

BUSINESS MODEL FOR GRAIN MARKETING BOARD'S PARTICIPATION IN WAREHOUSE RECEIPT SYSTEM



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1.0 Background

In September 2020, government of Zimbabwe and private sector embarked on a pilot project for the Warehouse Receipts System in Zimbabwe. The pilot was to serve as a precursor to the establishment of a commodity exchange. By April 2021, significant progress aimed at operationalizing a regulated warehouse receipts system (WRS) and associated commodity exchange had been made. This was facilitated first, by the operationalization of the Warehouse Receipt Act (Chapter 18:25) of 2007 through Statutory Instrument No. 224 of 2020 (see Republic of Zimbabwe 2020).

One of the major successes scored include the installation and operationalization of the digital software and ecosystem for the WRS and commodity exchange. This system has also been integrated with the systems at the banks and a module for use by the registrar's office is in place. However, because spot¹ market rules were yet to be gazetted at the time of the pilot projected, trade on the platform was restricted to trials by a few actors² that participated in the pilot phase. Further, there are some storage facilities owned by TSL Limited that have been issued letters to confirm they have been certified for use under the WRS. The Grain Marketing Board (GMB) has expressed interest in getting 12 sites approved for use under the WRS. Some of these warehouses have already been inspected by the registrar of warehouses, pending approval. GMB facilities have been inspected, and processes leading up to the approval for use under the WRS are ongoing. Origen and Export Trading Group are the other two storage operators that have also expressed interest but are yet to submit the application forms to the office of the registrar.

The progress to date has also included some awareness and capacity-building activities targeted at some actors in the WRS ecosystem. However, these efforts were limited in scope and coverage given challenges around COVID-19 restrictions imposed by the government and the shortness of the pilot phase. The key actors targeted include transporters, commercial farmers and farmer groups, trader associations, warehouse operators, mobile phone network service providers, bank financial institutions, and regulatory arms of the government. Other actors that have been capacity-built include the GMB and some Commercial Banks.

As the single largest storage operator, the GMB is likely to emerge as the main actor offering storage facilities to individuals or firms wishing to lease storage or store produce in GMB warehouses that have been certified under the WRS. In view of this, and because of the progress made to operationalize

¹ The spot market rules govern the operations of the commodity exchange thereby facilitating trade in warehouse receipts on the commodity exchange.

² The trials conducted so far have involved Chimayo Farms and TSL limited, however for this transaction, money did not exchange hands since Chimayo farms is owned by TSL. The only exchange of resources occurred in a transaction involving the GMB and Silo Foods

the WRS and commodity exchanges in Zimbabwe, this report seeks to present business models available for use by the Grain Marketing Board in relation to full range of services under the WRS.

2.0 The Warehouse Receipting Concept

This section draws from two main sources, Giovannucci, Larson and Varangis (2000) and Wehling and Garthwaite, (2015). The basic WRS concept involves the following steps:

1. In an agricultural season, typically following harvest, a producer, processor, or trader deposits a commodity of known quantity and quality in a warehouse to take advantage of market conditions and maximize profits or access finance.
2. The depositor is then issued a Warehouse Receipt (WR) by the warehouse operator. The WR documents guarantee delivery of the deposited commodity to third parties since the warehouse will only release the stored commodity to the owner of both documents.
3. The Warehouse Receipt can be used by the depositor to access finance or acquire inputs from input suppliers. Because it specifies the quality and quantity of volume deposited, the warehouse receipt guarantees that the specified value of the commodity can be redeemed if the commodity is sold. The warehouse receipt is pledged to the financier as security for the input or cash loan issued.
4. The depositor of the commodity can choose to sell their commodity before the loan maturity period in consultation with the financier.
5. The processor/buyer can then repay the loan to the bank and in exchange receives the warehouse receipt from the bank.
6. The processor/buyer can then access the commodity from the warehouse since they now own the document of title.

3.0 Warehouse Receipt System Business Model for Storage Operator

This section discusses ways in which the Grain Marketing Board can interface with the WRS actors including, firms offering input or cash financing and depositors of commodities in the certified GMB storage facilities or farmers depositing grain in the GMB warehouses. While the business services are discussed in isolation, in practice, the GMB is likely to interact with farmers and other actors using all the business services discussed below.

Model 1: Deposit of a Commodity in a Warehouse with a View to Sell When Market Conditions are Favourable

The first business service involves the provision of storage services by the GMB to individuals or firms seeking to deposit grain under the WRS. Under this model, the depositor only seeks storage services for a specified period with a view to take advantage of market conditions. The stored commodity is

not purchased by a third party. The GMB will charge storage fees to the depositing party including the cost of issuing the Warehouse Receipt. In this case ownership of the commodity is retained by the owner of the Warehouse Receipts (i.e., the depositor). The main source of revenue for the GMB under this model is the storage costs, there are other costs that the GMB may charge including fumigation, cleaning, and bagging of the commodity as an added service on request from a client. A payment of the fees in form of grain could equally be consider at an agreed costing rate with a client to GMB. An example of costs to be charged to the depositor is given in the Table below, note that these charges exclude the cost of issuance of the warehouse receipt:

Table 1: Indicative Storage and Handling Fees Per Month and Per Metric Ton

Activity	Fee (US\$)
Cost of storage per metric ton per month	3
Handling in per metric ton (once off to depositor)	3
Handling out per metric ton (once off to the buyer)	3
*Cost to the farmer per metric ton at deposit	6

Source: LFSP/IPARI, (2021) *Initial cost to depositor per ton

Model 2: Deposit of Commodity with a View to Sale on the Exchange or Auction Market

In this business service, the depositor stores the commodity/grain with a view to sell the commodity. Upon issuance of a warehouse receipt from the GMB, the warehouse receipt then goes for an option to sale through a commodity exchange or any other price discovery means such as an auction system. For commodities whose price is fixed, the GMB can communicate the price of the commodity to the farmer and the costs of storage if any since they may procure that parcel for their account. The main source of revenue is also in the form of storage and handling charges to the depositor and any party withdrawing the commodity. Other charges such as fumigation may also apply to the depositor. However, it is recommended that the fees are streamlined and communicated more as a composite amount for easy of understanding while detailing what services they cover.

Model 3: Part Sale and Part Storage by the Depositor

The third business service is like model 2. An individual or firm first deposits their commodity in a GMB warehouse under the WRS. This is done with an intention to sell a fraction of the commodity instantly through an auction/commodity exchange while storing the remaining commodity in a GMB warehouse. The GMB's income stream under this model is from storage, handling and fumigation or cleaning charges to the clients.

Model 4: Grains for Inputs and Finance

Figure 1 below shows a business service that involves the deposit of commodities in a certified warehouse by an entity with a view to access agricultural inputs such as fertilizer, seed or agricultural machinery using grain as the collateral. The same flow-chart applies to individuals seeking cash from bank or non-bank financial institutions. In this model, the entity or individual depositing their commodity in a certified warehouse owned by the GMB can surrender part or all the deposited grain to access inputs or cash from financiers. Essentially, a specified fraction of the deposited commodity is exchanged for cash or inputs. In this model, the warehouse receipt acts as collateral which is pledged to the financier or to a merchandise for other goods and services.

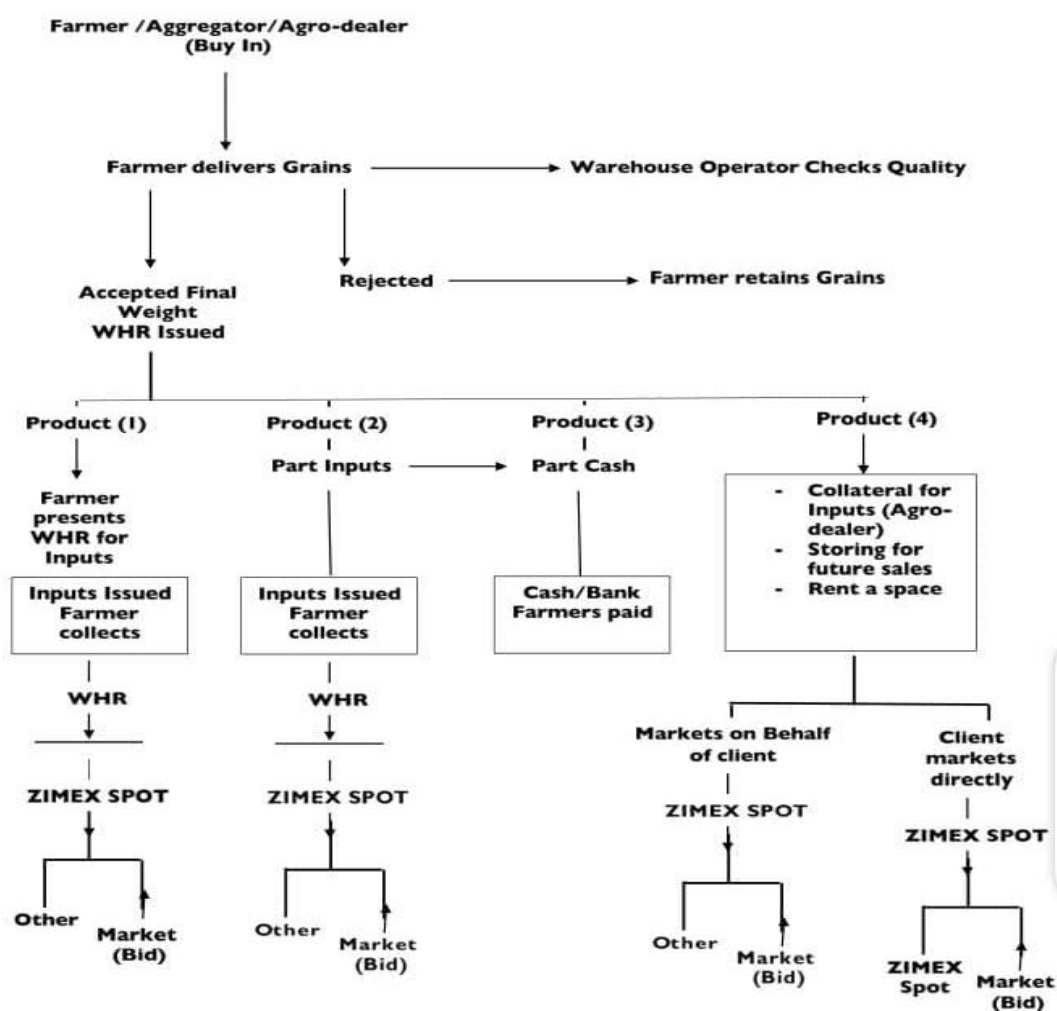


Figure 1: Grains for Finance Business Model

Typically, an estimated price of the commodity is worked out and the goods/services provided by the financier can be accessed. The warehouse receipt is given to the financier until the loan amount is paid

in full. This business model can also be used by smallholder farmers that usually pay membership fees or contributions in cooperatives to access government subsidies for instance. A farmer can pay for these dues using grain deposited in a certified warehouse to the government or other market actors while choosing to hold another fraction of the produce in the warehouse for later sale.

4.0 The Marketing Season

The marketing season will inform the cycle of the renew dates for the warehouse receipts that go beyond a given commodity marketing season.

White maize: Marketing season | April 2021 to 31 March

Wheat: Marketing season | Sept 2021 to 31 August

Soya beans: Marketing season | April 2021 to 31 March

5.0 Delivery Reference Point

The delivery reference point is for purposes of price discovery and marketing of commodities in this instance will be selected GMB depots across the country. The delivery reference point helps inform transport differentials for the purposes of trading.

6.0 Transport Differentials

Transport differentials are meant to inform clients the basis for pricing of the commodities only, they are not recommended transport rates. Transport rates will still have to be sourced from the transport market as is normally done. A template to guide the calculation of the transport differential has been provided in the Annex I. For example if Harare maize price is US\$290 per ton then Bulawayo transport differential is US\$30, then Bulawayo price for maize should be US\$290 less US\$30, that is US\$260 per ton.

7.0 Merchandise & Loans

Warehouse receipt could be used to access goods and services and finance from financial institutions. This utilisation will consider the projected future earnings that market may indicate from the commodity exchange platform. The price will then be discounted to cover costs associated with the transaction to ensure that the market price of that commodity does not fall to levels that it cannot payback or cover the loan. It's important that participants are aware of the added costs (interest on loan / financing) beyond the storing for a WRS used as collateral that may be charged by third parties to the transaction.

8.0 General Conditions for Storing

The participants to the warehouse receipts should be made aware at every storage facility through a one page document addressing the rights and obligations of depositor and that of GMB as warehouse operator. Further notice should encompass product, costs, ownership, expiring dates for the receipts and dispute resolution.

9.0 Additional Notes

There are some requirements to facilitate smooth conduct of business by the GMB under the WRS. A note is that this is not discussed in detail here. Other details on the gaps and requirements for the WRS in Zimbabwe to succeed are discussed in detail by IAPRI/LFSP, (2021). For purposes of the GMB interactions with the WRS, some requirements are as follows:

- First, actors in the Zimbabwe WRS need a reference laboratory that will sort any disputes related to the quality of the produce stored. An existing organization mutually agreed by the industry could be designated for this purpose.
- There is a need to establish the maximum volume of commodity that a warehouse receipt can hold.
- Minimum volume/quantity a depositor could tender to be stored.
- The contract size in terms of sales and the minimum volume to be traded on the commodity exchange must also be spelt out. This is crucial for lowering transaction costs. All this information must be communicated across the WRS ecosystem.
- There is a need to establish a reference delivery point, this is important in estimating the transport differential, and ultimately the value of stored produce. Multiple reference points can emerge later as the WRS system matures.
- The costs of storage, interest rates for finance etc., must be communicate to clients clearly. A note for the industry is that in providing the costs of storage to farmers depositing in warehouses, it is better to communicate this as a lump sum, too much detail (broken down costings) usually lead to confusion.
- Standardize to a large extent the main cost of providing these services while encouraging competitive pricing of among players for example the costs of storage, fumigation, handling in and out and costs of issuance of the warehouse receipt across the industry.

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Annex I: Template for Calculating the Transport Differential

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Grain Marketing Board

TRANSPORT DIFFERENTIALS

Transport differentials – Harare as a delivery point

Computations:

US\$ per-kilometre (\$PK) figure to a US\$ per ton (\$PT) using the formula below:

$$\text{\$PT} = \frac{\text{Distance} \times \text{RLF} \times \text{\$PK}}{\text{Payload}}$$

Where:

Distance is the distance in Km to Harare

RLF is the return load factor

\$PK is in US\$ per Km and

Payload is in tons

Distance=x

RLF= 50%

\$PK= \$5

Payload = 30ton

sn	Location	Distance KM	\$PT
1	Bulawayo		
2	Gweru		
3	Chitingwiza		
4	Mutare		
5	Kadoma		
6	Kwekwe		
7	Chinhoyi		
8	Masvingo		
9	Marondera		

Source (Distance Calculator): <http://distancecalculator.himmera.com>

N.B: 10KMS have been added to each location for accuracy