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AGRI-LENDING MANUAL 2025

True North Associates

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Sahaj
Partner for innovations in agricultural markets

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This agri manual was commissioned by the Swiss Agency for Development and Cooperation funded project Nepal Agricultural Market Development programme Phase II, also known as Sahaj. Sahaj is a bi-lateral project between Government of Switzerland and Government of Nepal. It is implemented by a consortium of Swisscontact (as the lead agency) and the Center for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED) on behalf of Swiss Agency for Development and Cooperation SDC.

The manual is a component of Sahaj, which aims to develop a thriving and inclusive agricultural sector that fosters employment and income growth in Koshi Province of Nepal. The agri-lending manual serves as a resource for Banks and Financial Institutions (BFIs) from all over Nepal to enhance their knowledge and practices in agricultural lending.

The manual was developed by True North Associates. The content of the manual has been informed from research, interviews, and gap analyses conducted with Nepali banking professionals, policy makers and agri-businesses. The manual highlights the importance of understanding the nature of agriculture business, borrowing purpose, needs, and context, but it is not intended to be exhaustive or prescriptive. This manual should only be used as a guiding resource rather than as a standalone solution for addressing institutional challenges in agricultural lending.

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AGRI-LENDING MANUAL 2025

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We would like to present this manual as a dynamic document, and we look forward to its continued evolution as it adapts to the changing needs of the agricultural sector in Nepal. We hope that it will serve as a valuable resource for all stakeholders involved in agricultural lending, contributing to the growth and sustainability of Nepal's agricultural sector.

CONTENTS

List of Abbreviations

ADBL	Agriculture Development Bank Limited
BFIs	Banks and Financial Institutions
CAD	Credit Approval Discretion
CAPEX	Capital Expenditure
CEAPRED	Center for Environmental and Agricultural Policy Research, Extension and Development
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
FLDG	First Loss Default Guarantee
ICR	Interest Coverage Ratio
LTV	Loan-to-Value
LC	Letter of Credit
NAMDP	Nepal Agricultural Market Development Programme
NAS	Nepal Accounting Standards
NFRS	Nepal Financial Reporting Standards
NPL	Non-Performing Loan
NRB	Nepal Rastra Bank
NTA	Net Trading Assets
OPEX	Operating Expenditure
PO	Purchase Order
ROA	Return on Assets
ROE	Return on Equity
SDC	Swiss Agency for Development and Cooperation
WC	Working Capital
WRF	Warehouse Receipt Financing

Overview of the Manual

1.1. Purpose and Scope

This agri-lending manual, commissioned by Sahaj and developed by True North Associates, is designed to support Banks and Financial Institutions (BFIs) to enhance their agricultural credit practices. It is meant to complement the existing credit policies, and provide guidance for institutional agricultural lending than serve as a standalone resource for lending.

The manual begins with an overview of the agriculture sector lending, and offers a macroeconomic perspective on policies governing agri lending, and current agri-lending scenarios of Nepal. It then outlines core lending risk assessment guidelines and translates to them to meet the sector's unique requirements.

The risk assessment guidelines cover general risks, credit facility risks, and financial risks. In doing so, it builds sector-specific perspectives to assist users in analyzing risks and considerations relevant to the agricultural sector.

The manual has categorized agricultural sector is categorized into four main value chain sub-sectors:

- Agri-inputs
- Agri-production
- Agri-processing
- Agri-infrastructure

Agri-trading is considered the fifth cross-cutting sector.

For each sub-sector, the manual addresses key lending elements, including borrowing purposes, nature, and suitable credit facilities that can be extended based on the purpose and nature of each sub-sector. Additionally, sub-sector-specific risks that are not highlighted in the over-arching lending risk assessment guidelines are also discussed.

The manual further outlines key considerations for evaluating collateral valuation and credit administration decisions specific to the sector.

The annexures provide decision-making tools to assist lending officials in refining their decision-making processes and improving credit lending in agriculture.

Designed for branch managers, relationship officers, and credit appraisal officers, the manual can also assist decision makers to develop or enhance internal agri-lending frameworks. By applying the manual's insights, BFI professionals can be equipped to evaluate risks associated with agri-lending, tailor more effective lending solutions for the sector, and foster more sustainable financing practices to potentially improve the sector's contribution to institutions' financial performance.

This manual incorporates an agricultural perspective into overall risk assessment, collateralization, and administration. It guides users to adapt its use to evolving regulatory policies and market conditions. The current version is a dynamic document aligned to the rules and standards set by the Nepal Rastra Bank (NRB) and Nepal Financial Reporting Standards (NFRS). It aims to support existing credit facilities and policies followed by banks and financial institutions.

1.2. Limitations

This agri-manual is intended to serve as a guiding document that should be used in conjunction with the bank's credit policy, human resources (HR) policy, accounting and administrative policies, and asset-liability management policies. It is not a standalone resource but a complementary tool designed to improve and align along with existing policy documents approved and implemented by the respective bank's decision-making authorities.

Users of this manual are responsible for ensuring that any recommendations they choose to adopt comply fully with existing institutional policies, protocols, and procedures, as well as with applicable laws, regulations, and directives governing the institution.

The content of this manual is informed by knowledge and insights gained from policy reviews, a study of the BFI and agri-lending landscape, interviews with bank staffs, policy makers, agri business, and a gap analysis of the sector. The guidelines provided should be interpreted within the context of evolving market conditions, regulatory updates, and institutional needs. As such, recommendations should be adapted and recalibrated as necessary to meet changing requirements.

It is the responsibility of relevant personnel and departments to assess and implement the manual's recommendations as appropriate within the fitting context. Any such incorporation must follow the bank's internal approval processes and align with its policies.

The producers of this manual disclaim any liability or accountability for its use. Readers are advised to exercise discretion, sound judgment, and professional experience when considering the implementation of the recommendations provided.

1.3. How to use this Manual

Developing specialized agri-lending guidelines and regular training programs for staff effectively institutionalizes knowledge and enhances the ability to assess and manage agricultural risks. This manual aims to support that effort by aligning risk evaluation with the agriculture sector's unique needs and serves as a practical tool for agri-lending decision-making and administration.

The manual is relevant for individuals involved in the origination, disbursal, administration, and monitoring of agriculture loans. Management and the board can use these guidelines to develop internal lending policies. Bank managers, credit officers, and relationship managers can leverage this manual to improve the agriculture lending process. It provides insights into agriculture sector lending, along with a step-by-step guide for assessing risks, evaluating sub-sector-specific agri-business proposals, enhancing collateral charges, and administering and monitoring loans. Each of the six stand-alone chapters can be referenced according to the user's specific needs.

The manual's logical flow is as follows:

Chapter 1 provides the economic context of agriculture lending.

Chapters 2 and 3 highlights key inherent risks in the agriculture sector and contextualize standard credit facilities and financial risk assessment guidelines.

Chapter 4 defines agricultural sub-segments and evaluates each sub-sector using standard credit facilities and financial risk assessment guidelines.

Chapter 5 of the manual describes how banking professionals may need to consider agriculture financing-specific factors beyond standard processes for accepting assets as security or collateral and executing documents to establish the lender's charge. It expands on the collateral risks associated with agri-lending, highlighting how lenders can make suitable choices regarding the security charge by determining the asset's nature and the level of control required. Available agri-insurance policies are discussed to safeguard against potential collateral risks.

Once credit is extended, **Chapter 6** highlights how the institution and borrower can formalize the loan through a contractual arrangement. A structured system for regular monitoring is shared to mitigate sector-specific risks and ways to safeguard the institution's exposure is highlighted.

Further, tools and case studies are provided in the annexure section to contextualize the lending.

What will the readers learn?

- An overview of the agriculture sector and its segments
- Inherent and emerging risks in the agriculture sector and their impact on lending
- Distinct characteristics and financial requirements of agri-businesses and ways to contextualize standard credit facilities and financial risk assessment methods to meet the needs of each agri-segment.
- A step by step guideline to assess risks and extend credit facilities to agri-businesses in each sub-segment: agri-production, agri-processing, agri-infrastructure, agri-inputs, and agri-trading.
- Specifics of agriculture financing—integrated assessments, collateralization, insurance, and administration.

INTRODUCTION TO AGRI-LENDING

2. Introduction to Agri-Lending

2.1. Agri-lending in Nepal: Policy Driven Growth

Between 2011/12 to 2023/24, agricultural lending in Nepal has witnessed remarkable growth. In 2011/12, less than 5% of total commercial bank lending was directed toward the agriculture sector[1]. However, driven by concerted government initiatives and regulatory mandates, agriculture credit has grown at a compounded annual growth rate (CAGR) of approximately 23% (refer footnote), significantly outpacing the overall loan growth rate by 27 percentage points. This reflects regulators' and policymakers' strategic focus on positioning agriculture as a cornerstone of economic productivity and modernization.

History of agriculture sector prioritization

The monetary policy of 2011/12 directed banks to allocate at least 10% of their lending to productive sectors, which included agriculture, energy, tourism, and cottage industries. Building on this foundation, the 2013/14 monetary policy mandated commercial banks to allocate 20% of their credit portfolio to the defined productive sectors by mid-July 2015, with a specific requirement that at least 12% be directed toward agriculture and energy. These changes signaled a clear priority for fostering credit-led growth in agriculture and other critical sectors.

The unified directive issued by Nepal Rastra Bank (NRB) in 2014/15 further revised the focus from "lending to the deprived sector" to "lending to the deprived and priority productive sectors." This broadened the scope of mandatory agricultural lending. Additionally, the 2014/15 monetary policy expanded the regulatory framework to include development banks and finance companies. Development banks were required to allocate 15% of their credit and finance companies 10% to the defined productive sectors by mid-July 2016, accompanied by action plans for achieving these targets.

As per NRB unified directive 2023/24, a minimum of 15% of loans must be disbursed by commercial banks to the agriculture sector by mid July 2027. 'B' class financial institutions must disburse a minimum of 20% of their total loans and advances, and 'C' class financial institutions must disburse a minimum of 15% of their loans in the sectors of agriculture, micro, cottage, and small enterprises/businesses, energy, and tourism.

By mandating these specific lending allocations, the government of Nepal and NRB has made efforts to boost investment in agriculture sector. The policies have aligned financial sector priorities with national development goals to ensure that the agriculture sector receives financial resources critical to its growth.

The steady increase in financial support for agriculture, catalyzed by targeted monetary policies and directives, has laid the groundwork for transforming the sector into a modern, productive, and sustainable pillar of the economy. In doing so, it has positioned agricultural credit as a cornerstone for fostering economic development.

1 Data sourced from NRB, current macro-economic and financial situation (2023/24)

Since the policy initiatives are driving the growth of agricultural lending in Nepal, it is essential to understand the current practices, challenges, and opportunities observed among Banks and Financial Institutions (BFIs). The findings highlighted are derived from interviews with BFIs and provide insights into the state of agri-lending today.

2.2. Current Context of Agri-Lending Practices in Nepal

Current Status of Agri- Lending

From the BFIs that were interviewed, we discovered that BFIs employs both centralized and decentralized approaches to extend agri-loans. Loans below NPR 150 million, categorized as retail, originate through decentralized processes involving relationship managers or officers at branch levels, with recommendations for appraisal provided by branch managers. Conversely, corporate loans (loans above NPR 150 million) are processed centrally, with origination, underwriting, and approvals managed by centralized risk departments.

Both approaches operate within the Credit Approval Discretion (CAD) framework, ensuring lending decisions align with institutional authority structures. To manage the complexities of agricultural lending, few BFIs include technical agriculture experts in their teams, while some have floating departments with such experts to guide loan origination and risk assessments.

The current practices among Banks and Financial Institutions (BFIs) in Nepal reflect a mix of progress and challenges.

Challenges

The agri-lending portfolios of BFIs are largely driven by Nepal Rastra Bank's directive mandating 15% of total credit to agriculture by 2027; the current mandate requires banks to allocate 12% of their lending portfolio to the agriculture sector by mid-July 2025[2].

BFIS are currently meeting this target; however the targets are not being matched through direct lending to the productive agriculture sector. They meet this target through a combination of organic lending, lending through other BFIs, refinancing (comprising 50-70% of agri-loans), and investments in agri-bonds issued by the Agriculture Development Bank Limited (ADBL).

Despite compliance with regulatory directives, BFIs have expressed concerns about heightened risks in agricultural lending and limited enthusiasm for expanding exposure to this sector.

Key challenges in agri-lending include higher default rates. As per the data by NRB, the average non-performing loans (NPLs) of class A financial institutions in the fiscal year 2023-24, stood at 3.89%[3]. As reported in the interviews, average (NPL) rate for agri-specific NPLs exceeded 10%.

Aggressive regulatory targets, coupled with the sector's inherent risks, have contributed to these elevated default rates.

While, causality between that of specialized lending and agriculture sector growth was not explored during the course of interviews. Our findings revealed that most BFIs do not have tailored agri-lending products; instead, they rely on umbrella products used across multiple

2 Credit and financial access in Nepalese agriculture: prospects and challenges. the journal of agriculture and environment Vol:23, June 2022
3 Data derived from NRB key financial indicators of commercial banks (Mid-April 2024)

sectors. 90% of BFIs interviewed shared that they are in the process of developing commodity-specific guidelines and products, yet these efforts remain at early stages.

Another critical challenge lies in the skill gaps among banking staff. Many lack the expertise to evaluate unique agriculture sector specific risks, such as market risks, infrastructure risks, borrower-specific risks, climate effect, credit facilities, financials, and collateral-specific risks. Instances of loan diversion into non-agricultural activities, such as real estate investments, indicates the need for enhanced due diligence.

These findings highlight the necessity for assistance in conducting benchmark risk assessments and identifying mitigating factors.

Additionally, BFIs have yet to fully integrated agri-lending capabilities into their practices, and the institutional knowledge of technical agriculture experts remains underutilized due to insufficient training and skill-sharing mechanisms.

Most agricultural lendings are concentrated in the Koshi (21%), Lumbini and Madhesh Pradesh (18), and Bagmati (16%) provinces[4].

As per the NRB data, the total agriculture loan amount at the end of financial year (2023/24) stood at NPR 417 Billion, where 20% of the total loan was disbursed through concessional loan schemes. The average loan size of concessional loan was NPR 1.8 million[5].

Opportunities

Despite the highlighted challenges, BFIs recognize opportunities to improve agricultural lending practices. Many have emphasized the need for risk-sharing mechanisms, such as First Loss Default Guarantees (FLDGs), to encourage safer lending.

Increased investments in agri-bonds are also seen as a viable way to meet regulatory requirements while mitigating direct exposure to high-risk borrowers.

Additionally, the development of specialized agri-lending guidelines and regular training programs for staff are seen as ways to institutionalize knowledge and improve the ability to assess and manage agricultural risks effectively.

Our findings highlight the evolving landscape of agricultural lending in Nepal. It underscores the complexities and opportunities in Nepal's agricultural lending landscape, and recognizes areas where BFIs can be supported to strengthen their agricultural lending portfolios. This manual aims to extend that support.

By aligning risk evaluation with the unique needs of the agriculture sector, this manual serves as a practical tool to enhance agri-lending decision-making and administration.

4 Estimates derived from data published by NRB, economic bulletin 2024, and current macro-economic and financial situation 2023/24.

5 NRB interest subsidized loans till February 2025.

RISK ASSESSMENT GUIDELINES

3.1 General Risks Associated with Agri-Lending

Agriculture sector can be exposed to many sector-specific risks. This part of the manual details some guidelines which can assist in carrying out a benchmark risk assessment and working out the mitigating factors:

3.1.1. Demand and Supply Risks

Businesses that deal in agricultural products and services, will be influenced by general market factors such as demand and supply. An assessment of the borrower's primary products or services' historical demand and supply trends (volumes), as well as estimates for the medium and long term (between 5 and 10 years), can help establish the integrity of their sales projections.

Risks

- Unsustainable demands for core offerings may put into doubt the borrower's financial projections and repayment capacity.
- Excess capacity, low entry barriers, substitutes, and inexpensive imports can all contribute to oversupply and negative prices.
- Perishable agricultural products offer substantial risks due to their limited shelf life.
- Cyclical nature of demand and supply can cause short- to medium-term demand-supply mismatches.

Assessment, mitigations & controls

- Conducting a stress test by adjusting sales forecasts can assess a borrower's ability to service debt during adversity.
- A moratorium period to repay principal or a balloon repayment plan might provide flexibility to deal with initial demand sluggishness if the borrower can service their interest.
- If demand or supply is cyclical or subject to short-term volatility, a customized repayment schedule or short-term financing support can be proposed.
- If the risk's potential impact is higher and challenges the borrower's repayment capacity at the proposed debt mix, a lower loan-to-value (LTV) ratio can be proposed.

3.1.2. Duties and Subsidies Risks

An assessment of the significance of import duties and subsidies on the borrower's sector can help assess the reliance on the government policies.

Risks

- If the government plans are less sensitive on imposing trade barriers or the historical trend suggest that they are being relaxed, it might pose risk of increased competition from the imported products.
- If any forms of government subsidies, e.g., interest subsidy, input subsidies, etc. is the main differentiating factor it can be a risk if the government withdraws the support.

Assessment, mitigations & controls

- Conducting a stress test by adjusting the sales or margin forecasts can assess a borrower's ability to service debt if the benefits of duty differentials or subsidy extinguish. However, it will have to be justified by expressing a reason as to why the government is likely to change its policy.
- If the risk's potential impact is higher and challenges the borrower's repayment capacity at the proposed debt mix, a lower loan-to-value (LTV) ratio can be proposed.

3.1.3. Interest Rate Fluctuations

The margins of businesses that deal in agriculture sector products and services tend to be highly sensitive to fluctuations in interest rates. An assessment of how a business's revenue, costs, and margins will react to changes in interest rates can help establish a borrower's capacity to service debt.

Risks

- If a borrower relies on funded facilities (e.g., short-term loans, overdrafts) for working capital, rising interest rates can increase financing costs, making it more expensive to hold inventory, procure inputs, and manage operations. This can reduce gross margins and weaken financial flexibility.
- Higher interest rates increase debt servicing costs, reducing available cash flow for day-to-day operations, expansion, or unforeseen expenses. This may heighten default risk if the borrower struggles to meet financial obligations.
- If financing costs and input costs rise simultaneously, but product prices remain stagnant, profit margins may shrink, affecting business viability and repayment capacity.
- Borrowers with variable interest rate loans are more sensitive to interest rate hikes; this can lead to unpredictable debt servicing costs and potential financial distress.

Assessment, mitigations & controls

- Conduct stress tests to determine how changes in interest rates affect cash flow, input costs, and commodity prices relevant to the business.
- Determine if the borrower's facilities have fixed or variable interest rates. Borrowers with variable interest rates may need a customized repayment schedule or alternate short-term financing to mitigate variations.
- Examine the borrower's interest coverage ratio (ICR) and past financial performance under various rate scenarios. If margins are tight, a lower loan-to-value (LTV) ratio or a longer period of repayment may be necessary.

3.1.4. Climate Effect

The impact of a sustained increase in the average global temperature and growing variability in rainfall and humidity patterns is known as the climate effect. The global mean annual temperature is steadily rising. Many regions of Nepal, particularly central and western areas, are experiencing more frequent and intense heavy rainfall events, the mid-hills, are facing prolonged dry spells.

Another reason why Nepal's agriculture sector remains highly vulnerable to climate effect is its reliance on monsoon rainfall and rising variability in monsoon precipitation.

The climate effect is manifested through symptoms such as droughts, floods, and disease outbreaks can have an impact on farmland yields, animal productivity, and overall agricultural output. An assessment of the climatic effect on the borrower is therefore necessary since it can help assess the impact on the borrower's productivity and repayment capacity.

Risks

- If a borrower's business is heavily dependent on natural rainfall and temperature patterns, agricultural productivity may fluctuate, affecting the borrower's revenue and repayment capacity.
- Shifts in temperature and rainfall patterns can reduce agriculture and livestock productivity by affecting water availability, fodder supply, and biological cycles.
- If borrowers rely on agricultural produce as primary inputs for the business, any climate-induced changes in yield can cause supply shortages, affecting input costs, availability, and overall supply chain continuity.
- Climate effects can increase the likelihood of floods, droughts, and disease outbreaks, which can disrupt planned production cycles and anticipated financial returns.

Assessment, mitigations & controls

- Conducting climate resilience assessment by evaluating whether the borrower has climate control systems—such as greenhouses, temperature regulation, and independent irrigation systems—can help determine their exposure to climate risks and ability to meet projected production.
- For borrowers reliant on agricultural inputs, assessing the availability of alternative supply sources and the strength of multiple supplier relationships can provide insights into their ability to withstand climate shocks.
- If a borrower's business is highly dependent on natural ecosystem services for water availability or feed supply, the risk potential is higher. In such cases, a lower loan-to-value (LTV) ratio or customized financing structures may be necessary to account for heightened vulnerability.
- Specific insurance policies are available to cover climate effect related risk in certain agri-production activities. The insurance policies include weather-index insurance and cover phenomenon related to drought, flooding and other perils. **The details can be referred to at: collateral>Insurance coverage.**

Note: Nepal's Green Finance Taxonomy 2024 has highlighted four core principles to guide green investments two of these include climate change mitigagation and climate change adaptation.

Under these core principles, adaptation and resilience finance are referred to as those financing activities that can support the transition to a climate-resilient economy. This includes investments in measures that reduce the vulnerability of communities, ecosystems and economies to the impact of climate change.

3.1.5. Infrastructure-Related Risks

Due to the perishable nature of its production, agribusinesses tend to be highly dependent on its infrastructure, from farm to market. Adequate irrigation systems, land management practices, storage facilities, and road and market connectivity can add significant advantages to agribusiness's value chain,

while lack of these can add inefficiencies and losses throughout the value chain. An assessment of infrastructure access, reliability, and strength can help evaluate whether a borrower can optimally utilize its existing resources and leverage extended credit facilities.

Risks

- A lack of an irrigation system can increase agribusiness's reliance on natural rainfall, expose firms to production swings, and lead to unpredictable revenue. Without irrigation, emergency water procurement may increase operating costs and reduce profit margins, or it may result in partial or overall crop failure, affecting the borrower's debt payment capacity.
- Land is a direct contributor to some agribusinesses. If an agri business is running on a commercial-scale, it may need additional land to support business expansion. To not surpass land ceiling limits, the land may need to be leased out. Unclear land titles, informal lease agreements, or disputes over land rights may create litigation risks; sudden land repossession can disrupt production cycles and jeopardize loan repayment.
- Inadequate or improper warehousing and storage facilities can lead to post-harvest losses, particularly in perishable goods, and may call into question the borrower's sales projections and repayment capacity.
- Another risk can arise from weak road and market connectivity. Poor road connectivity can create commercial risks due to supply chain challenges at each stage of value addition. Limited access to transportation facilities can hinder producers' ability to maintain product quality and reach consumers on time. This may increase operational costs, reduce profit margins, and allow competitors, who have easier access to the market, to substitute the products. As a result, projected revenue can become undermined.

Assessment, mitigations & controls

- A lower loan-to-value (LTV) ratio may be appropriate for borrowers who rely entirely on rain-fed agriculture and do not have access to irrigation facilities.
- The tenure length, renewal provisions, and legal enforceability of lease agreements are all useful factors for assessing protection from prospective legal disputes. Interviewing landowners can ensure that land ownership and leasing terms are in accordance with the agreements.
- If storage infrastructure is insufficient, consider the viability of contracted storage solutions or off-farm warehousing partnerships. If neither option appears practical, lower LTV percentages can be recommended.
- Assess the distance and quality of road connectivity between the production facility and the key markets. If the borrower has limited access to competitive marketplaces, check into contract farming arrangements or aggregator networks.

3.1.6. Borrower Specific Risks

The agriculture sector is a specialized sector and, like any other specialized business, requires a specific set of skills, technical knowledge, and experience. A lack of a borrower's exposure in handling agricultural production, processing, marketing, or managing sector-specific risk can impact a business's viability and financial stability. So, assessing the founder's technical competence and operational experience is critical in evaluating a borrower's ability to sustain and scale their agribusiness.

Risks

- If a borrower lacks local economic knowledge of crop cycles, soil management, pest control, or livestock care, the borrower's decision-making may be slow or ineffective and can lead to missed opportunities, delayed problem identification, production inefficiencies, and losses.
- If they have limited network outreach, it can increase search costs, restrict access to quality inputs, and reduce the business's overall ability to manage supply shocks.
- Poor understanding of market dynamics and credit cycles can result in financial mismanagement, over-leverage, and cash flow mismatches.
- Unfamiliarity with modern farming techniques can hinder the adoption of climate-resilient practices, new technologies, and regulatory compliance, increasing long-term risk exposure.

Assessment, mitigations & controls

- Assessing the founder's academic and family background, hands-on experience, and industry exposure is crucial in evaluating their ability to manage agricultural production, cycles, operations, and risks. Requesting a CV with the loan proposal can help gauge the borrower's risk profile.
- If the founder lacks direct expertise, evaluating the presence of technical advisors, agronomists, or structured partnerships can help in cushioning the operational risks.
- Where expertise gaps pose a high operational risk, a lower loan-to-value (LTV) ratio or additional financial and technical due diligence may be warrant.

3.1.7. Labor and Mechanization Risks

Labor and mechanization are critical components of agricultural productivity. The two resources have trade-offs, as well as implications on business cost structures, operational efficiency, and borrowers' repayment capacity.

Risks

- Investing in agricultural mechanization requires significant long-term CAPEX investment. If equipment is not optimally used, due to seasonal demand or small farm sizes, it may not generate expected returns and may lead to over-leveraging and inefficient cost recovery.
- If the agribusiness is in regions that face shortages of skilled machine operators, the cost of hiring labor can increase. Additionally, hiring skilled machine operators may increase wages and impact profit margins.
- If the region does not have access to skilled machine operators, poor maintenance and unexpected machinery failures can result in expensive repair costs, operating delays, and loss of productivity.
- If the machine is highly specialized, its resale value may be poor, which can have an impact on its liquidation.

Assessment, mitigations & controls

- To minimize overleveraging, it may be required to assess whether machinery investment is appropriate for farm size, productivity needs, and financial capacity. At this step, it may be required to assess whether the borrower has an organized plan for machine utilization, such as shared usage or rental income.
- If the machine does not justify its contribution to the borrower's business, granting a credit facility that corresponds to its historical revenue may be considered.
- If the machinery is highly specialized, requires a competent operator, and has a low resale value, a lower loan-to-value (LTV) ratio may be recommended.

3.1.8. Supply Chain Disruption and Inventory Risk

High bargaining power of suppliers and buyers can affect profits and revenue earned by the borrower. On the other hand, lack of adequate supply chain infrastructure can further impact borrower's operational efficiency and margins.

Risks

- If the borrower is dependent on a limited number of suppliers or distributors, procurement disruptions or supply shortages can impact inventory availability and overall business sales.
- If borrowers store commodities in bulk to compensate for any supply-side fluctuations, a lack of adequate warehousing or logistics infrastructure can lead to inefficient stock management, margin compression, or losses.
- Conversely, if the borrower's sales depend on a small number of buyers, revenue concentration risk can increase, making the business vulnerable to delayed payments or contract cancellations.
- If supply chain inefficiencies or seasonality result in procurement delays, businesses may experience stock-outs, increased storage costs, or working capital constraints, which can impact business margins.
- If procurement cycles are misaligned with sales realization, liquidity gaps may arise, impacting loan repayment schedules.

Assessment, mitigations & controls

- Assess the stability and reliability of supplier and buyer relationships, as well as procurement and sales channels. Evaluate the feasibility of incorporating fixed-price contracts or forward purchase agreements between buyers and suppliers.
- Evaluate historical inventory levels and seasonal demand fluctuations to assess the effect of variations on the borrower's stock availability and adjust for sales forecasts. Conduct stress testing on financial projections by adjusting for different stock volatility scenarios to assess the borrower's resilience under adverse conditions. If exposure to fluctuations is significant, require additional margin buffers in loan structuring to accommodate profit compression risks.
- Verify the borrower's storage capacity and logistics efficiency, including warehouse facilities, third-party storage agreements, and transportation arrangements. If storage facilities are inadequate, evaluate warehouse financing options or require collateralization of stored inventory through warehouse receipt financing.
- Examine historical cash flow trends to assess whether procurement and sales cycles are well-matched. If cash flow stability is uncertain, structuring repayment schedules to align with seasonal peak revenue periods can be proposed. If repayment risks due to cash flow variability are high, consider a balloon repayment structure or flexible tenure adjustments.

3.1.9. Currency Risk

Agriculture sector also remains volatile to currency risks, which can arise from local currency devaluation or temporary fluctuation in exchange rates.

Risks

- If the borrower imports agricultural inputs, currency depreciation can increase procurement costs, and lead to higher working capital requirements and reduced profitability.
- If the borrower relies on Letters of Credit (LCs) for import transactions, adverse currency movements between order placement and settlement can inflate costs, and affect business's financial margin.

Assessment, mitigations & controls

- If the borrower relies on import financing, incorporating supplier credit arrangements in local currency can help manage foreign exchange exposure.
- Evaluate the borrower's ability to absorb pricing shocks by conducting stress tests that adjust procurement costs based on currency fluctuations.
- If working capital cycles are likely to be extended due to currency risks, then integrating forward contracts can stabilize financial projection, such avenues can be proposed and explored.

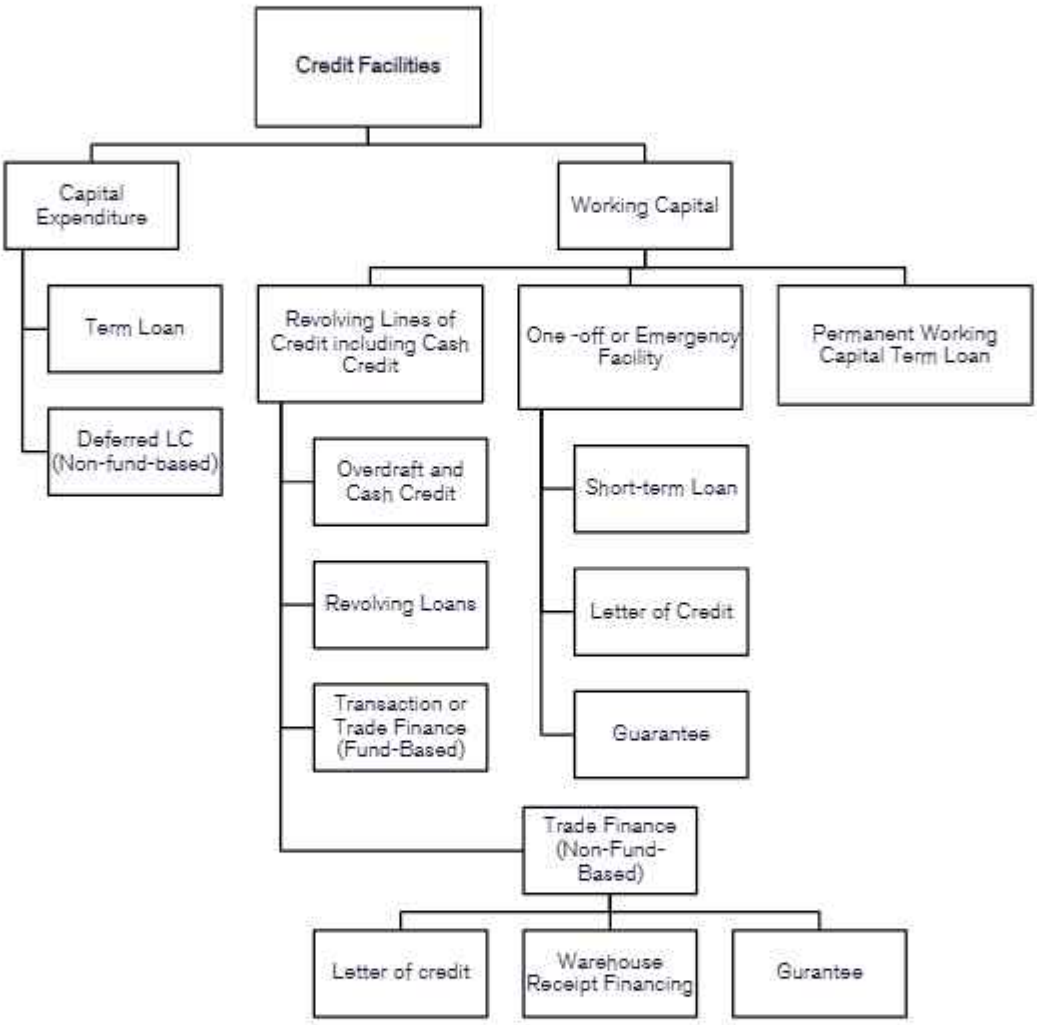
Note: Besides, risk- specific mitigation strategies mentioned in this section, to safeguard against potential collateral risks, the borrowers can be mandated to avail appropriate insurance policies that are available in the market. The available insurance policies and key considerations to be made are explained in details under 5.3 Insurance Coverage.

3.2. Credit Facilities Risk Assessment Guidelines

Background

Agricultural finance have distinct characteristics and financial requirements. However, given the current business environment, banks and financial institutions will be required to provide all of the sector's needs through the standard credit facilities that they provide. There are sector-specific characteristics to consider while developing the process flow. This section of the manual explains how to use each facility to finance the sector's specific needs.

Standard Credit Facilities



Each loan type serves a specific business need. Therefore, a comprehensive knowledge of each of them is essential to assess the borrowing need of the client and to offer the most suitable one.

3.2.1. Capital Expenditure (CAPEX)

Loans can be used to buy or construct long-term assets like real estate, equipment, biological assets, or infrastructure. It can also be used to refinance (swap) loans obtained by the customer for the same purpose.

The main steps that should be taken to finance capital expenditure in agriculture financing are as follows:

Step 1: Establish Borrowing Cause

Businesses will require long-term debt to finance or refinance (swap) loans that have been obtained for the investment in non-current assets. If we categorize them on the basis of the Nepal Financial Reporting Standard (NFRS), the agricultural sector would require credit facilities for the three major types of such assets. They are as follows:

Property, plant and equipment: land, building, machinery, motor vehicles, furniture and fixtures, office equipment, bearer plant, etc.

Note: The bearer plant is a living plant that:

- Is used in the production or supply of agricultural produce;
- Is expected to bear produce for more than one period; and
- Has a remote likelihood of being sold as agricultural produce, except for incidental scrap sales.

Tea plants are a typical example of a bearer plant, as they satisfy all three conditions as required by the NFRS.

Intangible assets: Preliminary expenses, and other capitalized expenses (during incubation period).

Biological assets: bearer plant (life of more than one year), bearer or consumable living animal (life of more than one year).

Note: The underlying activity of the business determines whether an item is classified as a biological asset or not. Furthermore, any asset that does not comply with all three criteria for a bearer plant that should be recognized as a "biological asset," provided it has a life of more than a year.

If the business's primary activity is to produce and/or sell plants and living animals, the assets should be classified as current assets and cannot be financed using any of the instruments specified for financing capital expenditure.

The primary objective of raising hens from an egg-laying breed is to sell the eggs that they produce. They are held for longer durations than the meat-producing breed. They qualify as a bearer living animal because anyone raising them would look to sell the eggs that these birds lay. Therefore, they could be considered as "biological assets" even if they are sold for poultry meat after egg production ceases.

Step 2: Establish Nature of the Asset

Lenders need to understand how the borrower's assets contribute to their business. Some contribute directly to income and core activities, while others provide indirect benefits, such as support for core activities or operational cost savings. This exercise can help in assessing the significance of the assets to the borrower's business. Based on it, the assets can be classified in the following categories:

- **Direct contributors**: production facilities, land (for farming purposes), bearer plant, biological assets, etc.
- **Indirect contributors**: land (for production, warehousing or administrative facilities), tractors, transport vehicles, warehouses, etc.

Step 3: Identify the Credit Facility

The BFI can offer fund-based or non-fund-based facilities as follows:

- **Long-term loan:** A fund-based loan that would have a tenure exceeding one year and be repaid in installments.
- **Deferred payment LC:** An LC facility that would allow payment of bills in whole or in part above one year.

Accurate assessment of the cost or expenses is a primary task. It often provides leads on the inherent risks of the asset.

Step 4: Evaluate the Cost or Value of the Asset

1. Financing for purchase or construction of new assets:

A. Land:

- A due diligence on the market price of the land should be carried out by making inquiries at the local level.
- If the cost exceeds 20 percent of the total project cost, the due diligence should be carried out with the help of a professional valuer.
- If the land is a "direct contributor," the due diligence should be carried out by a subject specialist. Although it may not be a direct effect on the cost, it can be a major dampener to the overall viability of the project.

B. Construction:

- A due diligence on the construction cost should be carried out based on the total construction area (square feet) and prevailing rate.
- If the cost exceeds 20 percent of the total project cost, the due diligence should be carried out with the help of a professional valuer.

C. New plant, machinery, equipment or other fixed assets:

- A formal quotation or pro forma invoice from the supplier supporting the estimate must be held before disbursement of the loan, if not at the time of facility assessment or approval.
- The purchase price and the cost estimate to raise or develop the bearer living plant should be assessed with the help of a subject expert. If the lender does not have an in-house resource for this, it should use the services of an external expert.
- If the cost exceeds 20 percent of the total project cost, the due diligence should be carried out with the help of a professional valuer.
- In the case of a deferred payment LC, the pro forma invoice should be verified against the approved cost before opening the LC.

D. Used plant, machinery, equipment or other fixed assets:

- Due diligence on the asset's fair value should be carried out by conducting inquiries at the local level.
- The purchase price and cost estimate for raising or developing the bearer living plant should be assessed by a subject matter expert. If the lender does not have an internal resource for this, it should hire an external expert.
- If the cost exceeds 20% of the entire project cost, the due diligence should be carried out by a professional valuer.

E. Biological asset:

- The purchase price and cost estimate for raising or developing the asset should be assessed with the help of a subject specialist. If the lender does not have an internal resource for this, it should hire an external expert.
- The value should be re-verified against the initial cost at the time of disbursement to ensure that there is no substantial (more than 20%) variation between the initial cost estimate and the prevailing value owing to impairment charges or quality loss.

2. Refinancing (swap) loan availed for purchase or construction of new assets:

- Details of the original cost estimate and actual cost incurred for the purchase should be obtained and verified. If there had been variances over 25 percent, a written clarification should be obtained from the client.
- A due diligence on the quality of the assets should be carried out by a professional valuer if the cost of the land and/or construction exceeds 20 percent of fixed assets.
- If the land is a "direct contributor," the due diligence should be carried out by an agriculture specialist to check for productivity of the land, soil quality etc., which can impact quality and quantity of output.
- If the cost of a particular plant or machinery exceeds 20 percent of the total project cost, the due diligence should be carried out with the help of a professional valuer.

Note: Revaluation, recognition, and measurement: Financing a term loan by upward revaluing property, plant, and equipment should be prohibited. However, in the case of bearer living plants, it may be an exception because of biological transformation. In such a case, the value can enhance and needs to be recognized. A similar principle can be applied in the case of financing biological assets. The recognition and measurement of the asset should be done in compliance with NAS 41. The value can be reconfirmed by using the help of a subject expert.

Step 5: Determine the Loan-to-Value (LTV) Ratio

The loan-to-value ratio determines the level of leverage risk that can be taken to finance the capital expenditure. The benchmark LTV ratio should be set as 70 percent of the total cost of the asset that can be stretched up to 80 percent. The following factors should be assessed for modulating the ratio:

- If land is a major component of the project and the escape value is satisfactory, the LTV can be increased.
- If any of the assets are specific and there would be difficulty in disposing of them and recovering a fair value, the LTV should be lowered.
- If the loan is being refinanced, the current outstanding loan should be compared with the LTV based on the historical value, depreciated value, and estimated current value. If the outstanding loan is higher by more than 10% of depreciated or estimated current value, the LTV should be lowered. However, if the estimated value is higher than the outstanding, the loan should not exceed the current outstanding.
- If the loan is used for financing assets that are "direct contributors," the LTV can be higher than the ones that are "indirect contributors."
- If the loan is used for financing intangible assets, the LTV should be lowered.
- If the loan is for financing biological assets, the LTV should be modulated based on the biological hazards assessed by the subject expert.
- The LTV should be reassessed at least once a year based on the value disclosed after depreciation, amortization, and impairment charges. An appropriate covenant to be set to correct the deficit that has been agreed upon between the lender and the borrower.

Step 6: Determine the Moratorium Period

Agricultural projects may have varying gestation periods based on the nature of the activities. An agriculture processing business may have a standard 2–3-year gestation period, whereas some core farming activities might require a longer incubation period.

A suitable moratorium period should be proposed and approved based on the need of the project. The regulatory requirement regarding the approval process should be complied with in this regard.

Step 7: Determine the Repayment Schedule and Prepayment Options

The following guidelines should be followed for determining the repayment and prepayment plan and conditions:

- If the business has a steady cash flow throughout

the year, a monthly or quarterly repayment plan would be suitable.

- If the business has seasonal swings in the cash flow due to purchase or sale factors, the repayment plan will have to be customized based on the annual projected cash flow. A fractured cash flow or cash budget, e.g., monthly or quarterly analysis would be preferable, and repayment terms can be matched with the cash flow cycle.
- If the business has a one-off cash inflow from the sale of the asset, particularly in the case of a biological asset, the covenant should be put in place requiring the entire sales proceeds to be used to repay the loan. In such a case, the prepayment penalty can be waived. Ideally, the repayment should be applied in the reverse order of the schedule.

Suppose a mango farm has to repay a term loan for biological assets in nine quarterly installments with a 5-year moratorium. After 8 years, if they chose to cut and sell some of the trees as logs, they will earn a one-time payment. In these circumstances, the cash must be utilized to repay the debt. To do so, the amount must first apply for the prepayment of the ninth installment. If there remains a surplus after such prepayment, it must be utilized to prepay the eighth installment, and so on.

3.2.2. Working Capital

Various forms of loans and credit facilities can be extended to finance working capital needs of an agricultural business. The major steps that need to be taken in these regards are as follows:

Step 1: Establish the Borrowing Cause

Agriculture-based enterprises require financing or refinancing (loan swap) of net trading assets (NTA) as well as business-related expenses. The NTA is determined as the sum of total trading current assets minus total trading current liabilities. If we categorize them according to the Nepal Financial Reporting Standard (NFRS), the trading current assets and trading current liabilities that satisfy the following characteristics can be included in the calculation of the NTA:

1. Trading current assets:

- If the business expects to realize the asset, or intends to sell or consume it, in its normal operating cycle;
- If the business holds the asset primarily for the purpose of trading;
- If the business expects to realize the asset within twelve months after the reporting period;

The specific items that can be included in the current assets are as follows:

A. Trade inventories:

- Raw materials, work-in progress, finished goods. It includes all farm produce (living or plant), standing annual crops, etc.
- Packing materials, essential stores and supplies (fertilizers, feeds, chemicals, etc.).
- Standing crops (only if they have a fair value).

B. Trade receivables and advances paid:

- Dues from the buyers on account of sale transaction.
- Advances paid to suppliers for supply of essential inputs.

2. Trading current liabilities:

- If the business expects to settle the liability in its normal operating cycle;
- If the business holds the liability primarily for the purpose of trading; or
- If the liability is due to be settled within twelve months after the reporting period.

The specific items that can be included in the current assets are as follows:

A. Trade creditors and advances received:

- Dues to the suppliers of basic inputs.
- Advances received from the buyers of trading goods.

A business might request loans to meet the financing needs emanating from growth in their NTA. Some of them are as follows:

1. Increasing sales or meeting projected volumes:

The need must be assessed using the underlying sales or purchase behaviors or attributes. Here are several examples:

- Seasonal sales or purchases.
- Contract-backed sales or purchases.
- Forced sales or purchases without market demand.
- Regular sales or purchases.

2. Changes in the trading cycle:

Increasing the inventory holding period or the trade receivable collection period due to accelerated supplier payments may lead to a rise in NTA. Here are a few possible reasons:

- Speculative purchases or deferred sales.
- Disruption in supply, distribution, or manufacturing processes.
- Lenient sales terms for marketing purposes or to mitigate perishable risks.
- Early payments made to purchase standing crops or before harvest.
- Investments in biologically evolving inventories.
- Impact of rainfall and temperature variability (climate change) in crop production cycle.

However, certain factors, such as inventory buildup owing to sales slowdown, may pose higher risk. Some examples are as follows:

- Payment delays caused by distributors' losses.
- Supplier payments were accelerated due to loss of trust.
- Operational issues causing a pileup of work in progress.

Step 2: Identify the Credit Facility

The BFI can offer fund-based and non-fund-based facility as follows:

1. Revolving lines of credit, including cash credit:

If the borrowing need can be met by a credit facility that allows the borrower to draw, deposit, and redraw, the following types of revolving lines of credit may be extended:

A. Overdraft or cash credit (fund-based):

It is a current account that allows for a debit balance up to a certain limit while adhering to NRB norms. The borrower enjoys the liberty to withdraw, return, or redraw funds on a daily basis at their discretion. This type of credit is appropriate for borrowers with frequent transactions.

B. Loans (fund-based):

It includes demand loans, short-term loans, working capital loans, and revolving loans, subject to a limit.

C. Transaction and trade finance (fund-based):

It includes various forms of financing arrangements to facilitate specific transactions or trade that can also be extended, e.g., bill finance, importer's loans, trust receipt loans etc.

D. Warehouse Receipt Financing (fund-based):
Warehouse receipt financing (WRF) is a financial

arrangement that allows agriculture businesses to store their produce in a warehouse in exchange for a warehousing receipt that can serve as collateral for receiving credit. When loans are provided against the security of the warehouse receipt, it becomes a tripartite transaction constituting a contract of pledge. The warehouse facility may be used by several owners at different times and the amount of inventory each owner holds can vary as well. Therefore, rather than allowing drawings under a standard working capital line, banks and financial institutions (BFI) can use alternative transaction finance products like WRF to meet such financing needs.

E. Letter of credit or LC (non-fund-based):

A revolving line of credit can be issued for regular purchases of trading items, stores, spares, supplies, and input materials. The bills under the LC can be of sight and usance (up to one year).

F. Guarantee (non-fund-based):

Some agriculture-based enterprises can be sold with contracts. In such circumstances, they may require bid, performance, or advance payment guarantees. Furthermore, some vendors or traders may need performance guarantees when purchasing products on credit terms.

Notes:

- The Nepal Rastra Bank directive specifies maximum revolving facility limits based on facility amounts. Similarly, it is necessary to clean up the outstanding balances under the cash credit facility once a year. The scales and duration of the cleanup have also been specified. These regulations will have to be complied with.
- Due to the seasonality of purchase or sale, some agricultural firms would experience erratic cash flows. Revolving loans with a standard payment mechanism can be unsuitable for them. Therefore, the borrowing needs assessment will need to be meticulously thought through. They may need loans with varying repayment cycles.
- The Nepal Rastra Bank specifies the maximum loan duration for import trade finance. If the real trading cycle exceeds the specified duration, an appropriate loan or line of credit to refinance the import loan should be approved before the LC is established.
- The current NRB guidelines and directives do not fully address the specific needs of WRF, although NRB permits lending against the inventory as collateral. Typically, banks include inventory when calculating drawing power under NTA; however, providing loans under WRF can offer specific security and reduce default risk. Therefore, advocating for a separate regulation on this subject could help codify the entire process and develop a new, efficient financial tool. For more information on the WRF system, its benefits, and recommendations, please refer to Annex 6.

2. One-off or emergency facility:

Agricultural businesses may have one-off requirements, and BFIs can extend fund-based or non-fund-based facilities. Some of the major ones are as follows:

A. Short-term loan (fund-based):

This type of loan can be advanced for urgent financing needs. However, the NRB directives have restricted the maximum number of such loans in a year. These loans would be one-off in nature and cannot be redrawn once repaid. Agricultural businesses may come across such situations due to unusual demand-supply gaps, supply or distribution issues, production or operation issues, etc.

B. Letter of credit or LC (non-fund-based):

A facility can be provided to issue a one-time LC for the importation of trading items, stores, parts, supplies, input materials, and so on. The bills under the LC can be of sight and usance (up to one year). The LC's availability terms can be payment, acceptance, negotiation, or a mix of the three.

C. Guarantee (non-fund-based):

BFIs can extend bid, performance, and advance payment guarantees if a business decides to participate in a one-off bid or business.

D. Working capital term loan:

If a business has a long trading cycle or a core NTA amount that remains on its balance sheet on an ongoing basis, it will require a long-term financing option. A term loan can be used to fund such a need. It can be repaid in installments ranging from three to ten years.

Notes: If items are purchased or sold in batches, the level of current assets may fluctuate. As a result, lenders will need to exercise caution when deciding on the period of a loan. A mismatch can occur when a loan has a long repayment term and current asset holdings fluctuate in short periods.

The loan must allow prepayments if the cash flows are irregular or related to a specific project, or if they vary significantly owing to a change in the business's primary activity.

Step 3: Evaluate the Cost or Value of the Asset

1. Financing for net trading assets (NTA):

A. Trading inventories:

- A statement of trading inventories in hand should be obtained at least once every quarter. It must contain the quantity and value of each item. The valuation should be based on the method acceptable in NFRS, i.e., specific cost, first-in-first-out (FIFO), or weighted average.
- Due diligence should be carried out if there is a change in the accounting policy for valuing the inventory.
- The stock statement should specifically declare the obsolete items, if any. The value of such stocks should be deducted from the total inventory amount.
- Agricultural products, particularly the farm produce, can have frequent price fluctuations. Therefore, the statement should also declare the market price of the commodity as far as possible.
- If the inventory comprises live plants or animals that have a characteristic of biological transformation, their value would change over time. It can be recognized and measured by applying the principles of NAS 41 as per the NFRS. The purchase price and the cost to raise or develop them should be declared. The value should be verified with the help of a subject expert on a regular basis.

B. Trade receivables:

- A list of trade debtors should be obtained at least once every quarter. The list must include names and PAN numbers of all the buyers. The list should be prepared on an age-wise basis of each debtor.
- The list statement should specifically declare the doubtful or bad debts, if any. The value of debtors should be deducted from the total receivable amount.

C. Trade payables:

- A list of trade creditors should be obtained at least once every quarter. The list must include names and PAN numbers of all the suppliers.

Note: BFIs should follow appropriate third party certification requirements, as defined by the NRB guidelines for NTA.

2. Refinancing (swap) loan availed for the working capital purposes:

- A latest (not more than 15 days old) statement or list of inventories, trade receivables, and trade payables should be obtained and dealt with on all the points as stated above.
- A statement of the latest outstanding amounts under all existing working capital facilities should be obtained and verified against the request.

Step 4: Determine the Loan-to-Value (LTV) Ratio

The benchmark LTV ratio should be set as 70 percent of the total cost of the asset that can be stretched up to 80 percent. The following factors should be assessed for modulating the ratio:

- If any of the assets are specific and there would be difficulty in disposing of them and recovering a fair value, the LTV should be lowered.
- If the loan is for refinancing purposes, the current outstanding loan should be compared with the LTV based on the historical value and estimated current value. If the outstanding loan is higher by more than 10% of the estimated current value, the LTV should be lowered. However, if the estimated value is higher than the outstanding, the loan should not exceed the current outstanding.
- If the loan is for financing living plants or animals, the LTV should be modulated based on the biological hazards assessed by the subject expert.

Step 5: Determine the Moratorium Period

Generally, moratoriums should not be allowed for working capital term loans, as the business would generate sales from the first day. However, if the business's main activity is to raise living animals or plants that are their trading assets, a moratorium period would be justified. In such cases, the period must be ascertained with the help of the subject expert.

Step 6: Determine the Tenure, Repayment and Prepayment Options

The following guidelines should be followed for determining the tenure, repayment, and prepayment plan and conditions:

- The revolving line of credit, or cash credit facility, should have tenure of one year. It can be renewed for a further year after the review. The borrower can borrow, repay, and reborrow funds within a tenure. However, except for the drawings made under an overdraft or cash credit line, any other loans drawn under the facility should have a tenure not exceeding one year. It should be repaid on or before the maturity date, irrespective of the tenure of the facility.
- The maximum tenure of a short-term loan for one-off or emergency purposes should be one year. It will have to be repaid on or before the expiry date and cannot be renewed for further periods. The amount should be determined by the internal lending policy of the bank. It is advisable to cap the one-of emergency loan at 30% of current NTA. Such loans should be only availed to fund short-term working capital needs.
- If the business has seasonal swings in the cash flow due to purchase or sale factors, the repayment plan will have to be customized based on the projected cash flow. A fractured cash flow or cash budget, e.g., a monthly or quarterly analysis, would be preferable in such cases.
- The covenant should be set to deposit the sale proceeds to repay the working capital loan.

3.3. Financial Risk Assessment

3.3.1. Operating Performance Analysis

Operational performance analysis focuses on evaluating the borrower's revenue trends, cost structure, profitability, and ability to meet financial obligations. This analysis also links the borrower's operations with the current financial cost and the impact of new debt financing on operations and profitability.

The operating performance of an agriculture business may differ significantly from that of other enterprises due to the nature of its revenue cycle, cost structure, and external dependencies. For instance, crop production with revenue cycles extending beyond one year will have substantial upfront costs for land preparation, seeds, fertilizers, labor, and equipment, while revenue generation starts only after certain years.

Historical Operating Performance: Analyzing past performance helps assess production volume, sales

pricing trends, costs, and profitability over time. This evaluation identifies patterns in growth, efficiency, and profitability, offering a clear picture of the borrower's financial trajectory. Additionally, these insights will serve as a basis for validating the projected performance numbers.

Projected Operating Performance: Projected performance analysis estimates the impact of new debt financing on operations, including anticipated revenue growth, cost changes, and overall profitability. It helps determine whether the borrower can efficiently utilize additional capital and sustain profitability while managing increased financial obligations.

Financial Indicators	Guidelines for the analysis
Core revenue (sales and other revenue) ▪ Volume and value. ▪ Historical growth trend and comparison with the projected trend. ▪ Qualitative factors and its impact on the revenue.	▪ The volume sales analysis would help in assessing actual performance by eliminating the impact of inflation. Agricultural items, particularly commodities, have price volatility, which can mislead the analysis if it is focused on the amount sold. ▪ The percentage growth analysis can help establish a trend and trajectory for historical growth. It may be useful in a technical comparison of projected growth. ▪ Notwithstanding the above, the projected growth should also be evaluated against the strategic plans or qualitative factors, as the business environment is subject to change.
Core costs (cost of goods sold and other direct cost) ▪ Percentage of core revenue. ▪ Historical trends and comparison with the projections. ▪ Qualitative factors and its impact on the cost.	▪ The analysis of the core cost as a percentage of the core revenue can help assess the value addition of the business. High-value-added agricultural activity can help lower the percentage. It can indicate the core competency of the business. ▪ The trend analysis can help show how the firm has been able to sustain the value advantage. It may also help in making a technical comparison of the projections. ▪ The projections would have to be assessed against the qualitative factors.
Other operating costs ▪ Percentage mix between, human resource, administration, marketing, selling and distribution, etc. ▪ Historical trends and comparison with the projections. ▪ Qualitative factors and its impact on the cost.	▪ The analysis would help in assessing the major cost items and their efficiency. ▪ It can be useful in making peer comparisons and identifying the scope of improving efficiency. ▪ The analysis can help in diagnosing the reason(s) for incurring higher costs in a particular activity, such as sales issues, marketing issues, distribution issues, human resource issues, etc.

Interest Cost: • Percentage of sales • Historical trends and comparison with the projections. • Qualitative factors and their impact on the cost.	• Percentage of sales analysis helps to measure the impact of interest cost on profitability. A higher percentage should be carefully evaluated to ensure that the profits can cover the current and future interest costs. • Analysis of historical and projected interest costs will provide insights into current interest costs, the additional burden from new borrowings, and their overall effect on profitability. This will help to evaluate whether the business can sustain its debt levels without compromising growth. • External factors such as changes in interest rates, access to subsidized loans, and government policies impacting agricultural financing should also be considered while analyzing interest costs.
Impairment Charge • Analyze the accelerated and one-time impairment charges. • Analyze the value of biological assets to ensure their current value.	• Impairment charges are non-cash expenses that reflect a reduction in the value of the assets. • Apart from the normal impartment of the fixed assets, any additional impairment (accelerated impairments or one-time write-off) should be carefully assessed to understand the type of assets that are being written off due to a decline in value. • The value of assets, especially biological assets, should be carefully evaluated to ensure they can generate future cash flow that justifies their current assets value.

3.3.2. Cash Flow Analysis

Cash flow analysis is employed in credit assessments for commercial borrowers, and agriculture finance would not be an exception. However, the cash flow characteristics of an agricultural business may differ from those of other enterprises. This is more likely if the firm is involved in agricultural production or farming activities. Trading cycles might be longer, or there can be unnatural fluctuations, which must be considered when financing or planning repayment arrangements. In certain cases, gestation periods can be extended, particularly if the business is involved in the biological growth of plants or animals.

Historical cash flow analysis: The analysis of historical cash flow statements can assist in determining the key sources and uses of cash flow, as well as their sustainability. If any of the following characteristics is apparent, it would be necessary to investigate the underlying causes:

- One-time, significant cash outflows or inflows from any source.
- Unusual cash trends or inconsistencies between sources and uses.

Projected cash flow analysis: The following activities can assist in assessing the projected cash flow:

- Assessing cash flow estimates versus past trends.
- Assessing debt disbursement plans to ensure they align with financing requests.
- Establishing the gestation period accurately before an investment starts generating cash.
- Conducting stress tests to ensure cash flow is sufficient. It might be prudent to create a distress scenario by stress-testing the variables with the highest level of risk.

Cash flow analysis based on the statement prepared as per the "direct method": It can help in tracking sources and uses of cash, as well as identifying the major sources for debt repayment purposes. It would also be useful in setting up controls to ensure that the funds are used for the intended purposes.

The cash flow will portray the cash waterfall in six stages. The following guidelines can assist with the analysis:

Cash flow indicators	Guidelines for the analysis
Stage 1: Cash collected from sales • Percentage collected from sales. • Historical trend and comparison with the projection.	• A low cash realization from the sales would indicate the fundamental cash flow constraint. Generally, agricultural commodities are characterized by faster collection cycles. However, in the case of branded products, the lag between the sales and cash realization would be longer. • The average cash collection period may have swings based on the demand-supply situation. Some of the agricultural products would be basic commodities. In such cases, supply constraints would improve the cash flow situation as there would be an incentive to pay faster to secure the supplies. Therefore, the projections will have to be scrutinized. Projecting cash from sales based on the historical trend may not be accurate in such cases. The prevailing market situation will have to be taken into consideration.
Stage 2: Cash from trading activities • Percentage of sales. • Percentage of cash collected used for purchasing traded goods and incurring direct expenses. • Historical trend and comparison with projections.	• Agricultural merchants may have a tendency to buy more than they can sell in a given period. They may attempt to speculate on the price of the commodity. In such a circumstance, a significant portion of the funds would be spent for such purposes. If cash flow is channeled for such unnatural transactions, it can result in unexpected borrowing requirements or affect repayment capacity. • In some cases, the cash flow from trading activities may also be affected by the use of suppliers' credit. If the supply exceeds the demand during a particular period, the credit terms can be lenient. However, if the products have a shorter shelf life, the cash flow support can be risky, as this would be the suppliers' strategy to dump their excess stock and put pressure on the cash flow of the merchants buying them. • Businesses that deal with core farming or agricultural production activities would have a longer trading cycle. Therefore, they may have a large cash need to support developing or transforming their traded items. • Businesses that sell agricultural infrastructure items might start deploying their cash only after receiving orders. Some of them may also have access to cash through advances obtained from buyers. However, for those that operate on a business strategy of building inventories without orders, a significant amount of cash may be locked up in traded items for a longer duration. • The projections would have to be assessed against the qualitative factors.

Cash flow indicators	Guidelines for the analysis
Stage 3: Gross cash after operations (GCAO) • Percentage of sales. • Historical trend and comparison with the projections. • Qualitative factors and its impact on the cost.	• The analysis can help assess the cash-generating competency from the core operating activities, i.e., buying, selling, and operating expenses. • A high-value-added agriculture firm may require a significant amount of cash to operate. Typically, the major ones are fixed costs. As a result, there would be limited flexibility in modulating cash flow by managing expenses. On the other hand, if a low-value-added trader of agricultural commodities incurs significant operating costs, it will find it difficult to pass them on to its customers. • Analysis of GCAO can also provide insight into the business's ability to manage cash flow from core operations for meeting debt obligations.
Stage 4: Net cash after operation (NCAO) • Percentage of sales. • Historical trend and comparison with the projections. • Qualitative factors and its impact on the cost.	• This section of the cash flow statement will explain cash inflows and outflows from non-recurring business operations, such as cash flow to or from other income, expenses, and changes in non-trading current assets and liabilities. It will also explain the funds used to pay the income tax. • A high volume of cash flows in this section may be risky because they can be unrelated to the core operation.
Stage 5: Cash after financing cost (interest) and debt amortization. • Percentage of sales. • Percentage of net operating cash generation.	• Analyzing this stage of cash flow can reflect a firm's comfort in servicing debt commitments. • Traders of agricultural commodities frequently have a slim GCAO. If they plan for a higher debt mix for financing, they would typically look for growing sales volume and improving efficiency. It can sometimes put them at risk of falling into a debt trap. • The level of gearing can be matched against the projected cash to serve the debt obligations. If the business, particularly agricultural production, has a longer gestation period, the repayment plan will have to be tested against the worst-case scenario. • It would also be useful to evaluate the cash flow position in the scenarios of interest rate changes.
Stage 6: Cash used for investment activities • Existing business: matching against the term loan disbursals. • New business or major capex of an existing business: matching the projection against the plan and actual use (after expenditure).	• This aspect of the analysis would be especially important for two reasons. It could be helpful in determining if long-term loan funds were properly utilized for planned capital expenditures. It could also help in comparing projected cash outflows in investment activities with the capital expenditure plan. • Agriculture enterprises engaged in production or processing operations may require a significant amount of cash for investment. As a result, it should generate more cash from operating activities.

Cash flow indicators	Guidelines for the analysis
Stage 7: Use of financing sources • Equity, debts (short-term and long-term), and other external sources. • Percentage mix of each source. • Matching sources with the need.	• The use of multiple sources and their mix can assist in evaluating risk in funding plans. • The exercise can also assist in matching sources and uses. If short-term funding is used to meet long-term needs, extreme caution should be exercised.
Stage 8: Outflows on account of dividend and withdrawals • Percentage of sales and profit.	• Large outflows triggered by dividends and withdrawals might hinder business expansion. • Banks prefer to have limitations on dividends or withdrawals, primarily to make such actions contingent on debt servicing and business expansion.

3.3.3. Ratio Analysis

Ratio analysis is a fundamental tool for evaluating a business's financial performance and creditworthiness. It provides a standardized method for financial evaluation, enabling comparability with industry standards and peers. Additionally, it allows for cross-examination of items within different sections of the financial statements; for example, the Return on Equity assesses profits in relation to the equity invested in the company.

The ratios for various types of agri-businesses may differ due to variations in their business models and operations. Similarly, even within agri-businesses that have similar business models, the ratios may vary because of differences in trading cycles, harvesting periods, and natural, and biological factors. Therefore, it is essential to understand the business model and the nature of the business in order to determine the appropriate ratios for analysis.

Historical ratio analysis: The analysis of a company's historical ratios can provide insights into a company's performance, financial health, performance trends, and debt repayment capabilities. It is important to understand the cause if unusual fluctuations and significant year-on-year changes in ratios are apparent.

Future ratio analysis: Projecting future ratios can help assess the business's future performance by accounting for growth, investments, and expansions. This would provide a picture of the future business situation and help identify any risks and threats beforehand. Similarly, it would also allow the lender to account for any externalities like external environment downturns and assess how the business would perform in such situations.

Financial indicators	Guidelines for the analysis
Sales growth (%) • Year-on-year volume growth % (current year sales volume / previous year sales volume -1). • Year-on-year sales price growth % (current year sales price / previous year sales price -1). • Comparison of sales price growth with (procurement/ production cost growth %).	• The volume growth analysis would help in assessing actual growth by eliminating the impact of inflation. • The sale price growth would help assess the market's price trend and the impact of inflation. • The comparison of sales price growth with production cost growth will provide insights into the ability to transfer the increase in cost to the sales price.
Gross profit margins (Gross Profit / Sales Revenue) • Gross profit margin (gross profit / sales revenue). • Year-on-year gross profit margin changes (current year gross margin / previous year gross margin -1). • Comparison of gross profit margin with historical trends and projections.	• Gross profit margin will help in assessing a business's core profitability and ability to manage production costs. • The gross profit margin growth would help in assessing the business's ability to grow its margins, maintain and reduce its costs, and sustain its financial health. • The comparison of gross profit margin with historical trends set a benchmark to assess the company's gross profit margin and comparison with the projections will enable assessment of its reliability and achievability.
Operating profit margin (Operating Profit / Sales Revenue) • Operating profit margin (operating profit / sales revenue). • Year-on-year operating profit margin changes. (current year operating margin / previous year operating margin -1).	• The operating profit margin helps to assess a company's cost control and operational efficiency as it measures profitability after accounting for direct and operational costs. • The operating profit margin growth helps assess a business's growth and stability and also provides an indication of its debt servicing capacity.
Net profit margin (Net Profit / Sales Revenue) • Net profit margin (net profit / sales revenue). • Year-on-year net profit margin changes (current year net margin / previous year net margin -1).	• The operating profit margin helps to assess a company's cost control and operational efficiency as it measures profitability after accounting for direct and operational costs. • The net profit margin change helps assess the trend of improvement or deterioration in a business's financial health over the years, which is crucial in assessing creditworthiness.

Financial indicators	Guidelines for the analysis
Return on equity (ROE) (Net Profit / Shareholders' Equity)	• The return on equity helps assess a company's ability to generate return to its shareholders. It is an indication of financial stability and performance. • It indicates a company's earning capability which could be an indication of their repayment ability. • Consideration must be given to whether the ROE is high due to excessive leverage as this may affect the debt repayment capability under financial distress. • Since agri-businesses are highly seasonal, investments in this sector tend to be opportunistic. When structuring loans, considerations must be given account for seasonal variability and need of agri-business owners to seek flexible capital that aligns with their cyclical cash flow nature. Instead of permanent equity capital, Mezzanine financing can be more appropriate for agri-borrowers, as it can provide a balanced mix of debt and equity-like features. Such financing structure can allow businesses to manage seasonal cash flow fluctuations, while ensuring stable repayments.
Return on assets (ROA) (Net Profit / Total Assets)	• Return on asset helps assess how efficiently a company's assets are being deployed. A high ROA indicates better asset efficiency, which for agri-businesses is crucial for debt repayment. • A low ROA must be further assessed as it may indicate an inability to repay debt due to inefficient asset use.
Debt-to-Equity Ratio (Total Debt / Total Equity)	• The debt-to-equity ratio measures an agri-business's proportion of debt funding to its equity funding. It indicates the gearing of the business. • A higher gearing could restrict a business's ability to raise further debt funding due to the existing obligation to repay existing debt. • Agri-businesses are prone to uneven cash flows throughout the year due to its seasonal nature. A high gearing would put further strain on the uneven cash flows, creating doubts on the debt repayment ability.

Financial indicators	Guidelines for the analysis
Inventory Turnover Period (Average Inventory / Cost of Sales * 365) • Inventory turnover days(average inventory / cost of sales * 365). • Change in inventory turnover days(current year inventory days / previous year inventory days-1).	• The inventory turnover period assesses how efficiently a business converts its inventory into sales. This is crucial because inventory conversion affects cash flow, a key factor in debt repayment. • As agri-businesses deal with many goods of perishable nature, inventory turnover period is a key metric as long inventory turnover periods may lead to spoilage, wastage, and financial losses. • Change in inventory turnover days can be an indication of the market demand for the product, sales, and marketing efforts of the business, and overall inventory conversion of the business. This can be used to estimate the future demand and sales of the business.
Receivable Collection Period (Receivables / Net Sales Revenue* 365) • Receivable collection days (receivables / net sales revenue* 365). • Change in receivable collection days (current year receivable days / previous year receivable days -1).	• The receivable collection period helps assess how efficiently a business is managing its credit, which directly affects its cash flow. A longer receivable collection period may indicate liquidity issues which may affect repayment ability during financial distress. • Agri-businesses operate on a seasonal basis. A longer receivable collection period during the off-season may be reasonable, however, consistently prolonged collection periods over the year may indicate bad credit management and liquidity issues. • Change in receivable collection period indicates a business's financial health and liquidity situation. This may reflect their repayment capability.
Creditor Payment Period (Payables / Cost of Sales * 365) • Creditor payment days (payables / cost of sales * 365). • Change in creditor payment days. (current year creditor payment period / previous year creditor payment period -1).	• The creditor payment period provides insight into how efficiently a business manages its working capital. Like the inventory turnover and receivable collection periods, this metric also indicates the business's liquidity. • This metric not only provides indications of a business's liquidity but also helps gain an understanding of a business's supplier relationship. For agri-businesses, maintaining supplier relationships is crucial for financial and operational stability. • Changes in creditor payment period can help assess a business's trend in working capital management and whether any growing liquidity strains could affect debt repayment capabilities.

Financial indicators	Guidelines for the analysis
Total Asset Turnover (365 / Total Asset Turnover Ratio) • Total asset turnover days (365 / total asset turnover ratio). • Change in total asset days (current year total asset days / previous year total asset days -1).	• The total asset turnover days show the period a business takes to convert its assets into revenue, which is a measure of operational efficiency. • This metric helps assess how efficiently an agri-business deploys its asset to generate revenue, which is crucial for agri-businesses. • Change in asset turnover days indicates how a business's operational efficiency is changing over time and indicates the business's overall financial health.
Current Ratio (Current Assets / Current Liabilities) • Current ratio (current assets / current liabilities). • Change in current ratio(current year current ratio / previous year current ratio -1).	• The current ratio helps in assessing a business's ability to meet its short-term obligations with its given assets. • As agri-businesses are regularly affected by natural factors, there is a high risk of crop failures and unexpected financial losses. A company with strong short-term liquidity may be able to handle such unexpected calamities swiftly. • Change in the current ratio helps assess a business's financial health as improving liquidity may improve a business's creditworthiness.
Quick Ratio (Current Assets –Inventory–prepayments) / Current Liabilities) • Quick ratio (current assets–inventory–prepayments) / current liabilities). • Change in quick ratio (current year quick ratio / previous year quick ratio -1).	• The quick ratio helps assess a business's liquidity excluding its inventory. This shows the business's immediate highly liquid assets. • Assessment of the quick ratio is highly crucial in agri-businesses as agricultural produce may take time to be converted into cash, meaning that inventory may potentially distort the current ratio. • Change in quick ratio indicates how a business's liquidity is changing over time and reflects the business's financial health and debt servicing capability.
Interest Cover (Times) (EBIT / Interest Expense)	• Interest coverage is crucial in assessing a business's ability to pay interest on its outstanding debt. • This is a key metric for the lenders as strong interest coverage boosts lender's confidence, improving creditworthiness. • Due to the seasonal nature of agri-businesses, a low-interest coverage during the off-season may be acceptable if the ratio is on par during other periods.
Interest Cover – Cash Flow Based (Times) (Cash Flow from Operations / Interest Expense)	• The cash flow interest coverage helps in assessing the business's ability to repay its debt from its operating cash flow rather than its earnings. As the cash flows represent a business's real liquidity, this metric gives a clearer picture of the company's ability to service debt. • Due to the seasonality in agri-business operations, there may be liquidity strains during the off-season, which must be considered during assessment.

Financial indicators	Guidelines for the analysis
Debt Service Cover (EBITDA / Total Debt Service*) • Total debt service = (interest expense + principal repayment).	• The debt service cover measures a business's ability to generate returns to service both interest and principal repayment, which is a key metric for stability and creditworthiness. • Given the seasonality and business risks in agri-businesses, the debt service cover is a key metric to assess creditworthiness.
Debt Service Cover – Cash Flow Based (Times) (Cash Flow from Operations / Total Debt Service)	• Similar to the cash flow interest coverage, the cash flow debt service coverage measures a business's ability to generate liquidity to cover its interest and debt repayments. • The cash flow-based debt service cover provides a more accurate picture of the business's ability to service its debt and helps in accurately determining a business's creditworthiness.

3.3.4. Financial Structure Analysis

Financial structure analysis primarily focuses on the borrower's balance sheet to assess the sources of funds and their utilization. This analysis helps to understand the existing asset base, liabilities, financial leverage, and overall capital structure. Additionally, it provides insights into the usage of the new borrowing and its impact on the overall balance sheet.

The financial structure of various businesses within the agriculture business also varies significantly. Agricultural production businesses typically invest in biological assets such as crops, livestock, and plants, which may have varied growing and production cycles. In contrast, agri-infrastructure and agri-processing businesses have asset compositions that include raw materials, equipment, processing facilities, and inventory, reflecting a more capital-intensive structure.

Historical financial structure analysis: Historical financial analysis involves evaluating the borrower's balance sheet over time to understand trends in asset growth, capital composition, debt levels, and equity contributions. This assessment provides clarity on the borrower's financial health, liquidity position, and ability to manage liabilities. Further, the inputs from historical analysis (working capital days, cash conversion cycle, etc.) will assist in validating the assumption for projected financials.

Projected Financial Analysis: Projected financial analysis helps to assess the impact of additional borrowings on fund utilization, focusing on asset creation, revenue generation, and overall financial structure. It will help to evaluate whether the borrowed capital will be efficiently allocated to productive assets that enhance profitability while maintaining financial stability.

Financial indicators	Guidelines for the analysis
Composition of current trading assets • Composition of inventory, receivable, and advance payment to suppliers. • Ageing of inventory, receivable, and advance payment to suppliers. • Historical trend and comparison with projections.	• The composition analysis will help to understand the utilization of funds in the working capital of the borrower. This will also help to understand the nature and business model of the borrower. The agricultural businesses may experience seasonal fluctuations in inventory, receivables, and advances, as production and sales cycles are seasonal. This analysis is crucial in assessing the cash flow cycle and working capital needs. • Since agriculture-related businesses often deal with perishable goods and seasonal sales cycles, an ageing analysis of inventory and receivables is necessary to understand the slow-moving items/accounts and potential write-offs. • Analyzing historical trends helps to assess the efficiency of working capital management and its direct correlation with sales performance. Evaluating projections provides insight into how additional borrowings will be utilized and their potential impact on financial structure.
Composition of current non-trading assets • Composition of current non-trading assets. • Ageing of current non-trading assets.	• The composition analysis offers insight into the nature and purpose of the non-trading current assets. Assessing whether these assets contribute to revenue generation or operational efficiency is essential to ensure optimal fund utilization. • Assets that do not directly contribute towards revenue generation should be carefully evaluated to prevent unnecessary funds utilization. • Ageing analysis will help to identify long-outstanding balances and unused assets that might have to be reassessed including write-offs.
Composition of non-current assets • Composition of non-current assets fixed assets, investments, and other non-current assets. • Analysis of the usage of additional borrowings.	• Composition analysis helps in understanding the nature of a business. Companies with higher investments in fixed assets are typically involved in capital-intensive sectors, requiring significant upfront costs for physical infrastructure such as machinery, factories, or equipment. While businesses with lower investments in fixed assets are usually engaged in trading or service industries. • The projected financial analysis will outline the intended use of additional borrowings, providing clarity on fund allocation and expected financial impact. A thorough evaluation of fund utilization is essential to ensure that the borrowed capital is deployed effectively, supporting business growth, operational efficiency, and financial stability.

Financial indicators	Guidelines for the analysis

Short term Borrowings
• Composition of short-term borrowing as a percentage of:
  • Total current liabilities.
  • Total working capital debt.
  • Total debt.
  • Usage of short-term borrowings.
• Historical trend analysis and comparison with projection.
	• A higher percentage of short borrowing indicates a greater reliance on borrowed funds for meeting short-term obligations while a low percentage suggests that the company is managing its obligations through operational cash flow or other sources. Also, an assessment must be done to evaluate whether the nature of the business justifies higher short-term borrowings.
	• It is important to check that short-term funds are not used for financing long-term assets, as this can create liquidity challenges, increase rollover risk, and impact the ability to meet short-term obligations efficiently.
	• Trend analysis will help to identify any increasing reliance on short-term debt, which could signal potential liquidity concerns. Comparing trends with projections provides insights into the company's reliance on debt financing and its ability to repay loans effectively.

Trade-related current sources, i.e., trade creditors and advances received from buyers of trading goods
• Composition of trade-related creditors as a percentage of:
  • Total current sources or current liabilities.
  • Total sources or total liabilities.
• Ageing Analysis
	• A higher percentage of trade-related current sources indicates reliance on trade credit for working capital, which may reduce the need for short-term borrowings while a lower percentage may suggest limited supplier credit, leading to increased dependency on short-term debt or internal cash reserves.
	• Ageing analysis helps to assess the liquidity position and payment cycle of the creditors. Long-overdue payments may signal cash flow constraints or liquidity issues, potentially affecting supplier trust and future credit terms.
	• It is also essential to evaluate that the supplier credit terms are sustainable and ensure they do not lead to significant cash outflows shortly after loan disbursal.

Other current sources
• Composition of other current sources as a percentage of:
  • Total current sources or liabilities.
  • Total sources or liabilities.
• Historical trend analysis.
	• A higher percentage indicates greater reliance on other current sources, such as customer advances, loans from directors, and other current liabilities, to manage working capital. It is essential to assess the business model to determine whether these sources like advances from customers are sustainable and do not create potential liquidity risks.
	• Historical trend analysis helps understand changes in composition over time. An increasing trend indicates a growing reliance on these sources, which may signal changing business practices or potential financial stress.

Financial indicators	Guidelines for the analysis
Long-term external sources • Term loans for capex and working capital. • Percentage of total liabilities and percentage of total debt. • Usage of fund and repayment schedule. • Equity and reserves. • Other long-term sources.	• A higher percentage of term loans indicates greater dependence on long-term financing. An evaluation must be done to understand whether the business model justifies the use of long-term loans to finance long-term assets, ensuring alignment between the loan structure and the nature of the assets. For example, an agricultural processing business typically requires a significant long-term investment in equipment and machinery which will generate cash flow over an extended period. • It's essential to understand the use of long-term loans to ensure they are used to fund capex or sustainable working capital investments, rather than short-term assets. Further, the repayment schedules should be analyzed to ensure that the projected future cash flows generated by these investments align with the long-term debt servicing requirements. • A higher equity and reserve fund lowers financial risk and strengthens creditworthiness. Historical trend analysis will help to track internal fund generation, reinvestment and dividend policies, and capital-raising efforts, providing a clearer picture of financial stability and growth strategy. • Other long-term sources include directors' loans, convertible instruments, and long-term payables. It is important to assess their nature, including equity conversion options and repayment schedules, to evaluate their impact on future cash outflows.

FINANCING AGRICULTURE SEGMENTS

Background

Nepal Rastra Bank's Unified Directive of 2080, has referenced the Industrial Enterprise Act 2076 (Schedule 4), to define the agriculture sector of Nepal. Referencing to the schedule which can be cross-referenced in appendix, the manual has categorized agriculture industry into five key segments:

- Agri-Production
- Agri-Processing
- Agri-Infrastructure
- Agri-Inputs

Agri-trading services are considered as a cross-cutting segment.

Taking reference of the standard credit facilities shared above, this section outlines key considerations that should be made for evaluating CAPEX and working capital requirements for agribusinesses in these segments. Supplementary flow charts are also provided in the annexure to bring clarity in credit extension decision making process, where the users of this manual can work out with tools provided to determine: the cause of borrowing, identify the type of asset being financed, determine appropriate credit facilities, and make decisions regarding cost or value of asset, LTV ratios, moratorium, and repayment arrangements.

4.1. Lending in Agri Production

- The agriculture production segment includes businesses primarily engaged in acquiring, raising, and selling plants and livestock. To engage in these activities, they also utilize resources such as land, capital, and labor. The principal borrowers in this segment are individuals or firms directly or indirectly involved in farming activities. They can be categorized as:
- **Commercial Producers:** Focused on market sales and profit generation.
- **Subsistence Producers:** Primarily farming for personal or household needs.

From the list of activities and/or products mentioned in the Schedule 4 of the Industrial Enterprise Act 2076, the following can be categorized under the production segment:

Fruits farming, animal husbandry, animal breeding, milk production, tea plantation, coffee farming, silk farming, herbs farming, fishery, rubber farming, mushroom production, birds farming, cotton farming, farming of cash crops such as sugarcane, sanpat, ajiwan, sargam, stevia, tobacco, jute, alaichi, keshar, oil seed, masala cultivation, bet and bamboo farming, private forest and agriculture forest, bee breeding, vegetable farming, poultry.

An agriculture producer is typically involved in growing:

- Long-term plants
- Long-term "consumable" plants and animals
- Short-term plant and livestock.

Definitions:

Long term plants are those plants that take up to a year or more to mature and produce tradable yields. When such plants mature, they provide multiple harvests for many years. But, once they stop being productive, they have no or only some residual values.

Short-term plant and livestock take less than a year to mature. Unlike the other two categories, they are not grown for their outputs but are rather sold in whole, either as food or as raw material for further processing.

Long term "consumable" plants and animals are those plants and livestock species that may either take less or more than a year to mature. During their lifespan, they undergo biological transformation which allows them to produce off springs or other by-products like fruits which can be sold in the market. Production usually increases as the species mature, peaks, and then starts to decline with age. At the end of their life, the species themselves can be sold for their intrinsic value such as for meat or wood.

Examples and Categorization:

From the list of products and activities categorized under agri-production segment following fall under long term plant species.

Coffee, alaichi, cotton plant, saffron plant, stevia plant, and herbs like bay leaf.

Following species fall under short-term plant and livestock.

Tobacco, sugarcane, bamboo, jute, mushrooms, livestock like: fish, bees, different varieties of herbs, different varieties of vegetables, annual crops like ajwain, sargam, spices like ginger and turmeric, oilseeds plants like mustard, sunflower, groundnut, sesame.

And, the following fall under long-term "consumable" plant and livestock.

Breeding animals like: goats, buffaloes, cows, bird varieties like layers chicken and ostrich that are primarily grown for eggs but can also be sold as meat at the end of life, fruit bearing trees like oranges and mangoes, mulberry trees used for silk farming, rubber trees, anpat trees.

Note: As illustrated, while most agricultural production activities defined under Industrial Enterprise Act 2076 fall under the three categories: long-term plants, short-term plants and animals, and long-term consumable plants and animals, there may be exceptions. In such cases, it is essential to identify such products or activities and follow the institution-specific details and policies for proper classification and decision-making.

4.1.1. A Step-by-Step Guide to Evaluate Agri-Production Sector

Typically, the businesses in agri-production require loan to buy or build long-term assets or to finance NTA. The underlying activity of the agri production business will dictate the borrowing cause, which will determine the nature of asset being financed, and subsequent treatment of extended credit facilities.

Step: 1 Evaluate the nature of asset being financed

1. Determine Type of Plant or Animal Species

a. long-term plant species
b. long-term "consumable" plant and animal species
c. short-term plant and animal species

2. Determine the Asset Category

a. bearer plant
b. biological asset
c. current asset

3. Identify other Assets that will be Required for

a. Property, plant and equipment
b. Intangible assets

4. Assess the Stage of Growth

a. They can be at the beginning of their life cycle, and may need to be incubated before producing output that can generate revenue.
b. For plant and animal species at mature stages of their lifecycle, financing can be required to fund net trading activities.

Once the type, asset category, and growth stage has been evaluated. Whether the borrower is in requirement of CAPEX or Working Capital Financing can be established.

Step 2: Identify Suitable Credit Facilities

a. To identify the suitable credit facilities, **refer to steps (1-7) under Credit Facilities > CAPEX, and steps (1-6) under Credit Facilities > Working Capital.**
b. Use the tools provides in **Annex (2 and 3)** to support credit facility decision making process.

Step 3: Conduct Risk Assessment

To identify appropriate risks and subsequent mitigation and control mechanisms, refer to section 3 Risk Assessment Guidelines. Besides general agriculture sector specific risks, credit facilities for financing agriculture-production should be scanned against the following specific risks:

If the borrower is engaged in agricultural production on leased land, it is crucial to review the lease terms and the borrower's anticipated plans for land improvements.

a. Check the duration of the lease. If it is short-term, this may raise concerns about business continuity.
b. Assess whether the borrower intends to make any land improvements on the leased property. The proposed expenses for these improvements should be evaluated for prudence, as any disputes regarding the leased property could affect the contribution of these expenses to the business's margins.

Besides, general risk assessment, mitigation and control measures, mandatory availing to sector-specific insurance policy can be used as additional risk mitigation measure in the agri-production.

Specific agri-insurance policies are available for few of the long term plants, short-term plants and livestock, and long-term consumable plants and animals, with the facility of subsidy on premium. If the borrower is engaged in those activities, they can be mandated to subscribe to those policies. The list of agri-production activities that can avail agri-insurance policies and qualify for subsidy on the premium can be referred to in **Collateral>Agri-Insurance.**

4.2. Lending in Agri Processing

Agri-processors are businesses engaged in converting raw, unprocessed agricultural products into finished or semi-finished goods. These businesses typically source agricultural raw materials from farmers, agri-traders, or through imports. The processed goods are then sold as:

a. Finished products to retail/wholesale shops and traders
b. Inputs for other manufacturing businesses
c. Semi-finished goods for further processing

From the list of activities mentioned in the Schedule 4 of the Industrial Enterprise Act 2076, the following can be categorized under the agri-processing segment:

> Fruits processing, food processing, milk and dairy processing, meat processing, fish processing and packaging, vegetable processing, industries producing animal feed, silk processing, tea processing, coffee processing, herbs processing, flower processing (making of garland, decoration, making bouquet), preliminary processing and operation of rubber, processing of cash crops, seed processing, wood industries including saw-mills, furniture, parqueting, seasoning, treatment plant, plywood, industries based on non-timber forest products including paper and resin, cotton processing.

For businesses in agro-processing the financing need can arise for buying or developing long-term assets (LTA) or for maintaining net trading assets (NTA).

Typically, financing for LTA assets includes investments in Property, Plant, and Equipment, which can be categorized as either real estate or non-real estate financing:

a. Non-real estate financing for non-current assets can include funding for machinery, motor vehicles, furniture and fixtures, office equipment, and temporary structures.

b. Real estate financing for non-current assets can include funding for land and permanent buildings.

Financing for net trading assets includes the following:

a. Inventory of trading commodities, with produce from agriculture serving as the principal raw material.
b. Outstanding trade debtors from the sale of finished products. It could be for agricultural or non-agricultural products.
c. Outstanding advance payments to raw material providers.

4.2.1. Step by Step Guide to Evaluate Agri-Processing Sector

Step: 1 Evaluate the nature of asset being financed

1. Evaluate the category of LTA that the borrower seeks to finance

a. Real estate assets
b. Non real estate assets

2. Assess the Specifics of LTA

a. Determine if the land is being purchased or leased.
b. Determine if the building and structures are being purchased or constructed. Establish whether they are permanent or temporary structures.
c. Ascertain whether the equipment & machinery being purchased is new or used.

3. Evaluate the Category of NTA that the Borrower seeks to Finance

a. Inventory
b. Trade Receivables
c. Trade Payable

4. Determine Composition and Specifics of NTA

a. Identify the composition of inventories that require financing, such as raw materials, work-in-progress, or finished goods.
b. Determine whether financing is needed to support seasonal inventory fluctuations or for maintaining regular stock levels.
c. Assess the availability of spontaneous financing from suppliers, such as trade credit, to determine dependency on external funding to sustain existing business activities.

Step 2: Identify Suitable Credit Facilities

a. To identify the suitable credit facilities, refer to steps **(1-7) under Credit Facilities > CAPEX, and steps (1-6) under Credit Facilities > Working Capital.**
b. Use the tools provides in **Annex (2 and 3)** to support credit facility decision making process.

Step 3: Conduct Risk Assessment

To identify appropriate risks and subsequent mitigation and control mechanisms, refer to section 3 Risk Assessment Guidelines. Besides general agriculture sector specific risks, credit facilities for financing agriculture-processing industry should be scanned against the following specific risks:

Agri-processing businesses, especially those producing branded products (e.g., ketchup, juice), can face marketing risks beyond market connectivity. These risks can impact product visibility, sales volume, profitability, and overall repayment capacity.

a. If processed agricultural products compete with established brands and low-cost substitutes, market penetration can be challenging.
b. If the borrower has limited access to supermarkets, retail chains, and distributors can restrict product availability. Or, give preference to established brands.

In such cases, take following assessment, mitigation and control:

a. Assess whether the borrower has a marketing strategy that includes digital presence, promotional campaigns, and partnerships.

b. Check if the borrower can secure supply agreements or contract-based sales models.
c. Develop cash entrapment mechanisms to ensure that the proceeds from sales are serviced to pay loan and interest.

4.3. Lending in Agri Infrastructure

Agri-infrastructure providers are businesses that supply equipment, machineries, and facilities to support agricultural production, processing, and market linkage. Their role spans across agricultural value chain.

As per the Schedule 4 of the Industrial Enterprise Act 2076, agri-infrastructure can include:

a. Establishment and operation of green houses.
b. Operation and management of cold storage facilities.
c. Development and management of agricultural markets to facilitate trade.

Beyond this, agri-infrastructure providers can also include businesses involved in:

a. Agri-logistics and transportation.
b. Water resource management, including irrigation systems.
c. Building infrastructure such as warehous-ing facilities.
d. Agricultural equipment and machineries.
e. Information and communication technology (ICT) services to support agricultural extension, market access, and financial inclusion.
f. Agricultural research, education, and extension services.
g. Marketing and financial services tailored to the agricultural sector.

From the above list, and based on the purpose they are serving, agri infrastructure segment can be categorized into two groups.

Core Infrastructures: Core infrastructures augment core agriculture activities and make direct contribution production. They can be specialized in nature and can include: greenhouses, irrigation systems, farm machineries etc.

Support infrastructure: Support infrastructure facilitate agriculture value chain activities by providing spaces, services, or software. Example can include: warehouse, transportation, finance, marketing, and other technological services.

4.3.1. Step-by-Step Guide to Evaluate Agri-Infrastructure Sector

Step: 1 Evaluate the nature of asset being financed

1. Identify the Category of Infrastructure

Determine whether the loan is being used to finance:

a. Core Infrastructure
b. Support Infrastructure

If the business's primary activity is to manufacture, sell or provide infrastructural services assets. Their assets may need to be classified as current assets.

2. Assess End-User Borrowing Needs

Unlike traditional agribusinesses, agri-infrastructure businesses cater to end users who may finance infrastructure either through CAPEX or through NTA-based working capital financing:

a. Identify whether the borrower is serving customers who would require finance to support their CAPEX or NTA.
- If the borrower is building core infrastructure (e.g., warehouses, cold storage), the loan undertaken by their end user will be for CAPEX.
- If the borrower is leasing facilities or providing services, the financing obtained by their end users may be NTA-based working capital.

CAPEX financing is typically required by end users who may need investments to purchase or build core infrastructure, such as irrigation systems.

3. Assess Factors that can Influence Demand for Borrower's Assets

Agri-infrastructure business typically requires financing to fund their current assets. The repayment capacity of the borrower is therefore directly tied to End users use case. It will therefore typically depend on:

a. Demand for infrastructure services by end users
b. Availability of financing for end-users, as they may require credit to afford infrastructure services.

Step 2: Identify Suitable Credit Facilities

a. Follow **steps (1-6) under Credit Facilities > Working Capital.**
b. Use the tools provides in **Annex (2 and 3)** to support credit facility decision making process.

Step 3: Conduct Risk Assessment

a. To identify appropriate risks and subsequent mitigation and control mechanisms. Refer to section 3.
b. Besides general agriculture sector specific risks, credit facilities for financing agriculture-infrastructure industry should be scanned against the following specific risks:

For Core Infrastructure,

- If the borrower cannot timely deploy required facilities, or reliably provide infrastructure maintain services, service disruptions can affect end-user desirability and retention. This can increase financial risks.
- If end-user demand is not demonstrable as of present, long-term viability of business may need to be scrutinized.

For Support Infrastructure,

- If the borrower lacks market reach or service efficiency customer acquisition and profitability can be tricky.
- If pricing is not competitive, market penetration and revenue growth could become constrained.
- It is critical to assess infrastructure type, borrowing purpose, end-user financing, and specific risks when lending to agri-infrastructure business. Take following assessment, mitigation and control:
- Conduct stress test by adjusting sales forecasts based on market demand for infrastructure.
- If revenue generation depends on end-user uptake, then aligning repayment schedules with peak demand periods can be considered. For example: For example, a farmer growing rice paddy will have a high demand for irrigation facilities during the planting and growing seasons when water need is crucial. So, the irrigation facility provider will have peak sales during this period.
- If infrastructure has seasonal demand cycles, a customized repayment structure may be required, aligning with peak seasonal demands.
- Modulating loan-to-value (LTV) ratios based on asset liquidity and market demand can be considered.
- Assessment of competitors' strength, availability of substitutes, availability of complementing services can be considered when modulating LTV ratios.

4.4. Lending in Agri Inputs

Agriculture inputs are all primary raw materials that are used in agri-production activities. These can include substances like seeds, saplings, fertilizers, manures, pesticides, agro chemicals, veterinary products, and other necessary supplies used in the process processes.

Referencing to the schedule 4 Industrial Enterprise Act 2076, the following activities and/or products can be categorized in the agri-input segment:

Tissue culture, producers of vegetable and flower seeds, fertilizers, Nursery business, establishment, protection and management of botanical gardens.

Based on the nature of business activities, agri input providers can be manufacturers, importer, and/or sellers of the agri-inputs.

4.4.1. Step-by-Step Guide to Evaluate Agri-Input Sector

Step 1: Evaluate the borrower and nature of asset being financed

1. Categorize and Identify the Agri-Input Segments

Borrowers in this segment can typically be grouped into the following three categories or sub-segments:

a. Manufacturers: Businesses engaged in the production of agricultural inputs, such as seed production units, fertilizer, and agrochemical plants.
b. Importers: Businesses that source agricultural inputs from foreign suppliers and distribute them in the domestic market.
c. Retail Traders: Businesses engaged in wholesale or retail distribution of agricultural inputs.

2. Establish the Nature and Composition of Assets

Each category or sub-segment of borrowers can have distinct asset compositions, which can determine the nature of their financing needs. Generally,

a. Manufacturers: Manufacturers asset composition will include fixed assets such as land, buildings, plant, machinery, and current assets in forms of inventories and receivables.
   They will typically require long-term financing for production infrastructure and equipment, alongside working capital for inventory management.
b. Importers: Importers major asset composition will include current asset. Financing needs may include short-term working capital loans to manage procurement and distribution cycles, logistics and storage.
   These businesses are most likely to depend on trade finance instruments for import procurement.
c. Retail Traders: Retail traders tend to operate with low capital investments. Their fixed asset composition can include shop space, fixtures and furniture and storage rooms.
   Nonetheless, such businesses will primarily require funds for inventory and cash flow management. They will typically rely on revolving credit lines or short-term loans to manage stock levels and cash flow cycles.

Step 2: Identify Suitable Credit Facilities

Financing requirements in the agri-input sector will fall under Capex Financing and Working Capital Financing:

a. To identify the suitable credit facilities, refer to **steps (1-7) under Credit Facilities > CAPEX, and steps (1-6) under Credit Facilities > Working Capital.**
- Besides standard funded and non-funded facilities mentioned under Credit Facilities > Working Capital, retail traders may have accessed supplier credit arrangements from their procurement networks. Existence of such spontaneous financing should be accessed before determining appropriate credit facilities and amounts.

b. Use the tools provides in **Annex (2 and 3)** to support credit facility decision making process.

Step 3: Conduct Risk Assessment

To identify appropriate risks and subsequent mitigation and control mechanisms, refer to 3 Risk Assessment Guidelines.

4.5. Lending to Agri Traders

The agri-trading segment consists of businesses engaged in the buying and selling of agricultural products, acting as intermediaries between producers and end-users. These businesses facilitate market linkages, and operate at different levels within the value chain.

Agri traders can be typically classified as:

a. Primary Traders: Those who purchase directly from farmers, cooperatives, or producer groups and supply raw agricultural products to wholesalers, processors, or exporters.
b. Wholesale Traders: Those procuring commodities in bulk from primary traders and selling them to institutional buyers.
c. Retail Traders: Operating in local markets, selling agri-products directly to consumers or businesses.
d. Export Traders: Selling products to the international markets, by managing international trade operations, including quality control, storage, and logistics.

Considering the key characteristics of agri-trading business, below are the specifics to evaluate credit proposals for agri trading business.

4.5.1. Step-by-Step Guide to Evaluate Agri-Trading Sector

Step: 1 Evaluate the borrower and nature of asset being financed

1. Categorize and Identify the Borrower

Identify the borrower's trading model, are they:

a. Primary Traders
b. Wholesale Traders
c. Retail Traders
d. Export Traders

2. Establish Nature and Composition of Assets

Agri traders generally operate in asset-light model and primarily invest in working capital than fixed assets. Their assets can include:

a. Inventories: agricultural commodities in transit, storage, or awaiting sale.
b. Trade Receivables: outstanding payments from buyers.
c. Trade Payables: short-term obligations to suppliers or producers.

However, for traders managing their own supply chain, capital assets can include storage and logistic infrastructure like: warehouses, cold storage, and transport assets

Step 2: Identify Suitable Credit Facilities

Financing for agri-traders is mainly working capital-based, with occasional needs for asset financing.

a. To identify the suitable credit facilities, refer to steps (1-6) under Credit Facilities > Working Capital.
b. Use the tools provides in **Annex (2 and 3)** to support credit facility decision making process.
c. Besides, standard funded and non-funded facilities mentioned under **Credit Facilities > Working Capital,** Warehouse Receipt Financing can be another credit facility that can be extended to businesses using stored commodities as collateral.

Step 3: Conduct Risk Assessment

Refer to 3 Risk Assessment Guidelines for general risks, assessment methods, and mitigation strategies relevant to agricultural lending. Agri-trading businesses should be specifically scanned for risks, which arise due to the unique characteristics of trading operations, inventory management, demand and supply dependencies.

COLLATERAL

Background

Apart from the standard processes for accepting an asset as security or collateral to secure credit facilities and executing documents to establish the lender's charge over it, banks and financial institutions may be required to consider certain agricultural financing-specific factors. This section of the manual describes them in detail.

5.1. Types of Assets and Valuation

1. Inventories:

Traded items can be accepted as security as in the case of credit facilities for any other types of borrowers. However following factors will have to be assessed and considered:

A. **Raw materials and inputs:** some agricultural activities, especially agricultural production, depend on biological transformation. They are not comparable to any other manufacturing or production-based business that normally employs raw materials as its major input and converts them into final products using a machine-based production process. The following considerations can be made for such agriculture activities.

- In situations where agri- businesses use inputs to help in the transformation process of biological assets, lenders may find it difficult to recover their debts by selling such assets. Therefore, they must apply a reasonable proportion of haircut when determining the distressed value of such assets.
- The valuation of such agriculture assets should be assessed with the help of a subject expert. If the lender does not have an in-house resource for this, it should use the services of an external expert.

B. **Work in process:** Work in progress will also be a significant part of agricultural inventory. According to the NFRS, such stocks must be valued on a regular basis to reflect the transition. However, the value cannot be relied on for security or collateral purposes. In some circumstances, the lender will be unable to recover cash from partially matured agricultural products through a forced sale of inventory, particularly if it is a short-cycle plant item. The only conceivable option is to force sell the company as a going concern.

C. **Finished products:** Finished goods in agricultural inventory are inherently perishable and have a significantly shorter shelf life compared to finished goods in other industries. As a result, their valuation for security or collateralization purposes cannot be entirely determined using standard methods. To ensure a prudent approach, following options can be taken:

- The distressed value of finished goods can be assessed using the inventory aging method, whereby the value is progressively adjusted downward as the goods age.
- Additional considerations can be made to align security value with the prevailing market price of the collateralized goods. This would require evaluating the price differential between the commodity's value at its raw material or work-in-progress stage and its market price at different points of time of collateralization.
- The longer time finished goods take to liquidate the riskier it can be to rely on pre-determined collateral value. A reasonable approach to determine distressed value of the collateral can be by analyzing historical variance in market price of the finished good commodity.

If there is any concern in the declared value, opinion of subject matter expert can be sought.

2. Land:

Land is one of the most accepted forms of collateral in credit facilities. However, in the context of agricultural lending, certain factors must be assessed to determine the realizable value of the collateral:

- Agriculture borrowers often consolidate land using means such as joint ownership by multiple family members to bypass landholding ceiling limits. If legal ownership disputes arise among family members, it can be difficult for lenders to recover their debts.
- In cases where agricultural land is leased for commercial farming, tenant protection laws may restrict the landowner's ability to liquidate the asset. Long-term leases with statutory protections can reduce flexibility in foreclosure, as prospective buyers may be reluctant to acquire land encumbered by leasehold obligations.
- The location of agricultural land can also be another determining factor. Compared to urban real estate, such lands are typically situated in rural or semi-urban areas, where the buyer pool is limited. The value of agricultural land hence may vary significantly from its appraised market value due to its location.

A prudent lending approach would require:

- A detailed legal review, assessment of enforceability, and marketability analysis of the collateralized land.
- The acceptable value of security should be determined after conducting necessary haircuts based on the assessments of the abovementioned factors.
- The valuation should be conducted with the consultation of a subject expert. If the lender does not have an in-house resource for this, it should use the services of an external expert.

3. Machineries and Equipment:

In contrast to general-purpose machinery, some agriculture machineries tend to be highly specialized and designed for specific farming activities. This specialization can narrow down the buyer base and make liquidation challenging in distress scenarios.

The distress value of farm equipment and machinery can also be affected by the availability of repair and maintenance facilities. If machineries require imported components or specialized servicing it may limit the availability of repair and maintenance facilities, this can lead to higher depreciation and lower realizable value.

To ensure prudent lending lenders can consider the following:

a. When determining the distressed value of such assets, a reasonable proportion of haircut may need to be applied based on factors such as market demand, resale potential, and maintenance accessibility.
b. Additionally, when conducting valuations, it is generally recommended to incorporate depreciation analysis, and to factor in manufacturer support, and local resale conditions in the analysis.
c. If there is any concern in the declared value, opinion of subject matter expert can be sought.

4. Trade Receivables:

Trade receivable can be accepted as security like in the case of credit facilities for any other types of borrowers. However, to strengthen recovery prospects, lenders can make following assessments:

a. Check the viability of binding trade receivables such as purchase order financing when accepting them as collateral.
b. To strengthen recovery prospects, check the existence of cash entrapment mechanisms.
- Banks can consider the possibility of encouraging both the borrower and end-users to maintain accounts within the lending institution. This can facilitate direct settlement of receivables, reduces diversion risks, and enhances the lender's ability to recover funds in case of defaults.
- Structuring multi-banking arrangements to ensure greater control over receivables can also considered.

If such mechanisms cannot be incorporated:

- Lenders may apply appropriate haircuts when determining the collateral value of trade

receivables. The haircut should reflect the borrower's creditworthiness, the reliability of receivables, historical payment patterns, and the risk of collection delays or defaults.

- The valuation should be conducted with the consultation of a subject expert. If the lender does not have an in-house resource for this, it should use the services of an external expert.

5.2. Nature of Charge

To safeguard against collateral risk, a legal charge over security can be established using available standard methods:

1. Hypothecation
2. Pledge
3. Mortgage
4. Lien

This section of the manual deals with how banks or lending institutions can make appropriate legal right decision to reduce collateral risk exposure through security charges. The later part the highlights key considerations to be made when selecting appropriate security charge methods to mitigate collateral risk exposure effectively.

Typically, the type of charge can be categorized into the following:

1. Floating Charge
2. Fixed Charge

Floating Charge: Assets held under a floating charge are fungible and can fluctuate in value. So, floating charge is usually used in case of working capital loans where the underlying assets are dynamic, such as in case of inventory and accounts receivable. Due to fluctuating nature of agriculture commodity prices, it is generally recommended to establishing periodic valuation mechanisms to ensure adequate security coverage relative to loan exposure.

Fixed Charge: A fixed charge is levied upon physical identifiable assets. It is non-fungible and non-transferrable. The lender retains control over the asset, and can restrict the borrower from disposing the asset if needed. In the case of default, fixed charge is given payment priority, over floating charge. As fixed charge reserves liquidity right of the borrower, it is generally considered safer than floating charge.

5.2.1. Definitions, Considerations, and Use:

Lenders can make suitable choice regarding security charge they can exercise by determining the nature of the asset and the level of control required.

1. **Hypothecation** is a charge on movable assets where the borrower retains possession, while the lender holds the right to seize and sell the asset in case of default.

a. Since, the borrower retains physical possession of the collateral this can limit the lender's direct control over the security. The following considerations can be made:

- To mitigate asset depletion or misuse, banks can establish regular monitoring mechanisms such as stock audits, borrower financial disclosures, and financial covenants.
- An assessment of borrower's financial discipline and inventory management practices may be essential to ensure asset availability at the time of enforcement.

b. This method can be used in securing standing crops, inventory, trade receivables, and agricultural equipment.

2. **Pledge** involves the physical transfer of possession of the secured asset to the lender, while ownership remains with the borrower. The lender retains the right to sell the pledged asset if the borrower fails to meet repayment obligations.

a. Pledging provides a high level of lender control which can reduce risk exposure, but it requires physical custody of the pledged asset which can be operationally demanding for financial institutions.

b. Generally, this method can be effective when lending to large aggregators or borrowers managing seasonal agricultural stocks. Yet institutions may be required to:

- Conduct storage condition assessment to ensure pledged assets remain in good condition and protected against deterioration or loss.
- Check for third-party custodial services and ensure that the security is not held under third-party arrangements to prevent conflicting legal interests. If the security is held by a third party, the institution's interests should be protected through a tri-partite agreement. Such agreements can include a clause stating that loan and interest repayment take priority over rent payments, meaning that rent should be subordinate to loan and interest repayment.
- Considerations must also be given to the type of asset that is being pledged. Agriculture commodity that have low shelf life and perishable in nature are riskier than commodity that can be held under pledge for longer duration.

c. Pledges are commonly used to finance harvested crops.

3. **A mortgage** is a charge on immovable property, where ownership remains with the borrower, but the lender holds a legal claim over the asset. In case of default, the lender has the right to foreclose and sell the property to recover outstanding dues.

a. Registered or unregistered status of immovable asset can affect distressed value recovery of mortgaged property especially in case of agriculture land. Agricultural land can be mortgaged under registered or unregistered agreements. The following implications must be noted by the institutions to ensure they are adequately safeguarded against the risk exposure:

- Unregistered land mortgages remain legally valid for loan amounts up to NPR 10 lakhs. For loans exceeding this threshold, lending institutions are either required to register the mortgage with the Land Revenue Office or pursue a court process to establish their charge.
- Enforcement of unregistered mortgages exceeding NPR 10 lakhs can occurs only after a court order; this can delay liquidation and increasing recovery risks.
- Therefore, for unregistered mortgages it is generally recommended to pursue extra due diligence, including a thorough legal review, borrower risk assessment, and fallback recovery strategy before acceptance of such collateral as security.

b. Mortgage-based security can be a preferred structure for long-term agricultural loans, such ones extended to secure CAPEX assets like land, property, plant and equipment.

4. **Lien is** a charge over liquid assets like deposits that borrowers hold with the institutions. Unlike fixed charges, which are a form security interest over an asset, lien simply grants the lender the legal claims over the asset. In the case of default. The ownership and operational control of the asset is retained by the borrower.

a. The lender has the right to seize and the liquidate asset in the event of a default and if the borrower disposes the asset without settling the lien, the lender has the right to the disposal proceeds.

b. Liens can be used in agri-lending. Farmers can secure loans in lieu of their future harvests for seasonal loans. Similarly, they may take out loans in lien of their livestock, ensuring repayment when the animals are sold.

c. Lien provides security to the lender by ensuring repayment from the asset in case of default. Similarly, it provides the borrower with easier access to credit. But, it is a diligent practice not be taken against assets other than liquid asset. If it is to be taken, it must safeguard with set of rights.

5.3. Insurance Coverage

To safeguard against potential collateral risks, the borrowers can be mandated to avail appropriate insurance policies that are available in the market. The available insurance policies include:

a. **General property insurance:** All assets, except for standing crops and growing property plant and equipment, biological, and current assets can be safeguarded with general property insurance.

b. **Agri-specific insurance:** Few of long-term plants, short-term plants and livestock, and long-term consumable plants and animals as defined under agri-production segment can be safeguarded through available agri-insurance policies. The insurance policies can be availed at input cost or yield value. The following crops and livestock insurance policies are available for growing property plant and equipment, biological, and current assets. The listed insurance policies also qualify for subsidy on premium, except for insurance on Pheasant (Kalij), Timur, Mentha, and Weather indexed flood insurance

S.N.	Livestock	Crops-Input Cost	Crops-Yield Value	Herbs-Yield Value
	Cattle	Potato	Sugarcane	Timur (Sichuan Seed)*
	Poultry	Fruit	Cereal Seed	Mentha *
	Fishery	Vegetable	Cereal Crop	
	Bee Keeping	Mushroom	Vegetable	
	Ostrich	Banana	Fodder Grass	
	Goat	Cardamom	Ginger	
	Pheasant (Kalij)*		Turmeric	
			Coffee	
			Tea	
			Lemon	
			Orange	
			Sour Orange (Junar)	
			Kiwi	
			Dragon Fruit	
			Mango	
			Lentils	
			Weather Index Drought	
			Weather Index Flood*	

*Subsidy not available.

Refer to Annexure 5: Agri-Insurance for further details on types, subject matter, and insurance perils.

Beyond securing the institution's interests through insurance mechanisms, it is critical to carefully assess when to obligate or waive insurance requirements for agri-borrowers. Additionally, it is essential to align insurance policies with asset values and to adopt ongoing monitoring mechanisms to effectively

mitigating risk and safeguarding loan recoverability. The following key considerations can guide this process:

a. **Aligning Insurance Coverage with Collateral Value and Risk Exposure:** Institutions can determine appropriate insurance policy type and coverage amount based on the nature of the product and the associated risks (e.g., crop failure, natural disasters, or asset depreciation).

- If an insurance requirement is to be waived, it need be justified based on collateral adequacy and risk assessment.
- For example, if an insured asset is valued at NPR 2 crore, but the insurance policy covers only NPR 1 crore, the collateral is underinsured, exposing the lender to potential losses. In such cases, the coverage should be adjusted to align with the asset's true value or additional safeguards should be put in place.
- Conversely, for lower-risk assets or self-insured borrowers, insurance requirements may be reduced or waived based on risk tolerance and alternative recovery measures.

b. **Monitor Insurance Adequacy in Floating Charge Scenarios:** If a floating charge is placed on collateral (e.g., inventory, livestock, or receivables that fluctuate over time), insurance coverage needS to be regularly reviewed to ensure it remains adequate against the outstanding loan amount. In such cases, institutions should consider conducting periodic reassessments of assets and adjust insurance policies accordingly.

- For instance, in a warehouse financing arrangement, where grains are used as collateral, the stored quantity may fluctuate throughout the year. If a fire or flood damages the stock when coverage is outdated, the lender may face unexpected recovery shortfalls. In such scenarios, periodic insurance audits and borrower reporting mechanisms can be implemented to ensure insurance adequacy.

CREDIT ADMINISTRATION

Background

Effective administration of credit is an essential aspect of ensuring the safety and soundness of the extended credit facility. Once the decision to extend credit has been made, the institution and the borrower can formalize the loan through a contractual arrangement. To mitigate sector-specific risks and safeguard the institution's exposure, a structured system for regular monitoring can additionally be implemented.

This section of the manual describes specifics related to primary contractual agreement and loan monitoring under the credit administration.

6.1. Primary Contract

Typical components of the primary contract include: representation and warranties, condition precedents, and covenants. Beyond standard clauses mentioned under these sections of the primary contract, specifics related to agriculture sector can be included to mitigate sector-specific risks.

1. Representation and Warranties: clauses under representation and warranties section serve to affirm the accuracy of information provided by the borrower information and provide the institution with necessary assurances regarding the borrower's financial and operational standing. To ensure compliance and safeguard the institutions interests, agricultural borrower can be required to make the following declarations:

Declaration of Land Ownership and Compliance with Legal Limits: the borrower can be required to declare the type of land ownership and provide supporting legal documentation to prove it. Affirmation that the total landholding remains within the prescribed ceiling limits as per applicable land laws can be an addition.

Condition and Maintenance of Inventory and Warehouse Facilities: To ensure safety of primary produce of the agri-business, the borrower can be required to declare the existing condition of agricultural inventory and storage infrastructure. In cases where third-party warehousing services are used, the borrower can be required to confirm that the facilities comply with agreed-upon standards and are free from conflicting legal ownership and transfer barriers.

Accuracy of Financial and Operational Information: To ensure that information provided by the borrower is free from material misrepresentation, institutions can further require borrower to attest that all financial statements, records of inventory, and projected cash flows.

Clause for Remedial Action in Case of Misrepresentation: The primary contract can contain provisions allowing the institution to demand immediate repayment or restructuring the loan if any material misrepresentation is identified. Clauses reserving the right of institution to initiate legal or remedial action, including but not limited to calling back the loan, imposing financial penalties, or reassessing credit terms upon discovery of false or misleading declarations can be included under this section.

2. Condition precedents: Before the disbursement of loans, borrowers can be required to fulfill specific conditions precedent. These conditions can ensure credit worthiness, safeguard institutions against potential risks, and ensure that borrowers meet the necessary eligibility criteria before accessing loan funds. Given the unique risks associated with different agri-lending segments, the following conditions can be included in the condition precedents:

For borrowers in agri-production,

- The borrowers engaged in agricultural production can be mandated to provide legal documentation proving ownership or leasehold rights to the land used for agricultural activities. If the land is leased, the condition precedents can require validity of lease agreement for the entire loan tenure, and confirmation of no legal disputes over the land.
- Some of the borrowers in this segment can avail agri-insurance policy available in the market, and

in addition they can qualify to receive subsidy on agriculture insurance premium. Details of agri-insurance policies along with scale of premium subsidy are provided in Annex 5: Agri Insurance Policy. Depending on the agriculture production activity that is being carried out, the condition precedent can require the borrower to subscribe to appropriate insurance facility.

- They can be required to have access to certain climate adaptive technology that can safeguard the crop and livestock's production against climate effect risk. This can include access to infrastructure like irrigation system, temperature control system or greenhouses.
- They can also be required to demonstrate certain technical expertise in the specific agricultural activities, which can be verified through certifications, experience, family history, or through the involvement of qualified experts.

For borrowers in agri-processing,

- The borrowers involved in agri-processing can be required to present evidence of stable and reliable sources of raw materials, such as contracts with farmers or suppliers.
- To reduce the risk of unsold inventory, contracts with buyers, distributers or retailers can be mandated.

For borrowers in agri-infrastructure,

- The borrowers engaged in agri-infrastructure business can be required to demonstrate evidence of demand by end-users. For this, the borrower can be required to submit a technical feasibility study conducted by a qualified expert, confirming that the infrastructure project is viable and will meet the needs of the target users.

For borrowers in agri-inputs,

- For borrowers involved in the production or distribution of agricultural input, conditions can mandate borrowers to obtain all necessary regulatory approvals, including licenses from the relevant agricultural or environmental authorities, evidence of quality assurance measures, such as laboratory testing or certifications.
- They can be required to have adequate storage facilities to prevent spoilage or degradation, particularly for perishable inputs like seeds or fertilizers.

For borrowers in agri-trading,

- The borrower can be required to demonstrate access to reliable markets, such as contracts with buyers or membership in agricultural cooperatives. This ensures that the traded products have a ready market.
- For borrowers engaged in international trading, license for export can be requested.

3. Covenants: Apart from standard financial and operational covenants that are included in the primary contract, some specific covenants can be included to ensure that agri-borrowers' risks are controlled on an ongoing basis:

- The borrower can be required to submit regular production reports, including crop yields, livestock health, and production costs.
- For agriculture producers that grow certain long-term crops or plant species that undergo significant biological transformation, covenant can require borrowers to submit periodic asset valuation carried out by or verified by sector expert.
- Other agri-borrowers can be required to submit regular reports on inventory levels, sales, and receivables. This can help to monitor the borrower's market performance and liquidity.

6.2. Loan Monitoring

Apart from standard monitoring procedures that must be followed as per the institutional policy guidelines, institutions can follow the specific on-site and offsite monitoring activities to regulate the risks on an ongoing basis.

For off-site monitoring,

- Obtain periodic report on agri-specific parameter which may influence the production, stage of the growth, yield, and health of the crop or livestock. This can include: reporting on soil health and nutrient level, pest and disease incidence, yield projections, irrigation and water availability, data

related to use of inputs, market demand and price trends.

- Make comparison between the projected and actual reports provided by the borrowers.
- Track climate factors like temperature and precipitation to get early detection of foreseeable climate related risks which may affect the production and repayment capacity of the borrower. These can be observed at the official website of Department of Hydrology and Meteorology.
- Check for fluctuation in national and global commodity prices to check for variances in market prices, and assess the potential impact on the repayment capacity of the borrower.

For on-site monitoring,

- Check that the loan are not being mutualized and are being utilized for the intended purpose. For this, conduct periodic inspections at the borrower's business site, including, social testing which can cover verbal inquires with community member or suppliers.
- Conduct regular on-site visits to inspect the condition of agricultural assets. Verify the stage of crop growth, health of plants, and any signs of disease or pest infestation. For livestock, assess the physical condition, feeding practices, and overall farm hygiene.
- Assess the status of land, irrigation systems, and other infrastructure. Ensure irrigation systems, storage facilities, and farm machinery are functional and adequately maintained.
- Validate land use and farming practice by cross-checking the size and boundaries of cultivated land against loan documents. Additionally confirm the farming methods i.e. utilization of fertilizers, pesticides, and other inputs align with proposed plans and best practices. Take support of agriculture expert to validate the practices.
- Verify stock levels of harvested crops or livestock products and assess post-harvest handling practices. Review relationships with buyers, cooperatives, or traders to ensure market access and price stability.

ANNEXURES

Annex 1: Use Cases of the Manual

This section of the manual provides hypothetical case examples to apply credit facilities risk assessment, financial risk assessment, and general risk assessment guidelines outlined in the manual.

The broad testing guidelines are based on standard credit facilities protocols. Credit officers should exercise discretion when evaluating specific cases, and ensure that nuances and complexities are handled on a case-by-case basis.

Example 1: A case for farmer (producer) growing mushroom

Ram Thapa (the farmer), a 34-year-old farmer from Sunsari, has been cultivating shitake mushrooms for the past three years. With rising demand from local markets and restaurants, he aims to expand his production by investing in a temperature-controlled growing facility and purchasing higher-quality spores.

Ram, a former migrant worker, started his mushroom farming business in 2022. He went to Malta in 2010 and also migrated to other countries for work, returning to Nepal five years ago after the COVID pandemic. After returning, he worked on a mushroom farm in Udaypur. In June 2022, he leased a plot of land and began growing mushrooms. Starting with an initial investment of NPR 250,000, he gradually increased his investment. With an annual turnover of NPR 1 million and a net profit margin of 2.5-5%, Ram is now looking to further expand his business. He plans to install an AC chamber, which is expected to increase mushroom productivity by controlling humidity and temperature. The AC chamber costs around NPR 1.1 million. He has invested NPR 2.5 million to date, of which NPR 1.2 million comes from loans. Although the price of mushrooms fluctuates, they generally sell for NPR 200 per kg. However, during price fluctuations, he has had to sell them for as low as NPR 100 per kg.

The farmer is seeking a credit facility from a local bank to finance the purchase of a temperature-controlled system and to purchase raw materials in bulk, such as sterilized sawdust and substrate bags, to avoid price fluctuations. He also plans to hire additional labor during peak seasons. With confidence in the market and a satisfactory track record, he is expressing his desire for credit to support revenue growth and profitability. Access to credit would enable him to optimize yields, maintain a consistent supply, and enhance profitability.

As a credit officer how would you conduct appropriate risk assessments and extend suitable credit facilities to Ram Thapa?

Step 1: Establish the category type under which the mushroom plant falls under.

- Shitake mushroom when grown in sterilized saw dust sterilized sawdust or substrate bags can be ready for harvest in about 6 to 12 weeks after inoculation.
- Mushroom falls under short-term plant and livestock category. **Refer to the definition in 4.1** lending agri production.

Step 2: Identify suitable credit facilities.

Establish the main reason for borrowing:
What is the main reason that Ram Thapa is seeking loan? Is it to finance property, plant and equipment? To finance intangible assets? To finance NTA?

- The farmer is seeking loan for three main reasons which includes the following: to build temperature controlled system, to purchase raw materials, and to hire additional labor.
- Classify the borrowing reasons into capital expenditure and working capital. **Refer to standard credit facilities>3.2.1 CAPEX and 3.2.2. Working Capital.**
- Typically, temperature control shed and raw material, particularly, spores will fall under CAPEX financing. Note: Spores are preliminary capitalized expenses. **Refer to 3.2.1. Capital Expenditure > Intangible Assets** for definition of intangible assets.
- The financing required to purchase saw dust,

substrate bags, and hiring seasonal labor will fall under NTA.

- Establish other reasons why borrowing could be required: could the borrower require additional financing to purchase/ lease land? Will financing be needed to construct temporary or permanent structures? If such is the case, then request the borrower to seek consultation of professional valuer, subject specialist, and conduct necessary due diligence. If the land is being leased conduct detailed risk assessment as highlighted under **3.1.5 Infrastructure related risks.**

Evaluate assets' contribution to the business: Identify how the asset will contribute to the farmer's business activity? Will the financed assets contribute directly to revenue generation? Or, will they make indirect contribution to business revenue?

- Raw materials and labor can make direct contribution to business revenue.
- Temperature control system and supplementary structures can be considered as indirect contributor. Whilst, these assets may not contribute to business revenue, they can be productivity drivers and safeguarding mechanisms.

Determine the cost or value of the asset being financed: The borrower is seeking to make additions in forms of new temperature control system as well as to finance trade inventories (raw materials). The financing required to pay seasonal labors will fall under operation expenditure which is generally not covered by loans.

- To establish the cost or value of equipment. Request the borrower for multiple quotations. Similarly conduct professional valuation and get cost verified by subject matter expert. If the equipment needs to be imported, request for proforma invoice. **Refer to Appendix 2(B) and 3(D)**

Determine the LTV ratio: As per standard banking guidelines, the loan-to-value (LTV) ratio should be maintained within 70-80%. To ensure that the bank has adequate security against the loan, ensure loan amount falls under acceptable range.

- Lower LTVs if the asset being finance is highly specialized, intangible, or if they have risk of hazards.
- Additionally conduct general verification of the declared price before deciding on the LTV.
- Calculate LTV every month. Request borrower to share regular statements, including market price for mushrooms. Additionally, consider biological transformation of the vegetable, check for updates in reporting standards and accounting policy on valuation of NTA. If risk is identified which may affect borrower's repayment capacity, then a lower LTV can be proposed.
- Check for factors which may impact farmers trading cycle. **Refer to Annex 3 (B)** for further details.

Establish moratorium period and repayment arrangements: Generally moratorium period should be aligned with the biological cycle of vegetables, including gestation and harvesting cycles. Since mushroom is a short term plant, the moratorium period can be less than a year. It is till vital to propose and approve moratorium based on the need of the project.

- Typically, moratorium is not allowed for working capital loans. But, in this case, since farmer's main activity is to raise plant which is their trading asset, moratorium can be justified, based on institutional policies and approvals. **Refer to 3.2.1 CAPEX>Step6: Determine the moratorium period.**
- Since, mushrooms are short cycle crops, a revolving line of credit and short (>1) payment tenures, aligned with seasonal sales proceeds can be considered.

Identify suitable funded or non-funded credit facilities: Banks are required to extend suitable credit facilities based on available standard credit facilities.

- Extend appropriate facilities by determining whether the borrower required one-off emergency

facility that can be paid within 12 months.

- Or, will a revolving line of credit be more appropriate? Establish if the borrower's credit needs can be fulfilled through cash credit, loans, or suitable transaction or trade finance?
- A funded facility will be more appropriate in this case, where one off term loan can be extended to facilitate purchase of temperature control system and overdraft, working capital or short term loans can be extended to facilitate raw material purchase.
- **Refer to Annex 3 (C)** Funded and on-funded credit facilities.

Step 3: Conduct financial risk assessment

Conduct thorough financial ratio analysis to evaluate farmers' profitability, liquidity and credit worthiness. Consider perilous years land area, yield, market prices, sales and profitability. Also request for details of input cost. On these bases, assess the reality and rationality of financial projection.

Some important financial ratio analysis can include the following:

- Sales growth analysis, which can include: Year-on-year volume growth %, Year-on-year sales price growth %, Sales price growth vs. production cost growth.
- Gross profit and net profit margin.
- Operating profit margin.
- Return on assets.
- Inventory turnover ratio.
- Receivable collection period.
- Debt service ratio.
- Current ratio
- Loan to value ratio.

Standard Projection Data Input Sheet

		Actuals	Actuals	Provisionals	Projected	Projected
Particulars	UoM	20X1	20X2	20X3	20X4	20X5
Area of Farm	Sq Ft					
Yield	Per Sq Ft					
Total Production	KG					
Input cost	Per Sq Ft					
Other Direct Cost	Per Sq Ft					
Sales Price	NPR					

Particulars	UoM	20X1	20X2	20X3	20X4	20X5
Revenue	NPR					
Direct Cost						
Inputs Cost	NPR					
Other Direct Cost	NPR					
Total Direct Cost	NPR	-	-	-	-	-
Gross Profit	NPR	-	-	-	-	-
Indirect Cost						
Land Lease Cost	NPR					
Electricity Cost	NPR					
Other Fixed Cost	NPR					
Interest Cost	NPR					
Depreciation	NPR					
Total Indirect Cost	NPR	-	-	-	-	-
Profit before Tax	NPR	-	-	-	-	-
Tax	NPR					
Profit after Tax	NPR	-	-	-	-	-
Gross Profit	%	0%	0%	0%	0%	0%
Net Profit	%	0%	0%	0%	0%	0%
Sales Price Growth	%		0%	0%	0%	0%
Yield Growth	%		0%	0%	0%	0%
Production Growth	%		0%	0%	0%	0%

Refer to 3.3. Financial risk assessment for further detailed guidelines on conducting these assessments.

Step 4: Conduct general risk assessment

Identify suitable risk and mitigation strategies that maybe relevant in mushroom farming. Follow the detailed guidelines as provided under **3.1. General risk associated with agri-lending.**

Step 5: Take measures to safeguard collateral

To safeguard against collateral risk, establish legal charge over security by following guidelines under chapter 5 Collateral.

Mushrooms qualify to receive agri-insurance at input cost; based on appropriate assessment the farmer can be mandated to avail appropriate insurance policies. If the farmer is self-insured or if the risk assessment shows low risk then insurance requirement can be waived off. **Refer to 5.3.Insurance coverage for further details.**

Example 2: A case for dairy processor: shree krishna dairy pvt. Ltd.

Shree Krishna Dairy Pvt. Ltd. (the company), is a dairy business located in Kathmandu. It has been operational for over a decade and is involved in the dairy processing business. It currently sources milk from 1,500 small dairy farmers and processes 10,000 liters of milk daily. Due to increasing demand for dairy products, the company plans to expand its processing facility to increase its capacity to 40,000 liters per day.

Initially founded by Mr. Shree Krishna as a small dairy, the company has expanded its operational scale establishing a state-of-the-art processing plant in Kathmandu. Following its growth, the company currently posts an annual turnover of NPR 200 million and a net profit margin of 2-3%. It is now looking to construct a new milk processing plant with modern equipment, purchase pasteurizers, homogenizers, and refrigeration units, expand its storage and cold store facilities, and incorporate quality testing and automation upgrades to increase efficiency. The expansion would cost NPR 100 million, including the leasing of the infrastructure of the processing plant. He has invested NPR 150 million till date, of which NPR 40 million comes from government-subsidized loans. Their products include dairy products ranging from milk to processed products like sweets, curd, and ghee. The price for milk is set by the Dairy Development Corporation (DDC), while the business exercises discretion over the pricing of value-added dairy products.

The dairy is seeking a 7-year credit facility to finance 80% of their processing plant expansion. Considering the sentiment of the dairy industry and the past expansion history of the business, it is expressing his desire for credit to support revenue growth and profit growth alongside expansion.

As a credit officer how would you conduct appropriate risk assessments and extend suitable credit facilities to Shree Krishna Dairy Pvt. Ltd.?

Step 1: Establish the nature of asset being financed.

- The expansion of the processing would involve both real-estate and non-real-estate assets as the expansion includes the leasing of the building and land alongside the purchase of the machinery.
- The land and building for the processing plant are to be leased, while the equipment and machinery to be purchased is new.

Step 2: Identify the suitable credit facility

Establish the main reason for borrowing: What is the main reason that the company is seeking loan. Is it to finance property, plant and equipment? To finance intangible assets? To finance NTA?

- The business is seeking credit facility for four main reasons: to construct a new milk processing plant with modern equipment, purchase pasteurizers, homogenizers, and refrigeration units, expand its storage and cold store facilities, and incorporate quality testing and automation

upgrades to increase efficiency.

- Classify the borrowing reasons into capital expenditure and working capital. **Refer to standard credit facilities>3.2.1 CAPEX and 3.2.2. Working Capital.**
- The above expansion plans fall under capital expenditure.
- Establish other reasons why borrowing could be required: could the borrower require additional financing to purchase/ lease land? Will financing be needed to construct temporary or permanent structures? If such is the case, then request the borrower to seek consultation of professional valuer, subject specialist, and conduct necessary due diligence. As the land is being leased, conduct detailed risk assessment as highlighted under **3.1.5 Infrastructure related risks.**

Evaluate assets' contribution to the business: Identify how the asset will contribute to business activity? Will the financed assets contribute directly to revenue generation? Or, will they make indirect contribution to business revenue?

- The factory expansion increases the company's daily production capacity from 10,000 liters to 40,000 liters. Hence, an increased output would directly contribute to higher revenue generation for the company.
- The factory expansion would also indirectly contribute to revenue generation as the purchase of refrigeration systems and expansion of storage and cold stores enable preservation of dairy products, increasing the company's bargaining power.
- It would allow the company to generate operational efficiency. This would cause a reduction in operational costs, which eases cash flow constraints.

Determine the cost or value of the asset being financed: The borrower is seeking to expand its processing plant. To establish the cost or value of equipment, request the borrower for multiple quotations. Similarly conduct professional valuation and get cost verified by subject matter expert. If the equipment needs to be imported, request for proforma invoice. **Refer to Appendix 2(B) and 3(D). Also can refer industry standard CAPEX cost for realistic comparison.**

Determine the LTV ratio: As per standard banking guidelines, the loan-to-value (LTV) ratio should be maintained within 70-80%. To ensure that the bank has adequate security against the loan, ensure loan amount falls under acceptable range.

- The company has requested for a LTV of 80%. As the asset being financed, a dairy processing plant, is highly specialized, there may be liquidity concerns.
- As the land for the processing plant is to be leased, the escape value for the project is highly dependent on the equipment of the processing plant. Hence, a LTV of 80% may be considered too high for such borrowing and a lower LTV may be explored.
- Additionally conduct general verification of the declared price before deciding on the LTV.

Establish moratorium period and repayment arrangements: Generally, moratorium period should be aligned with the construction cycle. Since the land and building for the processing plant is being leased, the company would need to purchase the required equipment and expand its storage and cold store facilities during the construction period. It is vital to propose and approve moratorium based on the need of the project.

- The construction period for the processing plant can be estimated to be shorter than the usual construction period as the land and building are being leased. Hence, the moratorium period should be aligned with the estimated time required by the company to source and procure the require equipment and expand its storage facilities.

Identify suitable funded or non-funded credit facilities: Banks are required to extend suitable credit facilities based on available standard credit facilities.

- Extend appropriate facilities by determining whether the borrower required one-off

emergency facility that can be paid within 12 months.

- Or, will a revolving line of credit be more appropriate? Establish if the borrower's credit needs can be fulfilled through cash credit, loans, or suitable transaction or trade finance?
- A funded facility will be more appropriate in this case, where one off term loan can be extended to facilitate expansion of the processing plant.
- **Refer to Annex 3 (C) Funded and on-funded credit facilities.**

Step 3: Conduct financial risk assessment

Conduct thorough financial ratio analysis to evaluate the company's profitability, liquidity and credit worthiness. Consider market prices, sales and profitability by incorporating any seasonality in this business segment. Also request for details of input cost. On these bases, assess the reality and rationality of financial projection.

Some important financial ratio analysis can include the following:

- Sales growth analysis, which can include: Year-on-year volume growth %, Year-on-year sales price growth %, Sales price growth vs. production cost growth.
- Gross profit and net profit margin.
- Operating profit margin.
- Return on assets.
- Inventory turnover ratio.
- Receivable collection period.
- Debt service ratio.
- Current ratio
- Loan to value ratio.

Standard Projection Data Input Sheet

		Actuals	Actuals	Provisionals	Projected	Projected
Particulars	**UoM**	**20X1**	**20X2**	**20X3**	**20X4**	**20X5**
For each product						
Input	Liters					
Churn Rate	Liters					
Production	Liters					
Input cost	Per Litre					
Other Direct Cost	Per Litre					
Sales Price	NPR					

Particulars	UoM	20X1	20X2	20X3	20X4	20X5
Revenue	NPR					
Direct Cost						
Inputs Cost	NPR					
Other Direct Cost	NPR					
Total Direct Cost	**NPR**	-	-	-	-	-
Gross Profit	**NPR**	-	-	-	-	-
Indirect Cost						
Land Lease Cost	NPR					
Electricity Cost	NPR					
Other Fixed Cost	NPR					
Interest Cost	NPR					
Depreciation	NPR					
Total Indirect Cost	**NPR**	-	-	-	-	-
Profit before Tax	**NPR**	-	-	-	-	-
Tax	NPR					
Profit after Tax	**NPR**	-	-	-	-	-
Gross Profit	%	0%	0%	0%	0%	0%
Net Profit	%	0%	0%	0%	0%	0%
Sales Price Growth	%		0%	0%	0%	0%
Yield Growth	%		0%	0%	0%	0%
Production Growth	%		0%	0%	0%	0%

Refer to 3.3. Financial risk assessment for further detailed guidelines on conducting these assessments.

Step 4: Conduct general risk assessment

Identify suitable risk and mitigation strategies that maybe relevant in dairy production. Follow the detailed guidelines as provided under **3.1. General risk associated with agri-lending.**

Step 5: Take measures to safeguard collateral

To safeguard against collateral risk, establish legal charge over security by following guidelines under chapter 5 Collateral.

Example 3: A case for cardamom trader: Everest cardamom traders Pvt. Ltd.

Everest cardamom traders Pvt. Ltd. (the company) is a mid-sized cardamom trading business based in Taplejung, Nepal. The company has been in operation for over a decade, sourcing large cardamom from over 1,200 smallholder farmers across the region. It processes, grades, and exports cardamom to both domestic and international markets, primarily India.

Due to rising global demand for premium-grade cardamom and increasing trade opportunities, the company plans to expand its operations by increasing its processing, packaging, and export capacity. The expansion will allow the trader to handle 200 metric tons annually, up from the current 80 metric tons.

To support this growth, the company requires NPR 100 million for infrastructure upgrades, including: construction of a modern grading and processing unit, installation of advanced drying, grading, and packaging equipment, and working capital for bulk procurement of raw cardamom from farmers

The company has approached a bank for a credit facility covering 75% of the project cost (NPR 75 million), with the remaining 25% funded internally. They have requested a 5-year term loan for infrastructure investment and a revolving working capital loan to support procurement and export operations.

As a credit officer how would you conduct appropriate risk assessments and extend suitable credit facilities to the company?

Step 1: Categorize the Trader

- Based on its procurement practices, Everest cardamom traders Pvt. Ltd. qualifies as a primary trader.
- From a sales perspective, the company operates as both a primary and wholesale trader.

Step 2: Identify Suitable Credit Facilities

Establish the Primary Borrowing Purpose:

- The borrower requires financing for both capital expenditure (CAPEX) and working capital needs.

Assess the Cost or Value of CAPEX:

- Since the trader is seeking financing for two major investments—the construction of a modern grading and processing unit and the purchase of specialized equipment and machinery—the cost exceeds 20% of total financing.
- In such cases, a professional valuer's assessment, along with supplier quotations and pro forma invoices, should be obtained. **Refer to Annex 2(A) for tools and evaluation guidelines**.

Evaluate the Asset's Contribution to the Business:

- The assets being financed are direct contributors to the business.
- Direct contributors (e.g., processing and grading equipment) justify higher loan-to-value (LTV) ratios, whereas indirect contributors (e.g., general infrastructure improvements) may warrant lower LTVs.
- Given that the assets in this case are highly

specialized, they may pose resale risks, which could further justify a lower LTV ratio. **Refer to Annex 2(B) for tools to assess asset contribution.**

Assess Sales Patterns and Trading Cycle Risks:

Consider whether the sales are contract-based and identify factors that could affect trading cycles, such as:

- Advance payment requirements for cardamom procurement.
- Inventory receivable days and potential delays in cash inflows.
- Possible disruptions in supply, distribution, or processing due to market or logistical factors.

Use tools **provided in Annex 3(B)** to analyze these variables and structure the loan accordingly.

Determine the Cost or Value of Working Capital Needs (Net Trading Assets - NTA):

- Use tools in **Annex 3(D).** To establish the cost of trading inventory financing.
- Ensure that inventory valuation complies with Nepal Financial Reporting Standards (NFRS) and that statements are regularly updated.

Establish the Moratorium Period and Repayment Terms:

- Since, the equipment are ready to install machine, the company may not need flexible moratorium. However, it may be essential to evaluate the lifetime of the asset and to match repayment period with the life of the asset.
- For working capital, align repayments with the seasonal nature of sales, harvesting and procurement period of input and peak sales period allowing flexibility in installment payments.
- The business may also be encouraged to seek forward contracts or price-lock agreements with major buyers to reduce revenue unpredictability.

Identify the Most Suitable Credit Facility:

- Based on the borrower's financing needs, extend the most appropriate funded or non-funded credit facilities.
- **Refer to Annex 3(C)** for available standard credit facilities and tailor them to fit the business's CAPEX and working capital requirements.

Step 3: Conduct financial risk assessment

Analyze the company's operating performance, cash flow, and financial ratios, to identify key financial risks for the trader. Given the seasonal nature of cardamom, and likelihood of the prices being influenced by seasonality, demand-supply imbalances, and trade policies it may also be essential to analyze the business's historical cash flow trends, projected Cash flow & debt servicing capacity, revenue trends and profitability, market Competitiveness & Pricing Risks.

Refer to 3.3. Financial risk assessment for further detailed guidelines.

Some important financial ratio analyses can include the following:

- Profitability ratio
- Revenue trends
- Return on asset
- Current ratio
- Inventory turnover and working capital cycle
- Debt to equity ratio

Standard Projection Data Input Sheet

		Actuals	Actuals	Provisionals	Projected	Projected
Particulars	**UoM**	**20X1**	**20X2**	**20X3**	**20X4**	**20X5**
Processing Capacity	Kg					
Capacity Utilization	%					
Annual Processed Quantity	KG					
Input cost	NPR Per Kg					
Other Direct Cost	NPR Per Kg					
Sales Price	NPR Per Kg					
Sales Price	NPR					
Particulars	**UoM**	**20X1**	**20X2**	**20X3**	**20X4**	**20X5**
Revenue	NPR					
Direct Cost						
Inputs Cost	NPR					
Other Direct Cost	NPR					
Total Direct Cost	**NPR**	-	-	-	-	-
Gross Profit	**NPR**	-	-	-	-	-
Indirect Cost						
Lease Cost	NPR					
Electricity Cost	NPR					
Salary Cost	NPR					
Other Fixed Cost	NPR					
Interest Cost	NPR					
Depreciation	NPR					
Total Indirect Cost	**NPR**	-	-	-	-	-

Profit before Tax	**NPR**	-	-	-	-	-
Tax	NPR					
Profit after Tax	**NPR**	-	-	-	-	-
Gross Profit	%	0%	0%	0%	0%	0%
Net Profit	%	0%	0%	0%	0%	0%
Sales Price Growth	%		0%	0%	0%	0%
Yield Growth	%		0%	0%	0%	0%
Production Growth	%		0%	0%	0%	0%

Step 4: Conduct general risk assessment

Identify suitable risk and mitigation strategies that maybe relevant in Trading. Follow the detailed guidelines as provided under 3.1. General risk associated with agri-lending. Some key risks can include:

- Labor and mechanization risk
- Supply chain disruption and inventory risk
- Currency risk (for export market)

Step 5: Take measures to safeguard collateral

To safeguard against collateral risk, establish legal charge over security by following guidelines under chapter 5 Collateral.

Example 4: A case for agri-input supplier: AgroGrow supplies pvt. Ltd.

AgroGrow supplies pvt. ltd. (the company) is a mid-sized maize seed importer in Udaypur district of Koshi Province, supplies hybrid maize seeds to local farmers. The company imports seeds in bulk from international suppliers, from India. The suppliers require 100% advance payment, while sales to local retailers and cooperatives operate on a 45-day credit cycle. This creates a mismatch in cash flow and working capital constraints for the company, especially during peak demand seasons.

To bridge this gap, the company is seeking a working capital loan of NPR 2 million to finance bulk seed imports. With this loan, the company aims to maintain steady inventory, and fulfill market demand, and increase its annual sales by 25%.

As a credit officer how would you conduct appropriate risk assessments and extend suitable credit facilities to AgroGrow?

Step 1: Categorize the agri-input supplier

- The company is involved in import business since it sources hybrid maize seeds from foreign suppliers and distributes them in the domestic market.

Step 2: Identify suitable credit facilities

Establish the Primary Borrowing Purpose

- The borrower requires a loan to finance its net trading assets.
- Primarily, financing is needed to support trade-related current assets, mainly to fund seed

supplies (traded inventories), trader receivables, and payments to suppliers.
- **Refer to Annex 3(A)** for tool to understand NTA borrowing determinants.

Assess the Cost or Value of NTA

- Determine the cost or value of trading inventory, trading receivables, and trade payables being financed.
- Follow the guidelines provided in the tools found in **Annex 3(D)** to identify factors that may affect NTA borrowing determinants.
- Further, follow the guidelines provided in **Annex 3(B)** to identify triggers that may change trading cycles and influence NTA growth.

Establish the Moratorium Period and Repayment Terms

- A moratorium will not apply since it is a short-term loan.
- The repayment period should align with the cash conversion cycle.

Identify the Most Suitable Credit Facility

- Assess funded and non-funded credit facilities that may be most suitable for the business.
- The business may require a revolving line of credit, which may be fund-based or non-fund-based. Trade finance serves as a fund-based facility, while non-fund-based facilities can include letters of credit.
- Use the tool provided in **Annex 3 (C)** to make decisions regarding suitable credit facilities using standard credit facilities.

Step 3: Conduct financial risk assessment

Get an understanding of cash conversion cycle by analyzing the following factors:

- Determine the lead time for imports, such as import shipment days.
- Understand the inventory turnover period and receivable days.

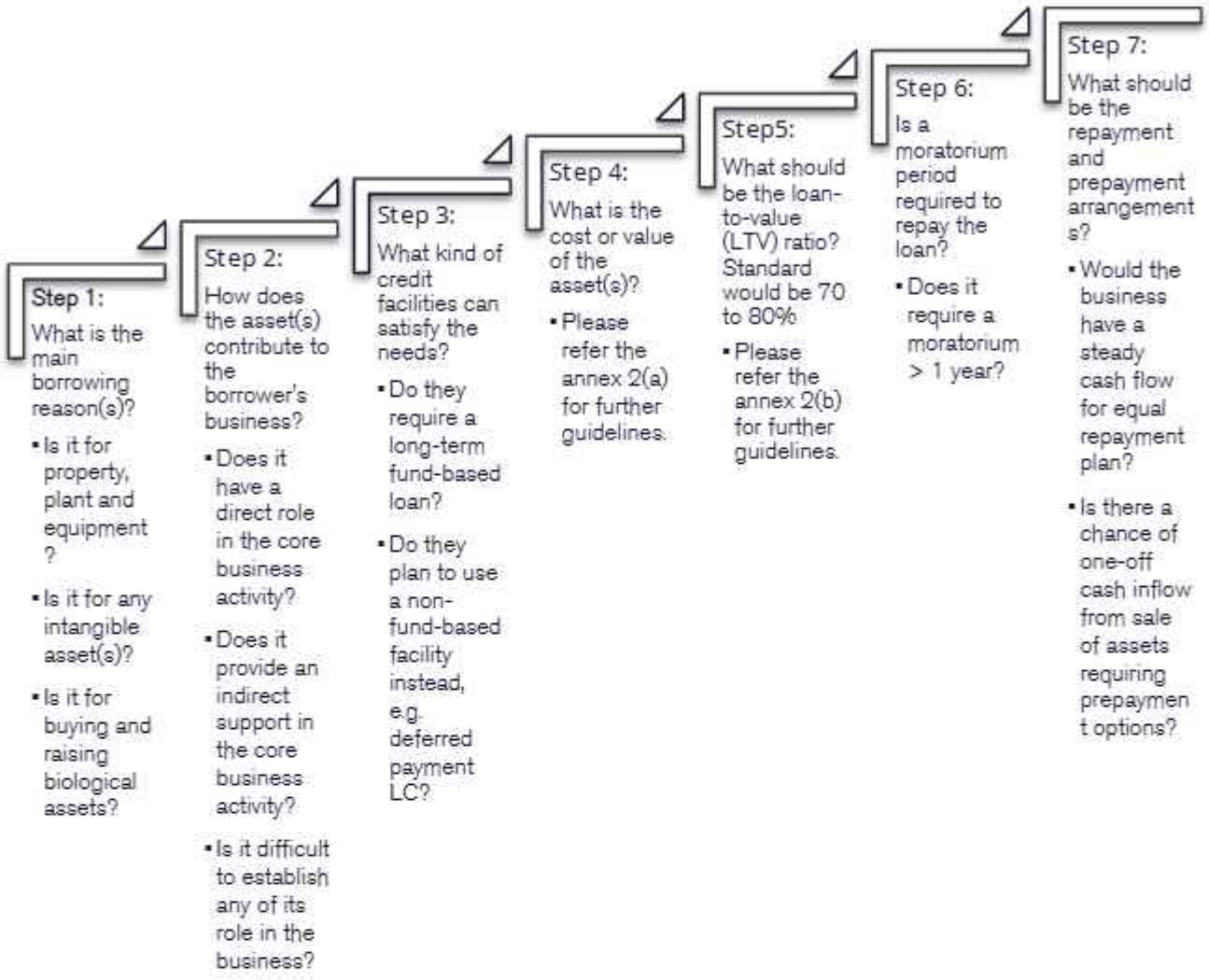
Step 4: Conduct general risk assessment

Identify suitable risk and mitigation strategies that maybe relevant to the buisness. Follow the detailed guidelines as provided under **3.1. General risk associated with agri-lending.**

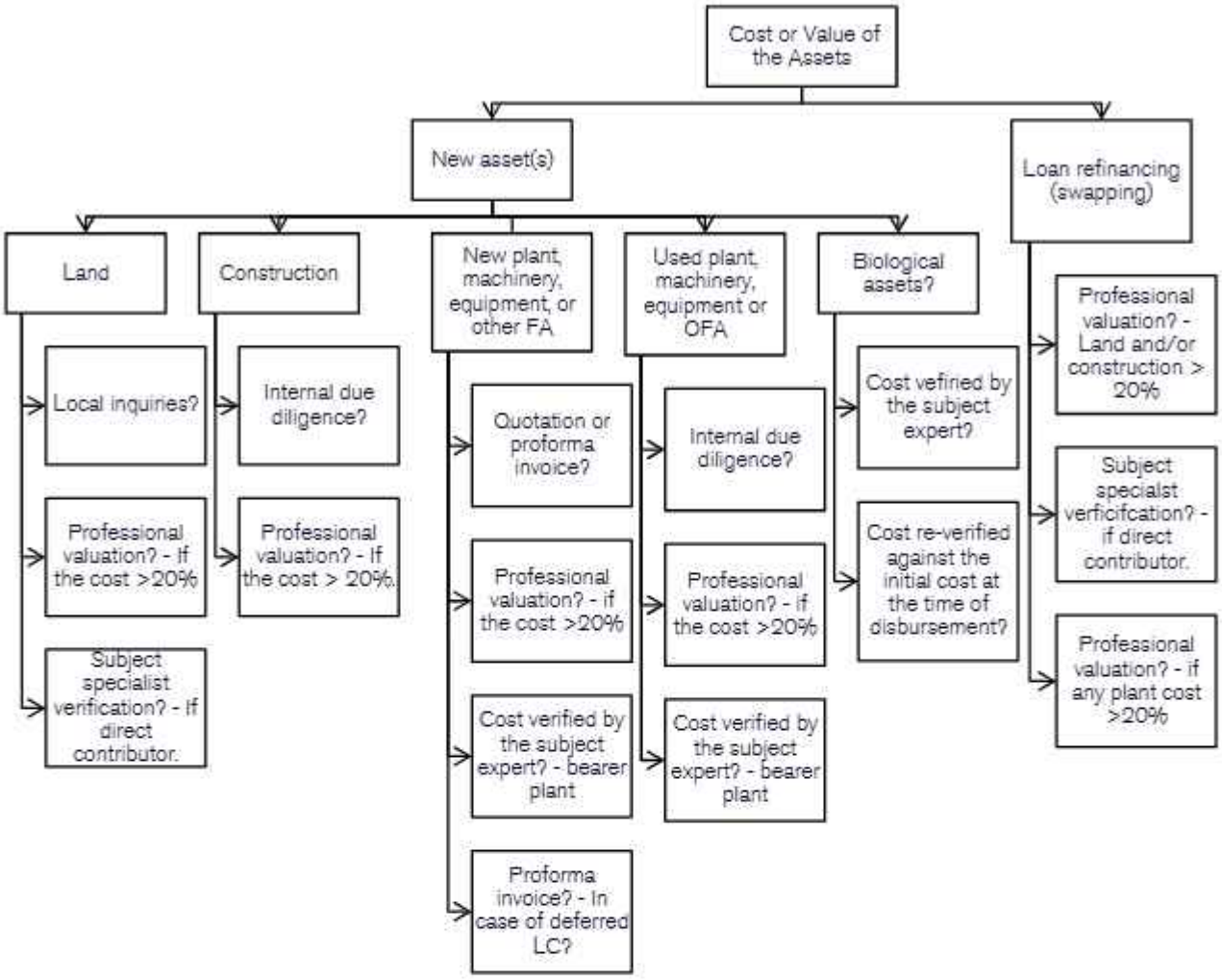
Step 5: Take measures to safeguard collateral

To safeguard against collateral risk, establish legal charge over security by following guidelines under **chapter 5** Collateral.

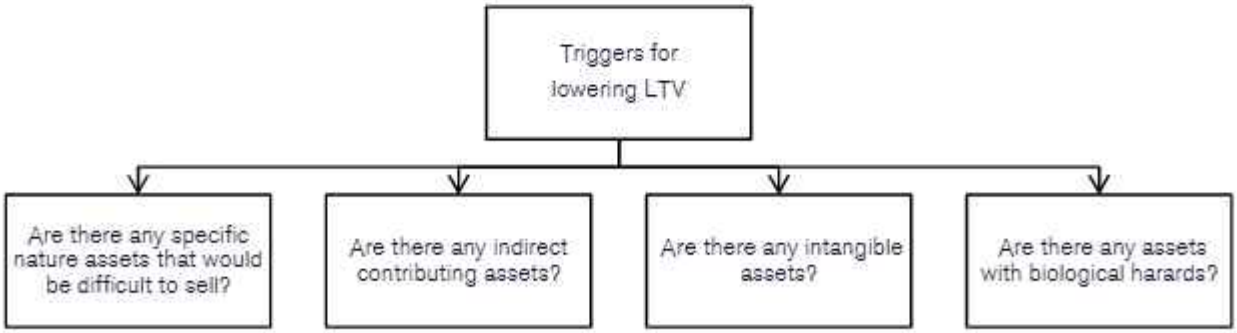
Annex 2: Step by Step Process to Determine CAPEX Credit Facilities



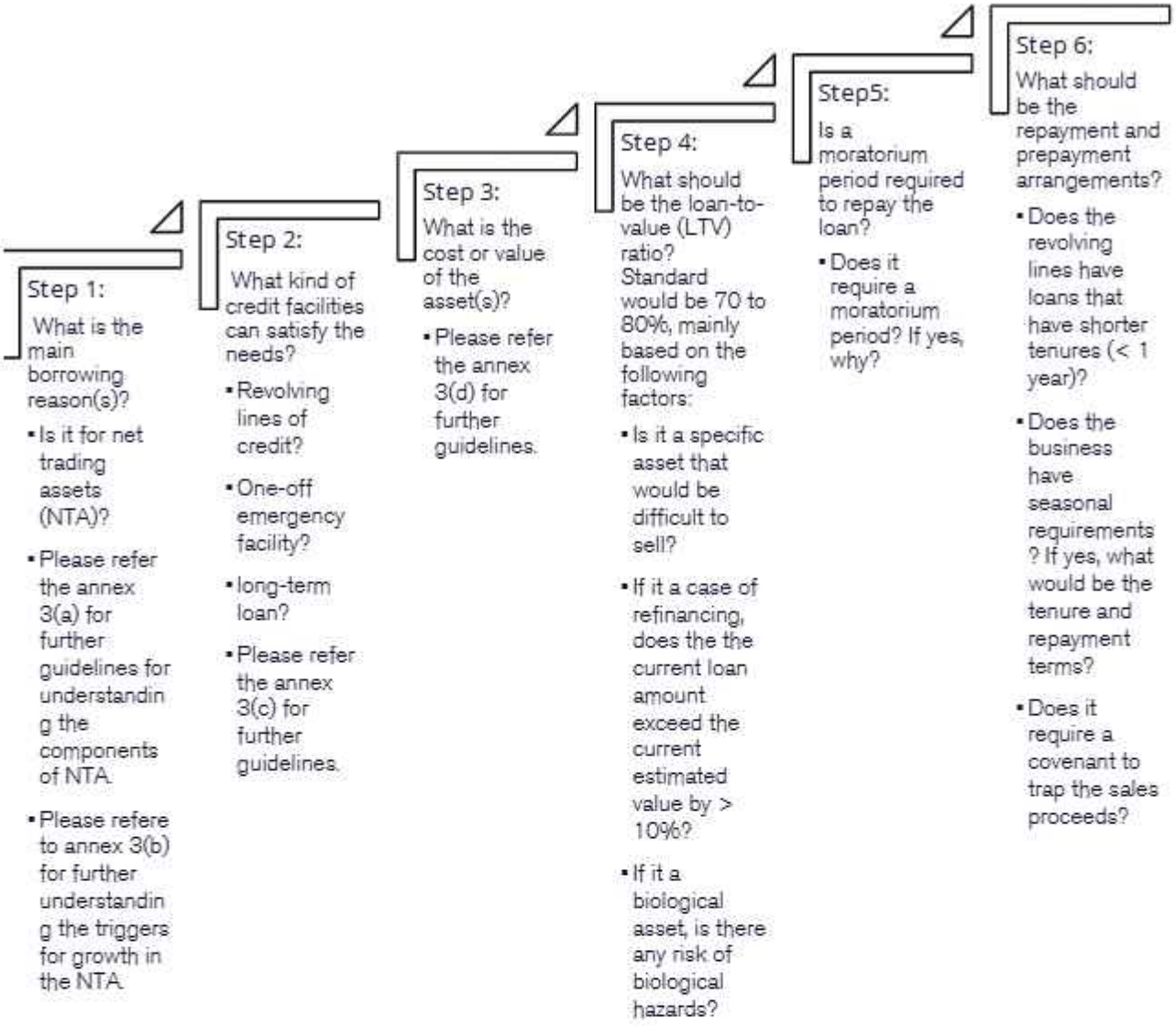
Annex 2(A): Determining Cost or Value of Asset



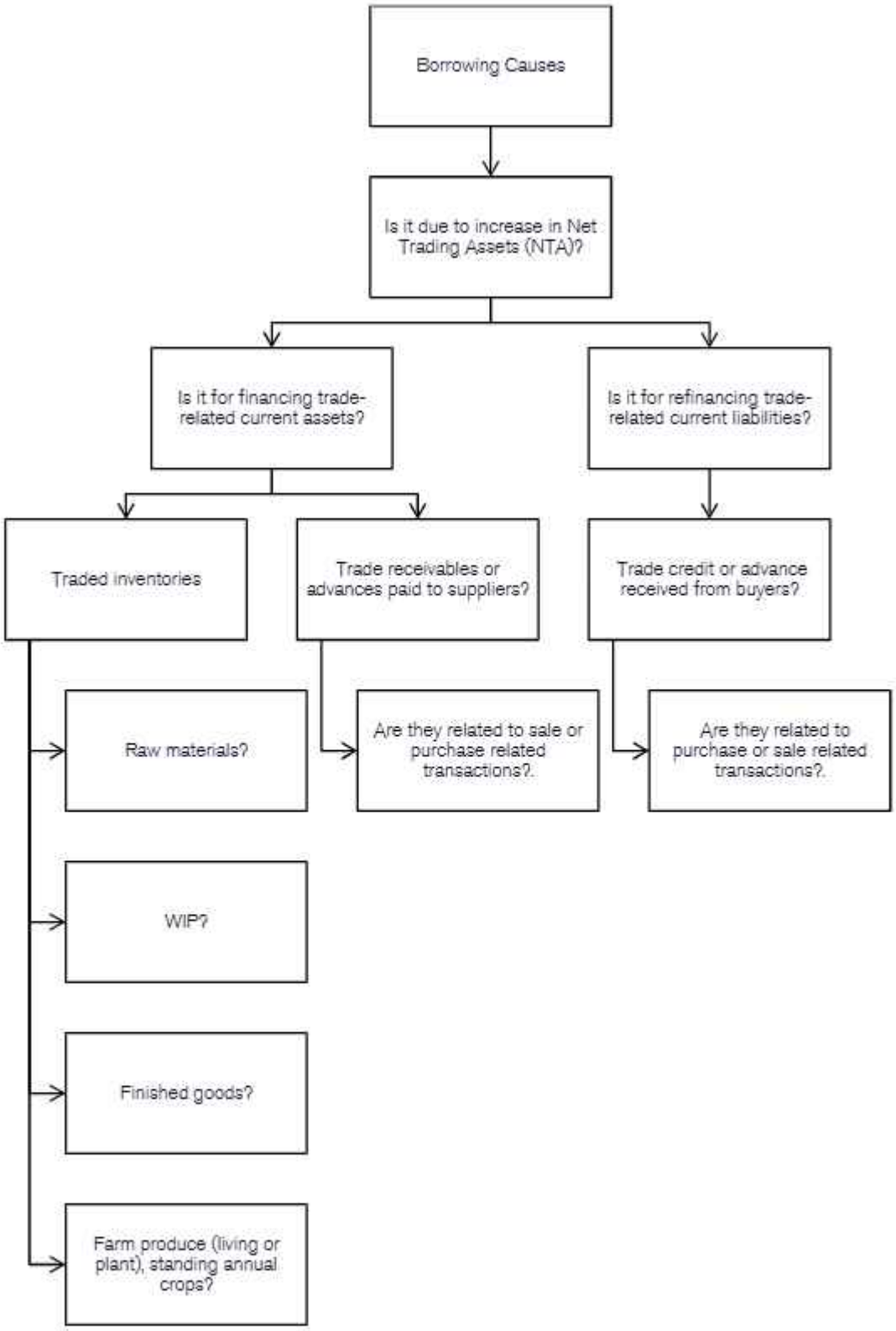
Annex 2(B): Determining Cost or Value of Asset



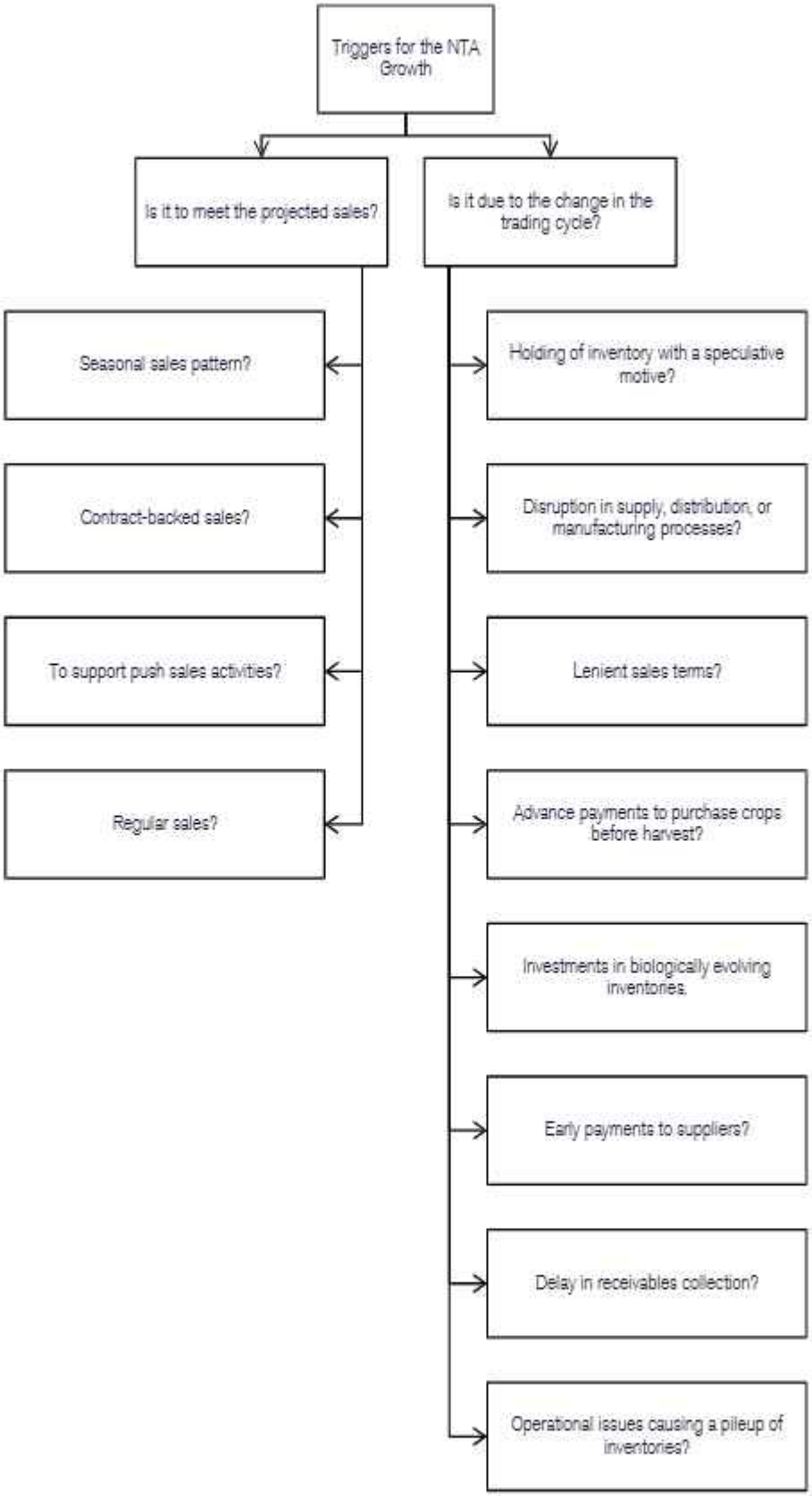
Annex 3: Step by Step Process to Determine NTA Credit Facilities



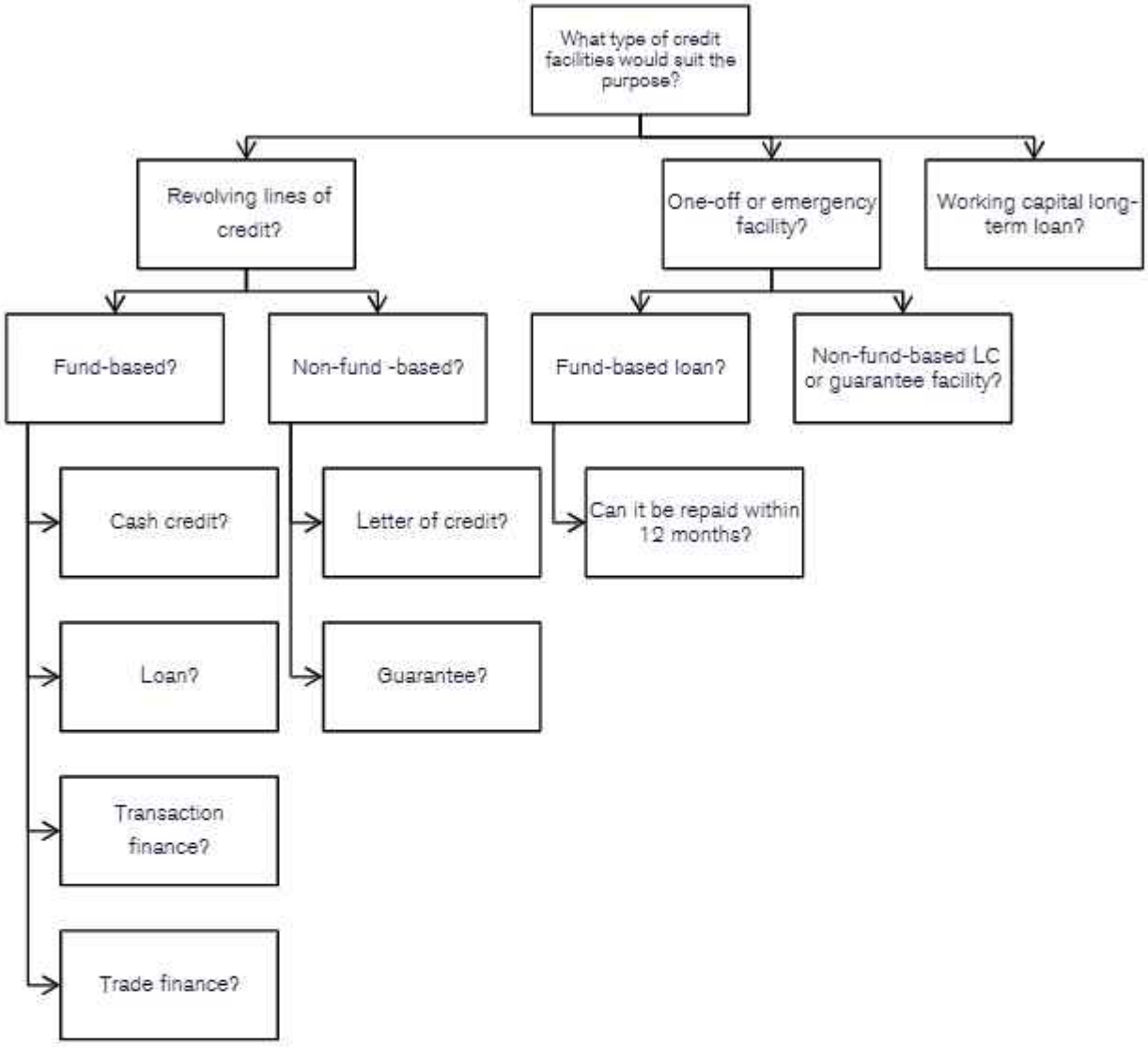
Annex 3(A): NTA Borrowing Determinants



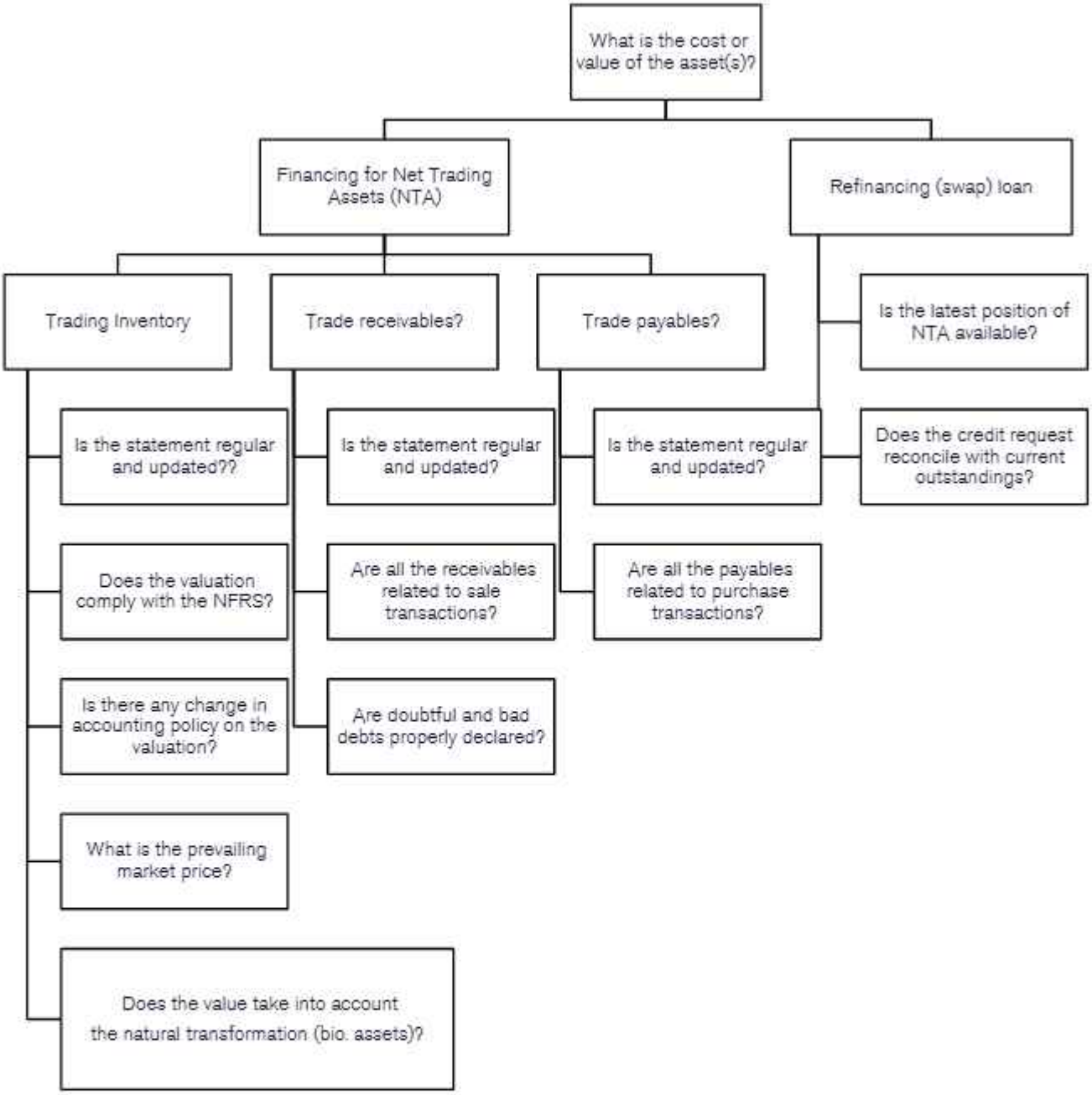
Annex 3(B): Factors Influencing NTA Growth



Annex 3(C): Funded and Non-Funded Credit Facilities



Annex 3(D): Determining Cost or Value of Asset



Annex 4: Agriculture Segments

The Industrial Enterprise Act 2076 (Schedule 4): Industries Based on Agriculture and Forest Products

1. Fruits farming or fruits processing;
2. Production, processing and storage of food products;
3. Animal husbandry, birds farming (including ostrich), animal breeding, challa kadne business, and production and processing of meat;
4. Industries producing milk and processing of dairy products;
5. Fishery, production, processing and packaging of fry;
6. Industries producing animal feed from agro-products as the primary raw materials;
7. Silk farming and processing;
8. Tea garden, tea processing;
9. Coffee farming and coffee processing;
10. Herbs farming, herbs processing;
11. Production of vegetable seeds;
12. Vegetable farming, vegetable processing;
13. Establishment and operation of green-houses;
14. Bee keeping (bee breeding, honey production and processing;
15. Floriculture, flower processing (making of garland, decoration, making bouquet, including production of seeds);
16. Nursery business, establishment, protection and management of botanical gardens, inclusive of tissue culture;
17. Rubber farming, preliminary processing and operation of rubber;
18. Operation and management of cold stores, agriculture markets;
19. Establishment and management of a community, leasehold, partnership, private forest and agriculture forest, and other non-timber forest products;
20. Commercial farming and processing of cash crops (such as sugarcane, cotton (kapas), sanpat, sajiwan, sweet sargam, stevia…., tobacco, zute, alaichi, keshar, oil seed. Mashala cultivation, dalahan, etc. and production of their seeds);
21. Bet, bamboo farming, bet, bamboo and other natural fiber products;
22. Processing of seeds;
23. Wood industries including saw-mills and furniture;
24. Wood industries such as parqueting, seasoning, treatment plant, ply wood, composite, board;
25. Industries based on other non-timber forest products including paper and resin;
26. Industries producing mushroom, tissue culture (producing plants through new technology), agroforest;
27. Cotton farming, production and processing of cotton and cotton seeds.

Annex 5: Agri-Insurance Policy

Livestock

Insurance Type	Subject Matter of Insurance	Insured Perils	Remarks
Cattle	Cow Calf (female)- up to 1 year Calf (female)- above 1 year Milch cow	Fire, lightening, Flood, Inundation, Drought, Landslides, Mudslides, Storm, Hailstorm, Snowfall and Frost, External Accidental Means, Diseases, Death, Infertility	Sum insured to be determined on the basis of local price, or on the recommendation of vet technician, ward, or vet hospital.
	Buffalo Calf (female)- up to 1.5 year Calf (female)- above 1.5 year Milch buffalo		
	Yak Calf (female) Heifer Milch yak Adult yak		
	Pig		
	Stud bull/buffalo Local breeds Cross breeds		
Poultry	For meat production Broiler Duck Turkey For egg production Layer Duck Guinea fowl (laukat) Local chickens / hens	Fire, Lightening, Earthquake, Flood, Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, External accidental reasons, Death caused by illness or disease.	Sum insured to be determined on the health condition and productivity. For parent and layer premium is applicable is per annum. For broiler premium is applicable for short-term (8 weeks).

Fish Farming	Fish production (technology wise) Semi-intensive farming -10,000 /ha Intensive farming – 15,000 /ha Trout – 100 per sq. Mother fish – 667/ha Panga Fish-70,000/ha/ Chhadi Fish – 2,00,000 / ha	Fire, Lightening, Earthquake, Flood, Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, External accidental reasons, Death caused by illness ,disease, lack of oxygen, ammonia, and poisonous materials	Maximum insured price is dependent on product price.
Bee Keeping	Housing Bee-hive (including bee) Other input cost	Fire, Lightening, Earthquake, Flood/ Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, Death caused by illness/disease, Damage by parasite, Damage by poison in the hive, Damage at grazing location, Damage by road accident during transportation for the purpose of grazing.	The sum insured must be reduced by 20% each year.
Ostrich	Ostrich farming	Fire, Lightening, Earthquake, Flood/ Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, Death caused by illness/disease except death by bird flu.	The sum insured is dependent on the cost of ostrich.
Goat	Goat raised for : breeding, milk and meat	Fire, Lightening, Flood/ Inundation, Drought, Landslide, Mudslide, Storm, Hailstorm, Snowfall, Frost, External accident means, Diseases	The sum insured to be fixed as per the local price, productivity, and recommendation by concerned vet technician.
Pheasant	Nepali Kalij	Fire, Lightening, Earthquake, Flood/ Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, External accident means, Death by illness/ diseases	The sum insured to be fixed as per the prescribed formula of the insurance policy. No subsidy available on premium.

Crops with Insurance policies available on Input cost.

Insurance Type	Subject Matter of Insurance	Insured Perils	Remarks
Vegetables, Fruits, Potato Farming	Vegetable Farming Fruits Farming Potato Farming	Fire, Lightening, Earthquake, Flood, Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, External accidental reasons, Death caused by illness, disease, and insects.	Maximum sum insured depends on the input cost for the entire period from plantation to harvesting.
Mushroom	Mushroom plant Tunnel/shed cost.	Fire, Lightening, Earthquake, Flood, Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, Death caused by illness and disease.	Maximum sum insured depends on input cost of mushroom farming, including cost from plantation to harvesting.
Banana	Banana Farming	Fire, Lightening, Earthquake, Flood, Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, External accidental reasons, Death caused by illness, disease, and insects.	Maximum sum insured depends on input cost for the entire period, including cost from plantation to harvesting.
Cardamom	Cardamom Farming	Fire, Lightening, Earthquake, Flood, Inundation, Landslide, Subsidence, Storm, Hailstorm, Snowfall, Frost, External accidental reasons, Death caused by illness, disease, and insects.	Maximum sum insured depends on input cost for the entire period, including cost from plantation to harvesting. One plant can be insured up to 16 years.

Crops with Insurance policies available on yield value:

- Sugarcane
- Cereal Seed
- Cereal Crop
- Vegetable
- Fodder Grass
- Ginger
- Turmeric
- Coffee
- Tea
- Lemon
- Orange
- Sour Orange
- Kiwi
- Dragon Fruit
- Mango
- Lentils
- Timur
- Mentha

Subsidy Details:

All livestock and crops listed in Annex 5, except for Phesant, Timur, and Mentha qualify to receive subsidy on insurance premium. The scale of premium subsidy is as below:

Sum insured range (NPR)	Subsidy in premium
0 to 50,00,00	80%
50,00,000- 100,00,000	65%
Above 100,00,000	50%

Additionally, under the weather index insurance policy, subsidy is available in an event of drought but not in the event of flood.

Annex 6: Warehouse Receipt Financing (WRF)

Background

Warehouse Receipt Financing (WRF)is a globally accepted financial instrument devised to aid and improve access to finance in the agricultural sector. A warehouse receipt financing model is based on transferring the risk of the lender from the producer to the warehouse operator who holds the goods for the producer in the capacity of a bailee. When loans are provided against the security of the warehouse receipt issued by the warehouse operator, it becomes a tripartite transaction constituting a contract of pledge.

An efficiently designed WRF system can provide various benefits for all parties involved. Global experience shows that, to achieve these benefits, the receipt system should be based on a well-designed and enabling regulatory framework that ensures its integrity and transparency.

In markets such as Nepal where 23 percent of its GDP is contributed through the agriculture sector while employing over 60 percent of the workforce, WRF can stimulate the sector for increased mobilization of funds and productive output while countering the inherent risks.

Context

The current NRB guidelines and directives are primarily focused on the procedures for providing consistent working capital financing for commercial credits. The regulations do not, however, fully deal with the specific needs of WRF.

Only four forms of financing are envisioned by the current version of the Working Capital Financing Guideline 2079:

- Credit lines for trade finance,
- Revolving cash credit for fluctuating working capital (FWC) needs,
- Permanent working capital (PWC) for long-term working capital needs, and
- Loans for financing one-off or temporary financing needs.

A wide variety of owners, each with a different scale, may use the warehouse facility to store their goods. For each batch of consignments received from these owners, the warehousing company will issue a Warehouse Receipt (WR) against goods received for storage in their facilities. The fundamental objective of WRF would be defeated if all these transactions must be accommodated within the present working capital financing framework. The fundamental principle of the WRF is specific transaction finance. Therefore, the concept of drawings from an omnibus line of credit would not be compatible with it in toto.

The warehouse facility may be used by several owners at different times and the amount of inventory each owner holds can vary as well. Therefore, rather than

allowing drawings under a standard working capital line, banks and financial institutions (BFI) would be better off using a transaction finance product like WRF to meet such financing needs.

Benefits

WRF will help the stakeholders in the following aspects:

Small and medium-sized agribusiness owners, in particular, struggle with the ease of access to regular credit lines of BFIs. The main reasons for this are a lack of reach and collateral. Obtaining real estate collateral is not mandatory for BFIs as per current working capital guidelines issued by NRB. They still lack the confidence to completely waive it, though. It has proven to be a major obstacle to scaling up the activities. The WRF would be a useful tool for reducing risk. Both the potential borrower and BFIs may benefit from it. Both parties can use the WR as a tangible means to attest to the legitimacy of the underlying transaction and as an effective form of security.

Currently, the commodities market is dominated by middlemen. They play a crucial role in the value chain, namely in the distribution and storage of seasonal products. They may also be the cause of abnormalities in the market at certain times. An efficient WRF ecosystem would counter those situations and bring order to the market. This is true because small and medium-sized farmers may increase their ability to hold inventory by having direct access to the facility. At the same time, the facility can also be used by the current aggregators to store their inventory. Consequently, both participants in the value chain may benefit.

Lenders have been offering credit facilities secured by hypothecation over the borrower's inventory stored in owned or rented premises. There are situations where it is the only possible security, particularly in the case of large borrowers. WRF can ease the lenders' discomfort when they are relying only on the hypothecation charge over the current assets of the borrower. Furthermore, it can also reduce their urge to seek real estate collateral as additional security, particularly in the case of small and medium-sized borrowers.

Lending and borrowing processes can be made transaction-backed with the aid of WRF. Every transaction will be supported by a receipt. It will assist the lenders in establishing the transaction and location of the inventory. It will also lessen their administrative hassles and expenses. These all help emphasize the importance of the receipt, which eventually can serve as a legitimate financial instrument.

Recommendation

Considering the, it is now essential to create a WRF-friendly environment. Particularly for the country's agricultural (productive) sector, a separate regulation on the subject can help codify the entire process and help develop a new efficient financial tool. This document seeks to make key recommendations that will help create a balanced environment, make transactions easier and put in place the required safeguards.

They are listed below:

The warehousing company must have a proper infrastructure to safely store the concerned commodities and items. It should also have a comprehensive system and process for issuing a WR and maintaining records for facilitating WRF.

There shall be a general tri-party agreement between the BFI, the warehousing company, and the borrower before extending the WRF facility to a borrower. The agreement shall cover the rights, duties, and obligations of all the parties. It shall remain valid until it is revoked with the consent of all three parties.

The warehousing company must issue a WR after all necessary checks, i.e., weight, quality, etc. The receipt should denote, at least but not limited to, the details regarding the owner, item, quantity (volume), date of receipt of the goods, date of issuance, date of expiry, insurance details, storage life of the goods, declared purchase price, etc.

The WR can be issued in paper or digital form.

In the case of a paper-based WR, the BFI engaged in WRF must hold the list of authorized signatories of the warehousing company. All WR shall be jointly signed by authorized signatories and the bank and financial institution must verify the signature before disbursing a loan under the WRF. In the case of a digital WR, the concerned BFI must have digital access to the software of the warehousing company to record and release its charge in the system. The environment should be secured and transparent for all BFIs so that any of them can check the details of each WR.

The WR should be issued within 7 days from the date of receipt of the goods by the warehousing company. The date of expiry of a WR should not exceed 365 days from its date of issue. However, the warehousing company shall be responsible for ascertaining the storage life of the goods and assigning an appropriate expiration date if the storage life is less than 365 days.

The loan-to-value (LTV) ratio shall not exceed 80 percent of the declared purchase price of the goods stated in the WR. The bank must carry out a general verification of the declared price before deciding on the LTV. The maximum tenure of the financing should not exceed 30 days before the date of expiry of WR.

If a BFI advances a loan against a WR, it must hold the original WR and execute its charge over the goods stated in the receipt. It can disburse the loan only after receiving acknowledgment of the charge from the warehousing company. In the case of a digital WR, the BFI must record its charge in the system before disbursing the loan.

The warehousing company shall not release the goods to anyone until it receives a formal confirmation from the lending bank. However, this does not restrict them from releasing the goods in parts if they receive formal consent from the concerned bank. In such cases, the bank must recover its entire dues (principal, interest, and charges) for the portion of the goods being released. The warehousing company should issue a fresh WR with an updated quantity, cancel the one that was previously issued, and continue the bank's charge in their system.

The WR will have the sections denoting registration and release of the specific charge.

The WR will be a non-negotiable document, i.e., the receipt cannot serve as a substitute for cash, and the rights and obligations of the title-owner of the receipt are not transferable to another party by way of endorsement or any other modes of transfer.

The borrower will execute a letter of hypothecation signifying a specific first charge over the inventory, including that held by the warehousing company, in favor of the BFI extending WRF. The charge must be registered with Credit Information Centre Ltd. (CICL) as per the Secured Transaction Registration Act.

The amount availed by a borrower in the form of WRF will not be included in calculating the borrowing power of general working capital facilities. Therefore, the general letter of hypothecation of all BFIs should have the provision of excluding their rights over the goods held as a specific first charge by the BFI advancing WRF.

The warehousing company must have a system for disclosing the total amount of loan utilized under WRF by each owner of the stock.

The requirement of sharing security on a pari-passu basis or obtaining a no-objection certificate from any lending institution shall not be necessary for availing WRF.

If the goods are sold during the validity of a WR and the buyer also wants to maintain the inventory with the same warehousing company, the loan advanced to the seller by a BFI under the WRF arrangement shall not be automatically transferred to the buyer of the goods. It will have to first receive repayment of the total amount of dues under the loan from the first party (the seller) before it grants a fresh loan to the second party (the buyer). However, the BFI will have the right to reject the request of the second party to advance the loan. A fresh WR must be issued in

favor of the buyer by canceling the first. However, if the seller has availed WRF, the warehousing company must receive the formal consent of the concerned BFI before they issue the fresh WR to the buyer of the inventory. In the case of such buy-sale transactions, the maximum tenure of the receipt shall not exceed the tenure assigned in the first WR issued for the same goods.

The stocks held by the warehousing company shall be fully insured against all possible perils. The policy must cover the rights of the owners of the stock, irrespective of the changes in its title during the period the warehousing company holds the stock in its possession. The interest of the bank or financial institution involved in WRF must be noted in the insurance coverage.

The concerned BFI must calculate the LTV every month for the loan against WRF. If the prevailing market price is lower than the declared price in the WR by more than 10%, it must issue a formal notice to the borrower in writing to deposit the deficit amount within seven days. If the borrower fails to deposit the amount within the notice period, it will have taken necessary action to recover the loan. However, the BFI shall not be obliged to disburse an additional amount of loan if the market price of the goods is higher than the declared price during the tenure of the loan.

The borrower's inventories kept by the warehousing firm are subject to inspection by the BFIs involved in the WRF. BFI shall cross-reference their records of WR with the warehouse company's records.

The claims of BFI involved in financing under WRF will have priority over the claims of the warehousing company. This will have to be specifically stated in the tri-party agreement.

The warehousing company must make all arrangements to segregate goods and make them ready for delivery if the BFI decides to exercise its right to sell the goods in case of default by a borrower. The goods must be delivered to the buyer after it receives a formal written communication from the concerned BFI. If such goods are to be stored with the same warehousing company, it shall issue a fresh WR in the name of the new owner upon the request of the concerned BFI.

The BFI can include the outstanding amount of the WRF loan in the agricultural-sector financing portfolio.

Sample of Warehouse Receipt

Warehouse Receipt					
Receipt No	1680-81		**Receipt Date**	09-Jun-2020	
Location and Address of Warehouse	Purnia S				
Godown No	11				
Godown Address	NCML PROJECT WAREHOUSE(rato), NH-57, VILLAGE - FATEHPUR, P.O - BASBA, DISTT- PURNEA, STATE- BIHAR, PIN-854339				
Name and Address of the Depositor	PPAGRO Dharamgarh Road,Sahdon, Distt -Jind Pin-126112				
Commodity (Said to contain)		Maize	**Condition of Commodity**		Average*
No of Bags		[5773]	**Gross Quality(MT) (Said to contain)**		[377.800]
Name of License No of Weigher			**Private Marks on Packaging**		na
Name of License No of Assayer					
Quality As per Grader			**Grade Valid Till**		20-Mar-2021
Storage Charges(Rate)-excluding Taxes(Rupees per mt/month)		[175.00]	**Storage Charges-excluding Taxes(Total Amountiper month**		[66,115.00]
Goods are Accepted for storage From		09-Jun-2020	**Goods are Accepted for storage Up To**		20-Mar-2021
Market Rate at the time of deposit(Rs/MT)		[12,300.00]	**Value of Commodities at time of deposit(Amount in Rs)**		[46,46,940.00]
Gross Quatity in Words		Three Hundred Seventy Seven MT and Eight Hundred Kg Only.			
Value of Commodity in Words		Fourty Six Lakh Fourty Six Thousand Nine Hundred Fourty Only.			
Insurance Details					
Valid From - Valid to	**Policy & Cover Note No**		**Insurance Co.**	**Policy Amount (in Rs.)**	**Risk Covered**
01-Apr-2020 To 31-Mar-2021	500100112OP100277874 AND 500100112OP100278306 AND 500100112OP100278371 AND 500100122OP100290057~500100112OP100277874 AND 500100112OP100278306 AND 500100112OP100278371 AND 500100122OP100290057		UNITED INDIA INSURANCE COMPANY LTD	16528093498.00	FIRE AND BURGLARY
This WHR can not be pledge to Banks/Financial Institutions.					
Withdrawal History	The good mentioned below are hereby released for delivery from the Warehouse. The unreleased balance is subject to lien for unpaid charges and borrowings from lending institutions.				
Date	**CITF No**	**Quantity Released** No of bags	Quantiy In MT	**Quantity Balance** No of bags	Quantiy In MT
-	-	-	-	-	-
This Warehouse Receipt is not valid without an official Hologram of NCMSL affixed below					
If the commodities are not withdrawn by 'Goods are Accepted for storage Upto' date mentioned in the WHR, NCMSL shall be entitled to dispose the same at the risk and responsibility of the depositor and remit the proceeds to the depositor after deducting the applicable fees and charges.					
Signature & Stamp of Warehouse Manager		**Hologram No:-2246871**		**Affix Hologram Here**	
WHR Versions:					
Hologram No	**Date**	**WHR Type**	**Pledge Bank Name**		
2246871	09-Jun-2020	Pledgable	HDFC BANK		

Sample of Tripartite Agreement

THIS AGREEMENT is made as of the date stated herein below,

AMONG:

..... **Bank Limited** having its registered office at , Kathmandu, registered under the "Companies Act, 2063", and licensed by Nepal Rastra Bank under Bank & Financial Institutions Act, 2074 and duly represented by herein after referred to as "the Bank" the First Party.

(Warehouse operating company) registered under the Company Act 2063, having its registered office at ..... duly represented by or personnel authorized by the board in writing and hereinafter referred to as "Collateral Manager" the Second Party.

Grandson of Mr....., Son of Mr. ....., Permanent Resident of....., Temporarily Residing at ..... Aged..... Mr. **[NAME OF THE INDIVIDUAL BORROWER]** hereinafter referred to as the "Borrower" the Third Party. *[In case of Individual Borrower]*

OR

[NAME OF THE INSITUTIONAL BORROWER] registered under ....., having its registered office at ..... duly represented by .....and hereinafter referred to as the "Borrower" the Third Party. *[In case of Institutional Borrower]*

WHEREAS,

the Bank has agreed to provide short term financing to the third party against the pledge of goods stored at the warehouse owned by the second party;

the Collateral Manager has agreed to provide overall collateral management services to the first party and also act as the legal custodian for pledged goods which has been stored by third party in the warehouse owned by it;

the Borrower has agreed to avail the short-term facilities from the first party against the Warehouse Receipt issued by the second party;

NOW, THEREFORE, in consideration of the above parties hereto agree and declare the following:

THE BANK

1. Shall disburse the loan to the borrower under fulfillment of the following conditions, but not limited to:
2. upon execution of legal/security documents as outlined in the Credit Facility Offer Letters (CFOL);
3. receipt of pledge marked Warehouse Receipt and pledge confirmation letter from the Collateral Manager;
4. receipt of Insurance Policy endorsed in favor of the Bank.

DUTIES AND RESPONSIBILITIES

Shall instruct the second party for partial/full release of pledged goods upon partial/full settlement of loan.

Shall partially recover the loan maintaining the initial ratio of financing in case of partial release of pledged commodity;

Shall fully recover the loan, accrued interest till date and other applicable charges (if any) for full release of pledged commodity;

Shall sent the instruction for release of goods to Collateral Manager, only in case of settlement of loan and dues (if any) by the Borrower or submission of Good for Payment (GFP) cheque covering the full obligation of the Borrower to the Bank. Bank reserves the right to not to release the pledged goods in case the customer presents the short GFP cheque.

Shall monitor the margin on a periodic basis and call for the additional margin to the borrower in case of shortfall in margin.

Shall recover the principal, interest, penal and other charges due from the proceedings generated through auction of pledged goods as per the first ranking claim in case of distress situation.

THE COLLATERAL MANAGER:

1. Shall issue the Warehouse Receipt against the commodities stored in the silo by the Borrower;
2. Shall mark the pledge on Warehouse Receipt and sent to the bank along with pledge confirmation letter;
3. Shall provide endorsed insurance policy to the bank;
4. Shall render the collateral management services such as quality, quantity verification/preservation and guarantee sage custody of commodities by the scientific management of temperature, moisture and fungus control.
5. Shall pledge and release the commodities in line with instruction from the bank;
6. Shall update the warehouse receipt in case of partial release and send the same along with pledge confirmation letter of remaining commodities to the bank;
7. Shall provide reference pricing to the bank for pricing determination of commodities being pledged;
8. Shall assist auction process in case of distress situation and recover the rent and other charges due from the proceedings from auction as per the second ranking claim.

THE BORROWER:

1. Shall execute the legal/security documents as advised by the bank and any other requisites (if any) to avail the loan.
2. Shall repay the interest on quarterly basis and principal amount on its maturity.
3. Shall partially repay the loan maintaining the originally agreed financing ratio for partial release of commodities;
4. Shall fully settle the loan, accrued interest till date and other applicable charges (if any) for full release of commodities;

All the three parties of this agreement consensually agreed the following:

In case of default, the Collateral Owner shall initiate the auction process with prior consent from the Bank. The proceedings recovered from the disposal of the commodities, shall be utilized among the parties as per the following ranking:

1. **First Ranking:** Recovery of rental charges, auction management charges, WRF issuance charges, and other applicable charges (if any) of the Collateral Manager.
2. **Second Ranking:** Recovery of principal, interest, penal and other charges of the Bank.
3. **Third Ranking:** Remaining amount to be left credited into the account of the customer.

Amendments of Features

Parties can any time amend, add, change, or modify any of the proposed features through mutually agreed manner.

Termination of Agreement

The agreement can be terminated only if all the parties agree in writing. However, the borrower shall settle all their dues to the bank and collateral manager before termination of the agreement.

Binding Law

This Agreement shall be governed by and is constructed in accordance with laws of Nepal.

Settlement of Disputes

In case any dispute arising out between the parties to this agreement, it shall be settled amicably between the parties, and no third parties shall be involved. In case of failing to settle the dispute amicably between the parties, such dispute may be settled through the process of Arbitration in the manner as prescribed in the Arbitration Act, Nepal 1998 (2055).

We tri-parties have read understood and accepted all the terms and conditions of this contract and signed, executed and exchanged a copy of the contract in the office of ..... Bank Limited,....., Nepal.

On behalf of (Bank and Financial Institution)

Name:	Witness
Designation:	Name:
Date:	Designation:

On behalf of (Warehousing Company)

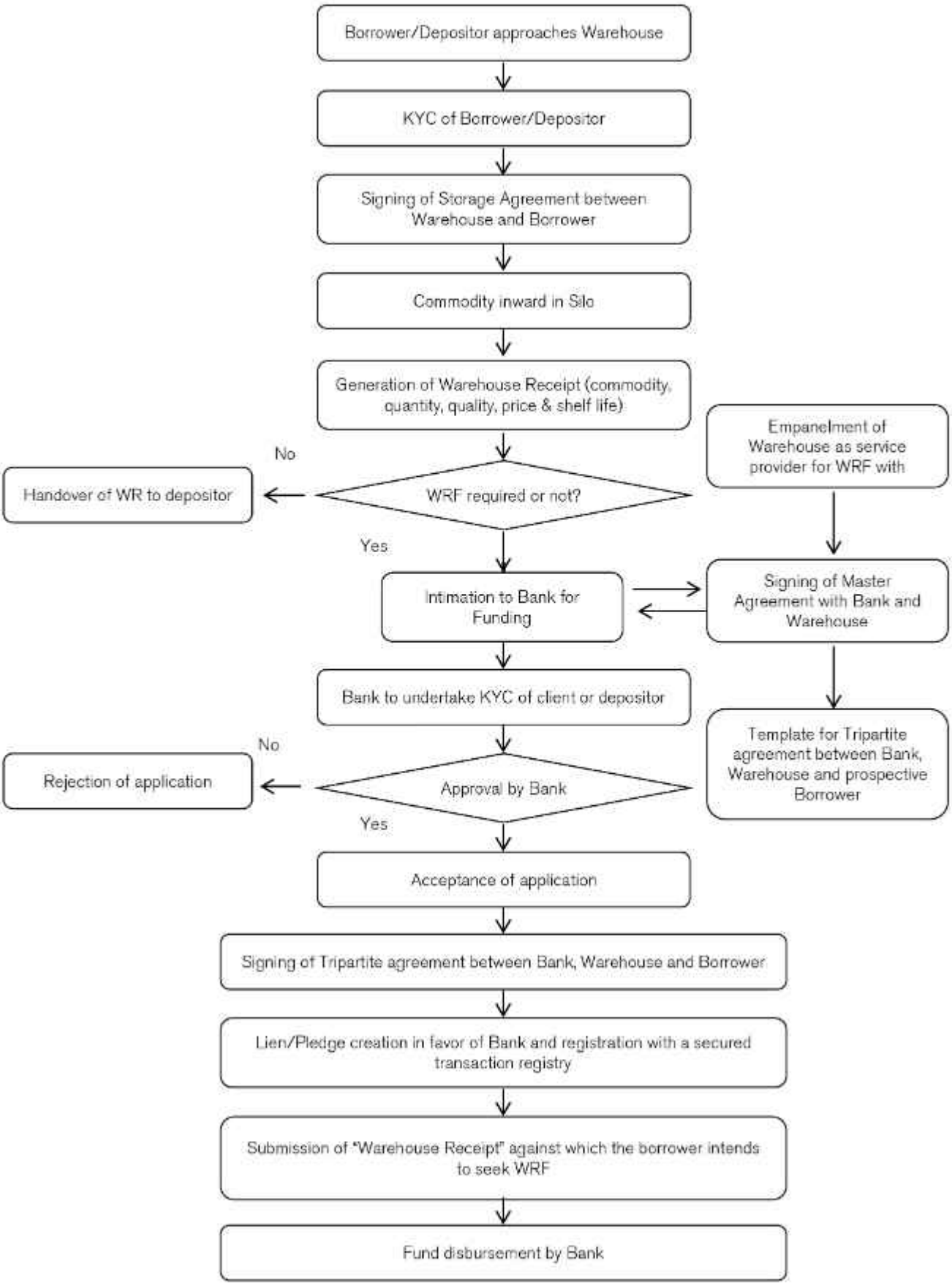
Name:	Witness
Designation:	Name:
Date:	Designation:

On behalf of Borrower:

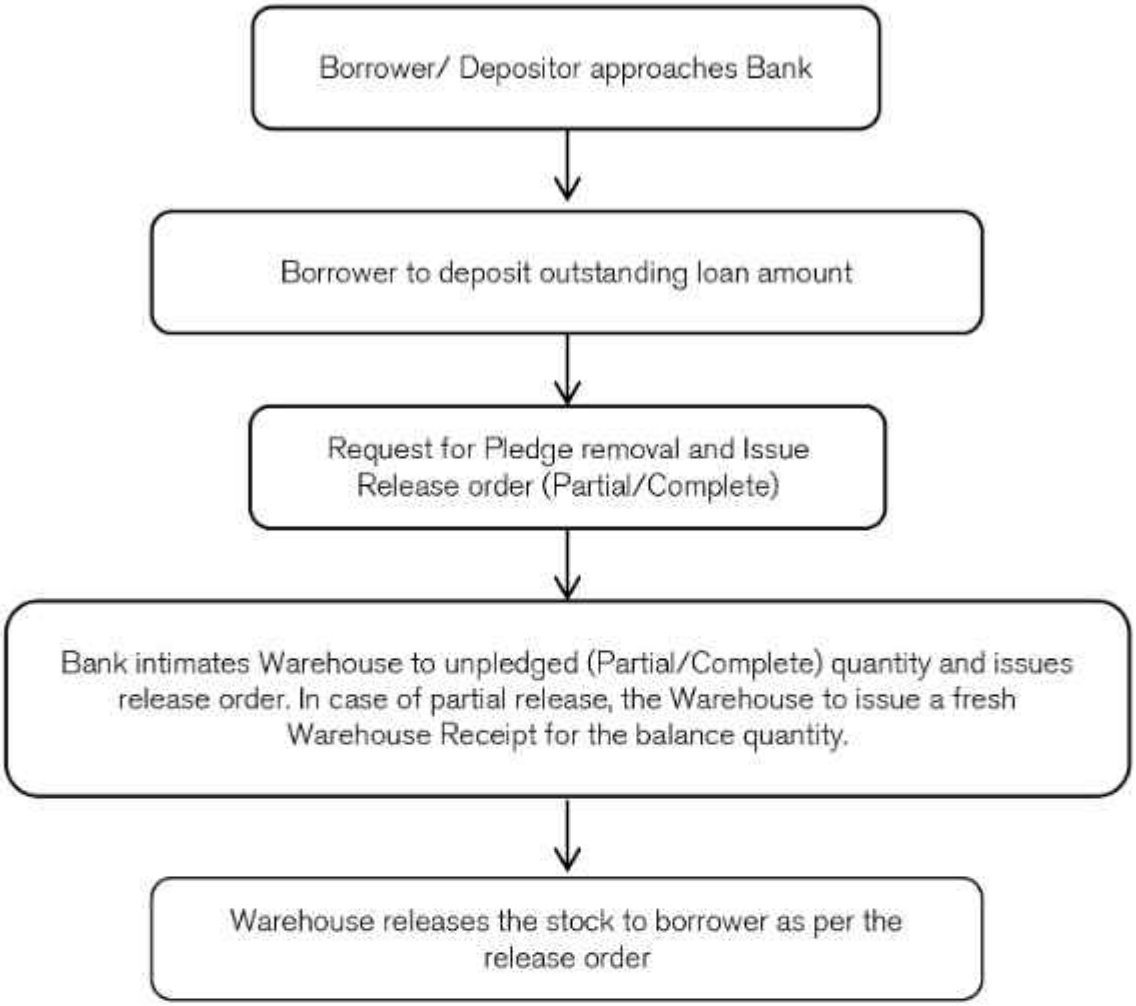
Name:	Witness
Designation:	Name:
Date:	Designation:

Flow chart of Warehouse Receipt Financing

PLEDGING OF WAREHOUSE RECEIPT



DEPLEDGING/REMOVAL OF PLEDGE OF WAREHOUSE RECEIPT



Glossary

Term	Explanation
Agri Infrastructure	Equipment, machineries, and facilities that support core or supporting activities of agri-businesses.
Agri Inputs	All primary raw materials that are used in agri production activities.
Agri Processing	The process of converting primary or semi-finished agriculture goods into finished goods.
Agri Production	Segment that is involved in farming or livestock rearing activities.
Bearer Plants	Living plants that supply or produce agriculture output for more than one year period. The plants themselves have remote likelihood being sold as agricultural produce, except for incidental scrap sales
Biological assets	Bear plants and consumable living animals that have life of more than one year.
Biological Hazard	Any threat to the health of agricultural asset that may impact its productivity or yield.
Biological Transformation	The lifecycle process of plant or animals, from its primary version that needs incubation to mature reproductive version.
Cash Entrapment mechanism	The process of trapping borrowers' revenue by aligning repayments with cyclical or peak cash flow periods of the agri-business.
Climate Adaptive Technology	Technologies that enable agri-businesses to protect their produce from underlying stressors of climate and standardize their scale of production. Eg: Temperature control systems.
Climate effect	The impact of changes in rainfall, temperature, and humidity on agriculture business.
Climate Mitigation Technology	Technologies designed to reduce or prevent the emission of greenhouse gases (GHGs) into the atmosphere. Eg: solar power irrigation pumps, precision farming techniques.
Commercial Producer	Agri producers that are focused on market sales and profit generation.
Crop Cycle	The complete sequence of stages in the lifecycle of a crop or agricultural activity—from initial investment phases such as incubation, gestation, and cultivation (cash-consuming stages) to harvesting, sale, and income realization (cash-generating stages). It encompasses all biological and financial phases from sowing to revenue generation.
Direct Contributor	Assets that contribute directly to the core business and income generating activities of the business.
End Users Borrower	The final actor in the agricultural value chain who utilizes the product or service. At each stage of the value chain, value is added, ultimately reaching the end-user borrower—who consumes the product or service and bears the final cost.
Farm Yields	The amount of agricultural produce harvested per unit of land area. It is a key indicator of farm productivity.
First Loss Guarantee	A risk-sharing mechanism where a third party—such as a government agency, donor, or guarantor—agrees to cover initial losses (up to a predetermined limit) incurred by a lender in case of borrower default.
Fractured Cash flow	Variability in the income and expense trends of an agri-business.
Indirect Contributor	Assets that support or supplement agri-business activities and revenues.

Intangible Asset	Preliminary or capitalized expenses that occur during the incubation period.
Perishable Goods	Agriculture produce that have short shelf life period.
Seasonality	Impact of cyclical nature based changes on agri production.
Social Testing	The social capital analysis of the borrower.
Subsistence Producers	Producer primarily farming for personal or household needs.
Technical Experts	Individuals with close insights, expertise, and qualification in the agriculture sector.
Warehouse Receipt Financing	Warehouse receipt financing (WRF) is a financial arrangement that allows agriculture businesses to store their produce in a warehouse in exchange for a warehousing receipt that can serve as collateral for receiving credit.

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