by loss of quality premium formerly enjoyed by Tanzania. This is often due to weak enforcement of quality standards by the private trade, as their agents or small-scale village traders selling to them, often aim for high throughput rather than high quality produce. Thus, while the payments they receive usually reflect the quality as well as volume of produce delivered to the principal (processor/exporter), the farmgate prices they offer is quite often the same per kilogram of coffee or cotton, regardless of the quality.

2.3 Warehouse receipt systems can help address these constraints

Warehouse receipts systems (WRS) can be used to help address the problem of lack of finance in the commodity trade as well as shorten the commodity chain, making it possible for instance for a farmer-group to trade directly with an end-user (e.g. importer of green coffee or lint). Under the WRS, a warehouse receipt (WR) is issued to a named depositor (who may be a farmer, farmer-group, processor or trader) as evidence that he/she has deposited a specified commodity, of stated quantity and quality, at a specified location. The holder of the receipt may pledge it to a lender (with the stored commodity being the collateral for a loan) or transfer it to a buyer (by way of a sale)[3]. The warehouse operator or collateral manager, does not own the stocks under their control but only has legal custody and guarantees delivery against the receipt. They are required and **should** be able to make good any value lost through theft, fire or other catastrophes.

There are two main types of WRS in Tanzania, which we discuss in this manual. They are the *unregulated WRS* (Inventory finance under collateral management), access to which is mainly limited to large-scale traders; and a *regulated widely-accessible WRS*, which has been promoted in Tanzania for the coffee and cotton sub-sectors under the CFC-funded project. The roles, responsibilities and benefits to key players are discussed below.

[3] As defined by Coulter J and G. Onumah (2002) "The role of warehouse receipt systems in enhanced commodity marketing and rural livelihoods in Africa", *Food Policy*, 27 (2002) 319-337.

3 Inventory finance under collateral management agreements

3.1 Introduction and key players

An unregulated WRS is a legal/formal system of inventory collateralisation, in that the provision of services as well as the rights and obligations of counterparties are based on existing contract laws. Contractual obligations and rights under the system are usually defined in tripartite *collateral management agreements* (CMA) between three key players shown in Figure 3: borrower, collateral manager and the lender (usually a bank). The CMA allows stocks of coffee/cotton owned by the borrower to be held as security for a loan. The stocks are usually held in a warehouse owned/leased by the borrower, but control over the facility passes to the collateral manager, who can only allow stocks to be taken out of the warehouse when authorised by the lender.

Borrowers

In the coffee and cotton sub-sectors, borrowers who benefit from this system tend to be medium to large-scale ginning/export companies, handling large enough volumes of coffee or cotton to justify the cost of this service and who either own or can lease suitable storage space. The very large traders, especially the vertically-integrated multinational companies often do not use it because of relatively easier access to cheaper offshore finance. Scale diseconomies make it difficult for smaller-scale traders and groups of smallholder farmers to use it.

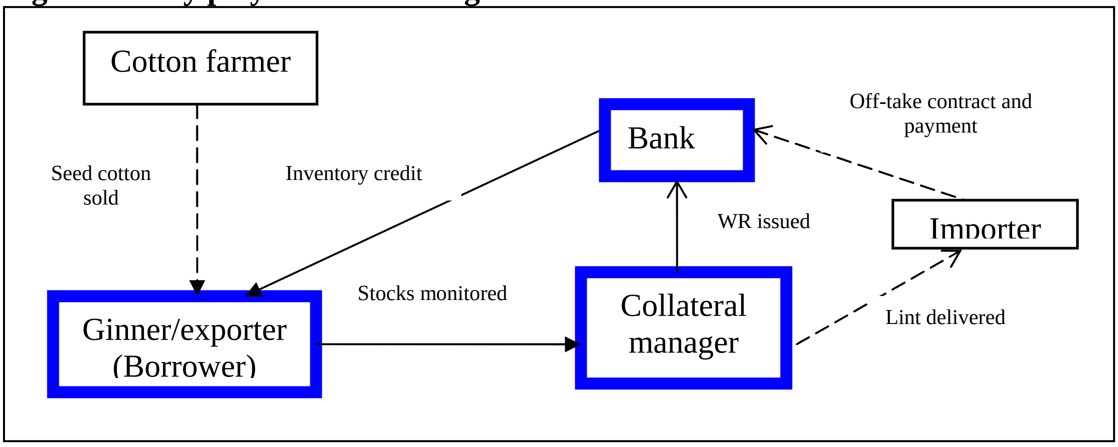
Collateral managers

They usually issue non-negotiable, non-transferable receipts and *guarantee of delivery* of the stored commodity. Most of them are local subsidiaries of international inspection companies, who obtain international insurance and performance bonds to back their *guarantee of delivery*. They also tend to have a track record in quality/quantity certification for various commodities. Societe Generale de Surveillance (SGS) is the most common example of such companies. Others include Audit, Control and Expertise (ACE), Cotecna and Baltonic.

Banks

The following banks in Tanzania are known to offer trade finance under CMAs: CRDB Bank, Exim Bank and Standard Bank (Stanbic).

Figure 3: Key players in the unregulated WRS



3.2 Transaction cycle under CMA inventory finance

Figure 3 is an illustration of a typical transaction cycle using the case of cotton inventory finance as an example:

a) The borrower applies for credit prior to the opening of the harvest season. The loan application is usually assessed on the basis of the borrower's balance sheet and track record as well as adequacy of security provided.

b) If the loan application is approved in principle, the bank and the borrower will select a collateral manager, but quite often the bank's view is paramount in the choice made. A Collateral Management Agreement ("CMA") is then signed between the borrower (ginner), the collateral manager and the financing bank.

c) The collateral manager, on the basis of the CMA, takes exclusive access to the warehouse provided by the borrower – it may be leased where borrower does not own a suitable facility. A nominal fee (about US$1.00) may be paid to the borrower by the collateral manager to cement legal control over the warehouse.

d) From that point, the collateral manager has legal custody of seed cotton and/or lint stored in the warehouse and is authorised to release such stocks only with explicit authorisation by the specified lender. The collateral manager is expected to provide regular updates on the quantity, quality and value of stocks, which are expected to be insured by the borrower.

e) After ginning and upon receipt of a confirmed order and satisfactory payment arrangements, the bank authorises release of the lint to an importer, which has either paid for or made satisfactory arrangements to pay for the lint delivered.

f) Payments to the ginner are required to the channelled through the lending bank, to ensure full recovery of the loan and related servicing costs. Some banks insist that if the contract is not backed by a Letter of Credit then stock release will only be permitted after payment has been received.

g) The collateral management fee is usually between US$1,500 and US$3,000 per site per month, implying that it is more cost-effective for borrowers handling relatively large volumes of inventories.

h) Quite often the banks will, in addition to the CMA, require the following as additional security:
   - Personal charge over the assets of directors and/or shareholders as well as a fixed and floating charge on the borrower's assets, usually the ginnery.
   - A confirmed fixed-price off-take contract or Letter of Credit against which the cotton collateral will be valued.

3.3 Business/process risks and mitigation measures under CMA

The business and process risks discussed below can potentially lead to losses by lenders and depositors, thereby undermining confidence in the system. The risk mitigation measures proposed are based on relevant experience and consultations with stakeholders, especially banks. These risks include the following:

3.3.1 Non-performance by collateral manager

Since the primary function of the collateral manager is to minimise the risk of value loss during storage, their non-performance can lead to potential default by borrowers and financial loss to banks. Loss through non-performance by collateral managers can be in the form of storage losses, fraudulent issue of receipts and fraudulent release of the collateralised stocks.

Storage losses
Storage losses can be in the form of quantity loss through theft, burglary, fire and allied perils. The other form is through deterioration of the quality of the stored commodity during storage. This risk increases if the following conditions prevail:

- Storage facilities do not meet minimum physical standards as required to properly store the collateralised coffee or cotton. The facilities may not be adequately secure; may have leakages or be prone to flooding or fire; and/or may be accessible to rodents.
- Warehouse personnel are not adequately trained to assess the quality of receipted stocks and manage the stocks efficiently.
- Poor warehouse management predisposing stocks to quality deterioration.
- Poor record keeping making it difficult to determine losses promptly.

Fraudulent issue of receipts
This occurs when receipts issued do not represent commodities stored under the CMA and/or situations where depositors are cheated on weight or quality in receipting their crop. The risk is particularly high when record keeping is poor; scales and grading equipment used are not assized or calibrated regularly; and the monitoring system, including independent verification by banks, is ineffective.

Fraudulent release of collateralised stock
This occurs when collateralised stocks are released by the collateral manager without proper authorisation by the bank. It is a particularly high risk that occurs when staff of the collateral manager collude with the borrower and/or independent monitoring by the bank is not robust.

3.3.2 Mitigating risk of non-performance by collateral managers

The proposed measures include the following:

Undertaking due diligence
Collateral management companies are often relatively large, international companies who tend to enjoy the confidence of the banks. However, losses arising from their non-performance have occurred in Tanzania and other countries in the region. It is therefore essential that banks conduct effective due diligence prior to the selection of

the collateral manager. This due diligence, which should be undertaken by the Credit Officer and verified by the Legal Department, should include the following:

i. Confirming that the Company is duly registered to carry out the business of collateral management in Tanzania;
ii. Reviewing financial statements and track record in the business to ascertain its capacity to perform and to assume the financial liabilities arising from the CMA;
iii. Reviewing staffing policies and procedures as well as staff training systems to ascertain the capacity of personnel to perform tasks arising from the CMA;
iv. Review insurance policies and performance guarantees to ensure that they have not expired and also to ascertain the ease of claims in the event of a loss-inducing incident and whether any litigations related to such claims are enforceable in Tanzanian courts;
v. Thoroughly review the draft CMA, especially to ensure that the roles and obligations of the collateral managers are clearly defined and further that their liabilities are not limited by indemnity and "limitation of liability" clauses to the extent that borrowers and lenders become unduly exposed; and
vi. Field visit to ascertain the suitability of the storage facility as well as the weighing and grading equipment used.

In carrying out the due diligence, reviewers should be guided by the following: The Warehouse Receipt Act (2005), Warehouse Regulations adopted by the Tanzania Warehouse Regulatory Board and warehouse standards included in the Quality Manuals prepared under for the WRS in Tanzania.

On and off-site monitoring of operations

It is usual for banks after being satisfied about the suitability of the selected collateral manager to marginalise follow-up monitoring. Experience from the Tanzania and other African countries, however, suggest that this activity is very important in minimising the risk and losses associated with non-performance by collateral managers. Monitoring process should include, but not limited to, the following:

- Financing should be released only after stocks are confirmed as being under storage **and not in anticipation of receipt** by the borrower;
- Regular review of Daily Stock Position Records submitted by the collateral manager;
- Review of insurance policy and performance guarantees, as and when necessary, to ensure that they are appropriately renewed during the term of the credit facility;
- On-site visits to the warehouse to review storage management, including reviewing systems for the issue of receipts and release of authorised stocks; and
- Undertaking stock count to ensure that actual stock levels are consistent with records at the warehouse and data contained in the Daily Stock Position Records submitted by the collateral manager to the bank.

3.3.3 Managing borrowers' loan default risk

Loan default – i.e. the inability or unwillingness of the borrower to service the credit provided – can arise if there is significant value loss through non-performance by the collateral manager. Other important issues that need to be addressed to minimise default risk include instituting a robust loan (or borrower) appraisal system, managing marketing, price and valuation risks and adopting structures that minimise the risk of diversion of proceeds from the sale of the collateralised commodity.

Borrower/loan appraisal
The appraisal process will normally start with the submission of a loan application which will ideally contain the minimum following information:

- A brief background of the borrower or applicant.
- Purpose for which the facility required.
- Amount of the proposed facility.
- Proposed tenor of the loan and expected maturity date.
- The security to cover the proposed facility, including details on ownership and valuation of the stocks to be collateralised, as well as other additional security (e.g. immovable property) being provided.
- The sources of repayment for the proposed facility.

Appraisal of the application will include:

❖ Due diligence of the borrower, including assessment of the borrower's legal capacity/authority to borrow, authenticity of documents submitted, credit and banking track record, and any information on borrower's reputation.
❖ Analysis of the purpose to which the credit is to be applied, especially if repayment is to be made from projected earnings from that investment.
❖ Analysis of financial statements e.g. audited balance sheet and profit and loss accounts as well as cash flow statements. Internally-approved financial ratios that help to assess potential or existing risk of liquidity constraints or insolvency should be used in the analysis.
❖ Analysis of the security offered – including ownership rights and ease of liquidation based on such considerations as risk of litigation if asset has to be liquidated as well as whether the asset is marketable and what it will cost to sell it.

Market, price and valuation risks
The existence of the coffee auction market in Tanzania minimises the risk that collateralised coffee cannot be sold and makes it unnecessary for off-take contracts to be a requirement for financing against the coffee receipts. However, there is no such system in the cotton sub-sector. Hence, borrowers as well as the bank can be faced with a situation where the collateralised cotton can not be liquidated.

Furthermore, both depositors and lenders are exposed to price risks – the risk that the price and related value of the underlying commodity at any particular time in the future will be lower than the value at the time of financing the collateral. Currently no market-based instruments exist which borrowers can generally use to manage or hedge against price risk. To mitigate this risk, most banks undertaking prudent lending against collateralised stocks will do the following:

- Adopt margining or "hair cutting" in determining the ratio of loan to the prevailing market value (based on the prevailing price) – otherwise termed the "advance rate". Most banks tend to lend at an advance rate of between 70% and 80% of the market value. The rate tends to be higher at the beginning of the harvest season as the likelihood of prices falling well below the opening season price is rather low. For instance, if the price at the beginning of the season is TSh.700 per kg of parchment coffee, then the advance rate is likely to be between

TSh.490 and TSh.580 per kg. Later in the season, when the price rises to about TSh.1,000 the credit provided will be about TSh.600 (i.e. at an advance rate of 60%). *For further discussions, see Chapter 6 on Loan-to-value compliance.*

- In valuing the crop, price data from international sources (e.g. published on the ICO website) and local sources (e.g. published by the Moshi Coffee Auction or by the Tanzania Cotton Board) should be consulted. The valuation should not only be based on the prevailing prices but should also reflect information about other significant market developments (e.g. supply from major producers) which are likely to impact on future coffee/cotton prices. *For further details see Manual on Market Information System.*
- Insist on a fixed price off-take contract that passes the risk of adverse price movements to the buyer. Though many banks adopt this system, it often makes it impossible for borrowers to obtain remunerative prices as buyers set such prices with the downside risk clearly in mind.
- Institute systems to monitor the link between market value and book value of the advances provided and to take appropriate action to minimise their exposure to default risk arising from adverse price movements, which can include, for instance, including in financing contracts, exit clauses that allow for the bank to request and/or arrange sale of the underlying commodity if they are overly exposed. *For further discussions, see Chapter 6 on Loan-to-value compliance.*

Diversion of funds from sale of commodity

This can occur when the borrower receives payment for the commodity without settling credit obligations with the bank. To mitigate this risk banks often require the following:

- Require that payments by buyers are routed through the borrowers' accounts at the financing bank.
- Release of the commodity to the buyer by the collateral manager is contingent upon satisfactory payment arrangements being made with the buyer.

3.4 Benefits and access problems

Financing under CMA has proved very crucial in making the import and export trade in commodities in many African countries, including Tanzania liquid. However, only medium to large-scale traders and relatively strong cooperative unions are able to use the system. Small-scale traders and producer groups, for whom the cost of collateral management and insurance may be too high, cannot access it. Financing decisions can be slow and the requirement for fixed-price off-take contracts often denies borrowers the opportunity to benefit from favourable price movements. Since the receipts issued are non-transferable, they can not be used as delivery instruments against contracts, hence limiting their role in facilitating trade.

Collateral managers, like other operators, sometimes experience losses through theft and fraud. Their liabilities, when they occur, are often limited by indemnity and "limitation of liability" clauses in the *collateral management agreements*. Hence, it is essential that lenders carry out effective due diligence in the selection of collateral managers and closely monitor their operations.

4 Regulated, widely-accessible Warehouse Receipt System

4.1 Introduction and key players

The involvement of an independent regulatory agency is what distinguishes the regulated WRS from the unregulated model. The regulatory agency may be government-based as is the case in the US (where the United States Department of Agriculture – USDA – is the main regulator) and Tanzania which opted for this model following promulgation of enabling legislation in 2005. A private-sector-based agency, for instance a strong commodity exchange, as is the case in South Africa, can also regulate warehouse operators issuing negotiable receipts which are traded. In Zambia and Uganda, another model is being promoted, where an arms-length private-sector-controlled agency is authorised by government to enforce appropriate laws and industry standards regulating the WRS.

The Warehouse Regulatory Board (WRB) is the independent regulator in Tanzania and is responsible for licensing/certifying warehouse operators as custodians of collateralised stocks (ensuring that they comply with criteria set in relevant laws and regulations); regulating the issue of standardised warehouse receipts to minimise the risk of fraud; and overseeing the operations of warehouse operators (including carrying out unannounced stock and quality verifications). Prior to the establishment of the WRB in Tanzania, the CFC-funded project Local Management Unit (LMU) acted as the quasi regulator of the receipt system. They were principally responsible for designating warehouse operators – mainly curing factories and ginneries – which participated in the system.

Other key players participating in the regulated WRS are licensed warehouse operators, depositors (who could also be borrowers) and the banks.

Licensed warehouse operators
Licensed warehouse operators offer “public” warehousing services, implying they can store commodities on behalf of multiple depositors (of all size) in a single warehouse or site. The receipts issued may be transferable and negotiable, depending on the enabling legislation.

In Tanzania the main designate warehouse operators are five coffee curing factories, and only one cotton ginnery. It is anticipated that as warehouse receipting is mainstreamed and the commodity coverage is broadened, other parties, including international as well as local inspection companies and commodity trading and processing companies will participate. *For a list of licensed or designated warehouse operators contact the Warehouse Regulatory Board.*

Depositors/borrowers
Depositors who can benefit from the system include most of the players in the coffee and cotton sub-sectors, such as farmer groups including the Rural Cooperative Societies (RCS), the Cooperative Unions (CU) and medium to large-scale private traders. As at the end of 2006, 45 RCS, one union and five private companies were being financed against deposited stocks of coffee and cotton under the system. *For list of participating depositors contact the Warehouse Regulatory Board.*

Banks
The following banks in Tanzania have been providing inventory finance to parties under the widely-accessible WRS: CRDB Bank, Exim Bank and Kilimanjaro Cooperative Bank. *For update on list of participating banks contact the Warehouse Regulatory Board.*

4.2 Transaction cycle under the regulated WRS

- Depositors requiring financing for initial procurement of seed cotton apply for credit prior to the opening of the marketing season. The application is usually appraised on the basis of traditional criteria and procedures, including:
  - The borrower's balance sheet and credit history/track record.
  - Satisfactory demonstration of the feasibility of the proposed activity.
  - Personal charge over the assets of directors and/or shareholders and/or fixed and floating charge on the company/group's assets.
  - Price risk mitigation, in the form of off-take contracts, where market-based price risk instruments are absent.

As in the case of lending under CMA discussed in Section 3, decision-making is slow and bureaucratic, involving recommendations by credit officers, credit committees and management. Potential borrowers therefore need to apply well in advance of the opening of the season.

- Borrower procures parchment coffee or seed cotton and delivers to the designated or licensed warehouse operator (curing factory or ginnery) for storage and processing. The Warehouse Regulatory Board is responsible for licensing of the warehouse operator (curing factory or ginnery). Deposits can be made by any party but must meet the following criteria:
  - Minimum volumes as determined by individual licensed warehouse operators (e.g. 3 to7 tonnes of parchment coffee or seed cotton) – in order to reduce administrative, transport and transaction costs.
  - Minimum quality standards set by the commodity boards in consultation with the trade. These standards are intended to ensure that the collateralised stocks are storable and readily marketable. *For details on commodity standards refer to the Quality Manual and/or contact the Warehouse Regulatory Board.*

- The licensed warehouse operator issues warehouse receipts (WR) to depositors, after weighing and grading the deposited commodity.
  - The receipt states the quantity and quality of the commodity deposited; name of the depositor; and the obligation of the licensed warehouse operator to deliver the deposited parchment coffee or seed cotton described in the receipt or its lint equivalent in green coffee or lint to the depositor or a *bona fide* party to whom the receipt has been transferred. The WR also contains the terms and conditions under which the stocks are being stored.

- Where the depositor intends to borrow against the collateralised stocks, the process involved includes the following:
  - The borrower approaches a bank providing inventory financing with relevant application backed by the WR and, where required, an off-take contract.

- The bank confirms the status of the WR from the licensed warehouse operator before advancing any credit – this is critical in minimising the risk of fraud. The bank may also contact the Warehouse Regulatory Board for confirmation of deposits and status of warehouse receipts presented.
- The credit advanced depends on the market valuation of the green coffee or lint out-turn from the deposited parchment coffee or seed cotton, with appropriate adjustments reflecting anticipated future price movements. *For guidance on how to interpret market/price information refer to the Manual for the Market Information System.*

➢ Prior to sale, a system of monitoring the collateralised stocks is enforced to safeguard the interests of depositors and lenders, including:

- Submission by warehouse operators of daily stock position reports to lenders and the regulators.
- Unannounced inspections by regulators to verify the volume and quality of stocks and confirm compliance with storage standards and regulations.
- Complementary inspections by insurance companies and banks.
- Monitoring of market developments that affect the value of the collateral by credit officers, who can advise clients to liquidate stocks if necessary to minimise exposure to potential adverse price movements.

➢ When the crop is sold, payment is required to be made through to the financing bank. Payment for coffee sold through the Moshi Coffee Auction is normally channelled through the financing bank, which has to notify the Auction officials of their interest.

➢ The financing bank will, after being satisfied that the loan obligations have been satisfied, release the WR to the *bona fide* buyer, who can take delivery of the green coffee or lint, after presentation of the WR to the licensed warehouse operator.

➢ When the WR and instructions from the bank are presented, the licensed warehouse operator will allow delivery of the green coffee or lint to the buyer and cancel the WR to complete the transaction.

4.3 Business/process risks mitigation under regulated WRS

As in the case of lending under CMA discussed in Section 3, the business and process risks discussed below can potentially lead to losses by lenders and depositors, thereby undermining confidence in the system. The risk mitigation measures proposed are based on relevant experience and consultations with stakeholders, especially banks. These risks include the following:

4.3.1 Non-performance by regulator and/or licensed warehouse operator

The functions of the licensed warehouse operator are very similar to those of the collateral manager, and are intended to minimise the risk of value loss during storage. Hence, non-performance by licensed warehouse operators can lead to losses which can potentially cause default by borrowers (because they are unable to pay) and therefore financial loss to banks. While under CMAs the main focus of attention in mitigating this risk was on the collateral managers, under the regulated WRS, the independent warehouse regulator has an even more crucial role in reducing loss caused by storage losses, fraudulent issue of receipts and fraudulent release of the collateralised stocks.

The functions of the independent warehouse regulator – which in the case of Tanzania is the Warehouse Regulatory Board – include the following:

- *Set and ensure compliance which maintain standards for sound warehousing – including minimum physical standards to which storage facilities for collateralised stocks should conform;*
- *Set and enforce uniform standards and procedures in the handling, storage and receipting of agricultural commodities in Tanzania;*
- *Set licensing requirements and enforce the same to ensure that only credible warehouse operators – with required storage facilities, well-trained personnel, satisfactory financial capacity, appropriate insurance and bonds in place – who are authorised to issue standard warehouse receipts for stored commodities;*
- *Ensure sustained compliance with the Act, Regulations and industry standards – required to depositors and lenders from loss of value of commodities under storage through intensive and comprehensive on-site and off-site examination procedures and processes; and*
- *Assure the integrity of transferable and/or negotiable warehouse receipts – thereby making them acceptable as reliable collateral for loans by banks and in commodity trade – by robust enforcement of systems for issuing and cancellation of receipts that minimise risk of fraud.*

In carrying out these functions, which are prescribed in the Warehouse Receipt Act (2005), the independent regulator is playing the role performed by banks in protecting their interests in lending under CMA. At industry level, banks can attempt to reduce the risk of non-performance by the regulator through having very strong representation on the Warehouse Regulatory Board. At the level of individual banks and other lenders, it is recommended that oversight of the licensed warehouse operators is complemented by internal assessment and monitoring, including the following:

Undertaking due diligence on licensed warehouse operators
This should be undertaken by the Credit Officer and verified by the Legal Department and include the following:

i. Confirm that the Company is duly licensed by the Warehouse Regulatory Board to carry out the business of third-party warehousing;
ii. Confirm that Company owns or has lease valid for a period not less than the duration of the storage period under the proposed inventory financing arrangement;
iii. Review financial statements to ascertain compliance with requirements specified in the Warehouse Receipt Act (2005) and Warehouse Regulations;
iv. Review track record in the business and reputation in industry;
v. Review staffing policies and procedures as well as staff training systems to assess capacity of personnel; and

vi. Confirm that Company has valid insurance policy and performance guarantees issued by agencies recognised by the Warehouse Regulatory Board.

On and off-site monitoring of operations
While these functions are carried by the Warehouse Regulatory Board, it is expected that banks, which can incur significant losses as a result of non-performance by the licensed warehouse operators, will also undertake off-site and on-site monitoring including the following:

- Regular review of Daily Stock Position Records submitted by the licensed warehouse operators;
- Review of insurance policy and performance guarantees, as and when necessary, to ensure that they are appropriately renewed during the term of the credit facility;
- On-site visits to the warehouse to review storage management, including reviewing systems for the issue of receipts and release of authorised stocks; and
- Undertaking stock count to ensure that actual stock levels are consistent with records at the warehouse and data contained in the Daily Stock Position Records submitted by the collateral manager to the bank.

4.3.2 Managing borrowers' loan default risk

Borrower appraisal is crucial only when the depositor requires "seed" capital to procure the crop before depositing. This is usually the case where the borrower is a farmer group (e.g. RCS) or trader which requires finance at the beginning of the season to buy parchment coffee or seed cotton from members or farmers respectively. Where "seed" capital is required, the borrower/loan appraisal process should be the same as suggested under Section 3.3.3 above.

Where financing provided is directly against receipted stocks, the main risks to focus on are the market, price and valuation risks as well as diversion of proceeds from the sale of the collateralised stocks.

Market, price and valuation risks
In the absence of market-based price risk management instruments, the following measures (same as in Section 3.3.3) can be instituted by the bank:

- Adopt margining or "hair cutting" in determining the ratio of loan to the prevailing market value (based on the prevailing price) – otherwise termed the "advance rate". Most banks tend to lend at an advance rate of between 70% and 80% of the market value. The rate tends to be higher at the beginning of the harvest season as the likelihood of prices falling well below the opening season price is rather low. For instance, if the price at the beginning of the season is TSh.700 per kg of parchment coffee, then the advance rate is likely to be between TSh.490 and TSh.580 per kg. Later in the season, when the price rises to about TSh.1,000 the credit provided will be about TSh.600 (i.e. at an advance rate of 60%). *For further discussions, see Chapter 6 on Loan-to-value compliance.*
- In valuing the crop, price data from international sources (e.g. published on the ICO website) and local sources (e.g. published by the Moshi Coffee Auction or by the Tanzania Cotton Board) should be consulted. The valuation should not only be based on the prevailing prices but should also reflect information about other significant market developments (e.g. supply from major producers) which are

likely to impact on future coffee/cotton prices. *For further details see Manual on Market Information System.*

- Insist on a fixed price off-take contract that passes the risk of adverse price movements to the buyer. Though many banks adopt this system, it often makes it impossible for borrowers to obtain remunerative prices as buyers set such prices with the downside risk clearly in mind.
- Institute systems to monitor the link between market value and book value of the advances provided and to take appropriate action to minimise their exposure to default risk arising from adverse price movements, which can include, for instance, including in financing contracts, exit clauses that allow for the bank to request and/or arrange sale of the underlying commodity if they are overly exposed. *For further discussions, see Chapter 6 on Loan-to-value compliance.*

Diversion of funds from sale of commodity

To mitigate this risk we propose the following:

- Warehouse receipts issued should be deposited with the financing bank. The Receipts should be released to the depositor or the *bona fide* party to whom it has been transferred through a sale, only after payment has been received by the bank.
- Release of the commodity to the depositor or buyer by the licensed warehouse operator should only be effected when the party presents the original warehouse receipt issued by the warehouse operator and confirmation of release by the bank.

4.4 Benefits and access problems

A major difference between financing under CMA and the regulated WRS is that the latter is potentially accessible to relatively smaller depositors, for example farmer groups such as the RCS. This is possible because, while in the case of CMA-based financing the storage facility or site can be used by one specified borrower, in the latter multiple depositors can have their commodities stored in the same facility. We illustrate the benefits of this by two cases – one each from coffee and cotton.

4.4.1 RCS utilises WRS to market coffee

About 45 rural cooperative societies (RCS) are currently marketing coffee directly to the Moshi Coffee Auction through using the WRS. Financing for the RCS, which mirrors the process outlined in Section 4.2, is as follows:

- Prior to the opening of the marketing season, the RCS estimates output from the members and their "seed" capital requirements. They then approach a bank for financing, with the application being processed as outlined in Section 4.2. However, since most of the participating RCSs are repeat borrowers, the evaluation process tends to be faster – largely because the bank has reliable data on their track record.
- When the season opens, the RCS procures parchment coffee supplied by members who receive a *first* payment. This payment is made from the "seed" capital financing obtained from the bank.
- When sufficient volumes of parchment coffee (3-7 tonnes) have been assembled by the RCS, it is delivered to the designated coffee curing factory which weighs and grades the lot, issuing separate certificates to confirm the weight and grade of

coffee delivered to the RCS. A warehouse receipt bearing details of the weight and grade is then issued to the RCS.

- The receipt states the quantity and quality of the commodity deposited; name of the RCS; and the obligation of the designated operator to deliver the deposited parchment coffee or equivalent in green coffee to the depositor or a *bona fide* party to whom the receipt has been transferred.

➢ To borrow against the collateralised stocks, the following process is followed:
- The RCS submits the WR to the bank, which confirms the status of the WR from the designated operator.
- Credit representing between 70-80% of the value of the parchment (based on data from the Moshi Coffee Auction) is advanced to the RCS.

➢ The RCS, using the inventory-backed finance, procures more parchment coffee and delivers to the designated coffee curing factory and agrees processing and sale schedule with the operator.

➢ While the coffee is in storage the designated operator submits daily stock position reports to the bank. They also submit reports on the out-turn from processing the parchment to the bank and the RCS. Officials of the bank can undertake unannounced visits to verify stocks.

➢ When the processed green coffee is auctioned – based on the agreed processing and sale schedule or as specifically instructed by the RCS based on advice from the bank reflecting their view of the market – the proceeds are paid by the Moshi Coffee Auction to the financing bank. The bank then deducts relevant portion of the credit and loan servicing charges, based on the volume auctioned. Also deducted is the processing fee charged by the curing factory.

➢ The balance after the deductions is transferred to the accounts of the RCS held at the bank.

➢ The financing bank subsequently releases the receipt through the Moshi Coffee Auction to the *bona fide* buyer, who can then take delivery.

➢ When the receipt and release instructions from the bank are presented, the operator allows delivery of the green coffee to the buyer.

➢ The RCS makes a *second* payment to the members after payment has been received net of the loan and service charges as well as processing fees.

➢ At the close of the season, when all administrative and operating costs have been deducted, the RCS then makes a *third* payment to the members. An illustrative payment schedule is provided in Table 1.

Table 1: Payments to farmers per kilogramme of parchment coffee in 2005/06 season from different buyers (in Tanzania Shillings)

	Private trader	**Cooperative Union (CU)**	**Rural Cooperative Society (RCS)**
First payment	650	400	400
Second payment	-	350	300
Third payment	-	-	300
Total	650	750	1,100

Source: Reports from Project Local Management Unit, Pamba House, Dar Es Salaam.

4.4.2 RCS exports cotton lint using WRS

One RCS in Eastern Tanzania, which has used the system, was able to raise seed cotton output by its members by almost 10-fold over a period of four years. Financing was provided by a local bank, CRDB Bank Ltd. The financing process is very similar to the case in the coffee sub-sector, the only difference being that while the processed coffee is marketed at the Auction, the lint is usually sold to Tanzania-based exporters or ginners. However, during the 2005/06 season, the RCS was able to export lint directly to a UK-based cotton merchant.

The importer was identified by a locally-based broker and the Tanzania Cotton Board certified the quality of the lint using a HVI equipment procured under the CFC-funded project. The TCB performs this function independently for all exporters in Tanzania. The increased output by members of the RCS was primarily financed by the cooperative society from retained profits accumulated through marketing cotton on behalf of its members.

It is apparent from Table 1 that while the initial but one-off prices offered by private traders is more competitive, coffee farmers selling through the RCS earn between 47% and 69% more than the others. This is possible partly because, as illustrated in Figure 2, the marketing chain is shorter than the others. The RCS tends to have a much leaner and therefore less costly bureaucracy and so can pass more of the margins to the farmers than the CUs. They enforce quality standards more robustly and the extra margins to members therefore partly reflect the quality premiums they obtain. Their track record with the banks has allowed some RCS to obtain input credit which contributes to improved produce quality. The case discussed in 4.4.2 also demonstrates how farmer groups in the cotton sub-sector can also benefit from the system.

5 Managing inventory credit – internal compliance systems

5.1 Introduction

Financial institutions earn most of their profits from interest on loans but usually this is quite small relative to the nominal size of loans granted. Thus, a minor error in a financing contract has the potential of not only depriving the bank of its budgeted income from the contract, but also leading to significant loss of capital invested. It is for this reason that banks tend to be very conservative. The internal rules, processes and procedures that banks institute to regulate lending activities in order to protect their interests, are what is sometimes referred to as the compliance system.

Compliance may be regarded as part of risk management by the bank and is often instituted to discipline to each operational step in order to avoid costly errors. It usually requires good legal advice to set up but making it work needs good management. Manuals and checklists are important in the process of compliance, but their existence does not guarantee success. Nothing is more fundamental to effective compliance than good line-management and the realisation by staff that operating procedures are to protect them and the bank. The elements of compliance that the bank need to institute include the following operational, legal and administration.

5.2 Compliance - operational

Operational compliance relates to processes outside the bank – which are activities outside the bank but which impact on loan default risk. It consists of measures to manage such issues as the status of licensed warehouse operators, the physical storage facility, management support systems in the warehouses and the warehouse receipts being issued.

Financial status of warehouse manager/owner
The credibility of the WRS depends on the perceived risk of warehouses failing to deliver the commodity described in the receipt and in accordance with specified terms and conditions. Although warehouse management plays a major role in limiting this risk, the financial ability of the warehouse operator is the ultimate security to receipt holders if anything should go wrong. The Warehouse Regulatory Board sets financial requirements for licensing warehouse operators. However, a bank's view regarding risks associated with a specific licensed warehouse operator needs to be reviewed regularly, taking into consideration the following:

- Ensuring that the financial requirements that are set for licensing warehouse operators satisfy the bank's credit approval requirements and standards.
- In analysing financial ratios apply the bank's internal standards at to what assets are acceptable to take into account in calculating the net asset value.

Where licensed warehouse operators fail to meet prescribed financial requirements of the specific bank, this should be communicated to the Warehouse Regulatory Board, which can initiate steps for rectification. Failing that, the bank may consider refusing to finance warehouse receipts issued by the specific warehouse operator.

Physical storage facility

The condition and location of these warehouses play a major role in assuring the security of the system. Although banks may rely on the Warehouse Regulatory Board to monitor these facilities and ensure compliance with existing regulations and standards, it is advisable for them to undertake spot checks on ad hoc basis, usually contracting professional third parties to carry out this function. The main aspects to monitor are:

Security: The facility should be physically secure to prevent theft and damage to the stored commodity.

Equipment: The facility should have adequate and good quality equipment to ensure accurate quality and quantity measurements at the point of intake and effective handling of stored commodities with minimum risk of damage. Banks should be conversant with grading/quality standards set by Warehouse Regulatory Board as well as standard storage management practices and procedures so as to be able to observe compliance with these during monitoring visits.

Management and support systems of warehouses

The Warehouse Regulatory Board is responsible for monitoring the management skills of warehouse managers, but banks should, given the importance of warehouse management as a security mechanism, monitor this as well. If in the opinion of the bank the management of a specific warehouse is not in accordance with standards set by the Warehouse Regulatory Board, the bank may consider refusing to accept receipts issued by that warehouse. Non-acceptance of receipts issued by a warehouse should motivate warehouse managers to adopt remedial measures. The following elements of management and support systems may be monitored:

- A registered warehouse is a business enterprise and should be run like one. An effective administration system should be in place and all management information should be readily available at any point in time.
- A warehouse manager should have an active monitoring system in place and should normally be present at the warehouse or a suitable deputy with relevant skills to run the warehouse in his/her.
- Communication lines, computers, software and other equipment related to communication should be adequate and in good working order.
- Record keeping systems should be accurate and well managed.
- Management skills and operational skills of management and workers at the warehouse should be adequate and in line with the requirements of the Warehouse Regulatory Board. Any weaknesses should be identified and addressed through training.
- Proof of adequate insurance of facilities and stored commodities should be provided. Discipline regarding compliance with the conditions of the insurance policy should be tested.

Warehouse receipt system

Standardised receipts with adequate security features are important in minimising the risk of fraud and so too is the system under which receipts are issued to warehouse operators and by them to depositors. The systems for storage and issuing at the Regulatory Board and the licensed warehouses need to be closely monitored.

5.3 Compliance - legal

Legal compliance assumes that market participants comply with relevant Tanzanian statutes regulations, including the Warehouse Receipt Act (2005). The critical legal issues relate to the transfer of ownership of the receipt where the borrower defaults, the process by which the bank can secure its interest in the underlying commodity, and the security of the stored commodity in case of liquidation of the warehouse operator. Once the bank is satisfied about these legal issues, Legal Department should train credit and other front-office personnel to ensure that the correct procedures are followed in securing the interests of the bank in the collateralised stocks.

5.4 Compliance - administration

Given the margins that banks make relative to their exposure in various transactions, every effort should be made to prevent failures that can lead to significant financial losses. Unfortunately, poor administration is, in many cases, responsible for mistakes that lead to losses. There are multiple administrative processes in a bank relating to a commodity based financing agreements. Fortunately, these processes are easily defined and normally consist of routine actions. The processes governing these actions can be pre-listed under compliance rules. Personnel can be trained to adhere to the rules and can be monitored easily. Compliance with the administration process is therefore something that any institution should be able to introduce and manage effectively. Attention should be paid to the following:

Physical documentation

Physical handling of warehouse receipts demands the same detailed procedures as other documents because of the financial risks. Banks should treat warehouse receipts with the same care as they treat cash and be mindful of the following:

- All movements of the physical documentation should be recorded. The records must reflect the date of every movement (receiving and releasing), the name (and all other information regarding the person to create an audit trail of such movement) of the person receiving the document, signatures when receiving and releasing the documents and indications of status changes of such documents (registration of a lien or ownership changes while in the bank's possession).
- The warehouse receipts should be kept in a specific safe or a specific location within a safe as soon as possible after receipt by the bank. Thereafter, it should be moved to a central depository in the bank or to a third party contracted by the bank. Full details of the documentation should be recorded upon receipt at the central depository. These details should include the contract number relating to the documents. Confirmation of receipt in the central depository should be given to the contract manager, who has to record the location of the receipts in the relevant operational contract file.
- The process of receipt handling should be documented, managed, monitored and audited. Discipline regarding document handling should be as strict as possible and no deviations from the rules/procedures should be allowed. Any non-compliance should be sanctioned quickly and with appropriate measures.

Delineation of responsibilities

In managing warehouse receipts as collateral, there are many opportunities for fraud. To prevent or minimise this risk, banks should assign different functions and responsibilities to different personnel and build a firewall type of division between the functional units. The following delineation of functions may be considered:

- Personnel responsible for marketing (front-office) should work with clients and be responsible for the preparation and collection of the necessary documentation.
- The Administration Office (back-office) should be responsible for all further administration functions including maintenance of contract files and administrative management of the contract.
- The Financial Division should be responsible for all cash flow and cash flow related actions. It can also be responsible for ‘loan to value’ monitoring (discussed in Chapter 6).
- The Central Depository or Administration Office should take responsibility for the physical warehouse receipts and issuing of instructions for the release of documents.
- The Internal Audit should constantly monitor the process in all the departments and/or units involved.

Contract management

Finalising a contract is in many instances much easier than managing it. Commodity finance contracts often have follow-up responsibilities relating to market monitoring, documentation to be handed in, payments to be monitored, margin calls, monitoring of margin payments and decisions to liquidate the collateral. Although many of these activities will require Management’s decision, a dedicated person or division should be responsible for managing the process. Contract management is usually a back-office function, which should not be delegated to junior or inexperienced personnel due to its importance. It should be undertaken in collaboration with the front-office personnel who are normally in communication with the clients.

Liquidation of collateral

Where a client defaults it becomes necessary to liquidate the collateral. Liquidation of collateral should be done with great care as it required market knowledge and experience. A number of actions are involved in this process, including the following:

- The contract manager will signal the need to liquidate the collateral, this being done after consultation with the front office and the Financial Division.
- The information desk then provides information on prevailing market prices to the Head of the Financial Division, who has to authorise the liquidation at the recommended price. It must be understood that this decision has to be taken quickly as market conditions often change rather quickly.
- The designated officer in Commodities Division will then sell the collateral in the market at the mandated price level or higher. The process of selling is relatively easy in the coffee sub-sector because of the existence of the Auction. In the cotton sub-sector where no such formal market currently exists, traders and exporters can be invited to tender for the commodity, with the mandated price being taken as the minimum or reserve price.

Internal auditing

The whole process of commodity-based finance should be managed in a very disciplined way. Compliance should be strict and the process should be audited on a regular basis. Auditing usually focuses on figures and numerical results. However, auditing of operational procedures and the business approach is the key, in this context. Given the specialised nature of commodity finance, it is recommended that personnel from the Internal Audit Division are trained to enable them handle issues related to these transactions proficiently.

6 Loan-to-value monitoring

6.1 Introduction

Loan-to-value is part of the bank's compliance system but is treated specially because of the potentially high losses which can be incurred as a result of adverse price movements during the tenor of the credit. It involves measures to secure the intrinsic value of the collateral – ensuring maintenance of satisfactory relation between the loan value and the value of the collateral.

Warehouse receipts embody ownership of a certain market value as represented by the market value of the underlying commodity. The intrinsic value of such a receipt to the bank is equal to the net income after liquidation; and is determined by *the market value of the day, carrying-cost obligations and liquidation costs*. Both carrying-cost and liquidation costs have limited effect on the intrinsic value of the receipt and can to a great extent be determined with certainty well in advance. The daily market price is the major factor but is usually difficult to predict accurately. It is therefore understandable that compliance related to securing the loan-to-value ratio in a financing transaction is of utmost importance. Among the measures the banks should institute to maintain an acceptable loan-to-value ratio are "hair cutting", market monitoring and margining. These are discussed below.

6.2 "Hair cutting"

Hair cutting is one option the bank can adopt to limit the loan-to-value risk. It involves limiting finance provided against the warehouse receipt to a pre-determined percentage of the initial market value of the underlying commodity. The general price level, price volatility and the lender's general perception of the market will influence decision on this percentage. The higher the relative market price level, the higher the credit risk faced by the financier and, therefore, the more 'hair cutting' will be done. For instance, where risk of price decline is deemed high, the share of the initial market value of the underlying commodity that would be financed may be lowered (for example it may be reduced from the current average of between 70-80% to about 60% or even 50%). The recommended level has to be assessed by the Credit Committee.

6.3 Market monitoring

Given the fact that changes in daily market price constitute the major risk factor in ensuring loan-to-value compliance, constant monitoring of the market is essential. It is important not only to monitor price movements, but also all fundamental elements influencing the market, including supply situations in major producing countries and demand in the major markets for coffee and cotton.

The frequency of price observations will depend on the volatility of the market as well as on the source of price information. The more volatile the market, the more frequent the observations should be. *For details on how to monitor and interpret market information refer to Manual on Market Information Systems.*

6.4 Margining

Margining involves requiring the borrower to make a deposit – usually in an interest-earning account – which the bank can use to cover potential losses arising from adverse price movements. The amount is calculated on the basis of the total risk exposure of the entire account – implying the higher the risk of price decline the bigger the size of deposit that will be required.

An **Initial margin** is the initial deposit the borrower has to provide in contracting the loan. This margin acts as a performance bond and remains the property of the client until he dishonours the financing contract. The initial margin is paid back after full compliance with the financing contract by the borrower. In many cases, the initial margin is regarded as an interest bearing deposit, but this should be negotiated with the client.

Variation margins allow the bank to maintain an agreed value of the collateral. This is done by requiring the borrower to maintain the value of the collateral, for instance, by paying up the difference between the book value of the collateral and the market value when the book value is lower. Where the market moves in his favour of client, his account will be credited with the margin on that day. This is done on a daily basis.

The threshold to be maintained is negotiated with the client. Any variation margin agreement will demand a clear understanding on how the daily reference price (Mark-to-Market – MTM) will be determined. This is especially true for the cotton sub-sector in Tanzania where there is no independent formal price discovery system. Special arrangements should be put in place for margin-call cash flows. Normally, clients will mandate the financier to debit or credit their designated current accounts as and when necessary, with the variation margins.

7 Glossary of some inventory finance terms

Administration compliance
Administration compliance refers to procedures and systems put in place in the bank to ensure efficient management of transactions and contracts involving warehouse receipt finance. It includes physical documentation, delineation of responsibilities, contract management procedures, processes by which collateral can be liquidated and internal auditing of these systems.

Arbitrage
Arbitrage is the simultaneous purchase and sale of commodities to take advantage of price differentials.

Balance sheet financing
Balance sheet financing takes place where the bank accepts the quality of the balance sheet of an enterprise as the main and sufficient security for a specific loan or credit line.

Basis
Basis refers to the difference in prices of the same commodity at different locations and points in time. In Tanzania, Moshi might be a good reference point for basis calculation and the value of a commodity can be expressed in terms of a discount or premium to Moshi. Normally the spot or cash price of a commodity is used to calculate the basis. Future delivery dates will trade different premiums over the cash price. These premiums are called *basis levels*.

Basis trading
Basis trading in the commodity markets implies profiting from differences in commodity prices in different locations and from different points in time.

Bear market
Is a period of declining market prices.

Bid
A bid is the price a buyer is willing to pay for a specific commodity (for which the quality, quantity, location and storage status are known).

Bull market
Is a period of rising market prices.

Call option
A call option gives the owner the right but not the obligation to buy a specific amount of a commodity at a predetermined maximum price. The seller of the call option earns the premium but underwrites the risk of prices higher than the maximum price.

Carrying-cost
Carrying-cost refers to the cost of storage, insurance and finance charges incurred when holding a physical commodity.

Cash/spot market
This is where transactions between buyers and sellers of commodities entail immediate delivery of and payment for a physical commodity.

Cash transaction
Is a commodity transaction in the cash/spot market.

Inventory (or commodity) based finance
Inventory/commodity-based finance refers to finance against the intrinsic value of a commodity. The financier does not focus on the lender's financial status but primarily on the security locked up in the market value of the commodity.

Compliance
These are the operating systems specifically designed to ensure that the bank gets it right with regard to its obligations under legislation as well as to its obligations under internal rules in a financing agreement or contract.

Export parity
Export parity refers to the net earnings of an exporter and normally includes a reference to the location of the exporter, the destination of the exports, the commodity and quality of it, the price and currency as well as the time of delivery.

Firm bid/offer
A bid or offer is firm when it is rightfully assumed that the buyer or seller is contractually bound once the bid or offer is accepted by the other party. Acceptance of such a bid or offer implies a legally binding contract.

Forward transaction
Is a cash market transaction specifying a future delivery date.

Futures transaction
Is a standardised exchange-traded agreement to buy or sell a particular type and grade of commodity to deliver at an agreed place and time in the future.

"Hair cutting"
"Hair cutting" is the practice where banks discount a percentage of a commodity's market value when utilising the commodity as collateral for a loan. When market prices are very high and the financier is not comfortable to utilise the full market value of a commodity as collateral, the financier may decide to apply 'hair cutting' and only allow for example 75% of the market value as collateral.

Import parity
Import parity is the all-inclusive landed price of an imported commodity. Import parity will normally include reference to the source, the delivery point, the commodity and quality of it, the price and currency as well as the time of delivery.

Insurance compliance
Is the internally-instituted system to ensure that all insurance requirements are honoured or complied with.

Initial margin
An initial margin is collateral that an investor must deposit/provide when entering into a transaction and will normally receive back after completion of the transaction. The investor may even earn interest on this deposit.

Legal compliance
Legal compliance refers to all compliance relating to legal requirements as well as to ensure secure the legal interests/position of the organisation in all business activities.

Licensed warehouse operator
A licensed warehouse operator is one that is licensed by the Warehouse Regulatory Board to issue warehouse receipts for commodities deposited in his/her licensed warehouse. The operator is expected to have staff who are certified to handle commodities deposited at the licensed warehouses and their operations are subject to inspection by the Warehouse Regulatory Board.

Loan-to-value compliance
Loan to value compliance refers to procedures and systems instituted with the aim of securing the value of the collateral, including ensuring that depreciation in the intrinsic value of the collateral is promptly identified and steps taken to maintain it.

Loan-to-value ratio
This is the ratio between the nominal value of the loan and the book (intrinsic) value of the collateral.

Margin
A margin is collateral an investor must deposit/provide when buying or selling a commodity.

Offer
An offer is the price at which a seller is willing to sell a specific commodity (for which the quality, quantity, location and storage status are known).

Options
An option is the right to buy or sell a specific amount of an underlying commodity at a certain price within a specific time. An option can be obtained by paying a premium. Options can be exchange-traded instruments or issued 'over the counter'. An exchange-traded option is traded on a formal exchange and is a standardised financial instrument traded within the formal rules of an exchange. Exchange-traded options are regarded as safe instruments as the exchange/clearing house system guarantees the rights embodied in such options. Typically, the buyer and seller in any specific transaction will be anonymous. An **'over the counter' option** is an option that is negotiated between a specific buyer and a specific seller. The seller of the option must be regarded as a credible counterparty for the buyer.

Private warehouse
A private warehouse refers to a warehouse owned/managed by a company/individual and which does not store commodities for third parties. Such a warehouse does not necessarily need to comply with any specific storage/management requirements.

Put option
Is an option contract that gives the owner the right but not the obligation to sell a specific amount of a commodity at a predetermined minimum price. The seller of the put option earns the premium but underwrites the risk of prices falling below the minimum price.

Warehouse receipt
A warehouse receipt is a document legally issued by a warehouse operator confirming ownership of a commodity in the warehouse. Such a document is normally issued to a specific individual/company, indicating the specific commodity, quantity and quality of the commodity as well as the storage terms and conditions.

[i] Coffeenews.com.au