

TERMS OF REFERENCE FOR CREDIT SCORING CONSULTANCY FOR THE AGRICULTURAL SECTOR

Expected Date for Consultancy: 25th November 2024

Language for Submission of Proposals: Portuguese and/or English

Location of Consultancy: Nampula, Mozambique

1. About Futuro Mcb

Futuro Mcb, S.A. is a microbank based in Nampula, playing a crucial role in the financial inclusion strategy in northern Mozambique. Futuro offers a range of financial solutions inclusively, simply, responsibly, and sustainably to micro, small, and medium-sized enterprises, including solidarity groups, contributing to positive economic transformation for individuals and growing entrepreneurs in both rural and urban areas.

2. Introduction

Futuro MCB S.A. (Futuro) seeks to hire a specialist consultant to develop a credit scoring system for agricultural associations and cooperatives in the Nampula province, based on the products, production, and agricultural crops of the members. This system will be essential for assessing the creditworthiness of members, ensuring risk mitigation and a more efficient and secure allocation of Futuro's resources.

3. Objective

The objective of this ToR is to define the requirements and expectations for hiring a consultant responsible for developing a customised credit scoring system for members of cooperatives, associations, and/or aggregation businesses linked to the agricultural sector selected by Futuro.

4. Definition of Credit Scoring – System and Tool

Credit scoring is a method of assigning a numerical value to an individual to predict the likelihood of them experiencing an event or performing an action in the future, compared to others. This is based on the notion that past behaviour is indicative of future behaviour for populations with similar characteristics. Through a sample of historical client data, trends are deduced to better understand (potential) clients and predict future events.

A credit scoring tool focuses on credit scores – a number that represents an assessment of an individual's creditworthiness or the likelihood that the individual will repay a loan. Financial institutions use credit scoring models to evaluate a borrower's credit risk and assist in credit assessment processes.

5. Scope of Services

The hired Consultant will be required to perform the following activities:

5.1 Phase 1: Initial Analysis

- Review the risk matrix for the agricultural sector focusing on cooperatives, associations, and/or agricultural aggregation businesses.
- Identify key variables influencing the risks of members, including risks related to crops and production and/or multi-crop production, climate risks, financial risks, and credit default risks.

5.2 Phase 2: Development of the Credit Scoring Model

- Select and apply appropriate statistical methodologies and machine learning techniques.
- Develop a predictive credit scoring model.
- Validate and test the developed model with historical data samples.

5.3 Phase 3: Implementation and Integration of the Model

- Integrate the credit scoring model with Futuro's existing credit analysis systems.
- Develop a user interface to facilitate the use of the system by Futuro's client relationship managers.

5.4 Capacity Building and Knowledge Transfer

- Train Futuro's team to use and interpret the credit scoring system.
- Prepare detailed documentation on the model and its implementation.
- Develop a procedural and user manual for the credit scoring model.

5.5 Technical Support

- Provide technical support during the implementation period.
- Offer technical support for adjustments to the credit scoring system post-implementation for a period of six months.

6. Deliverables

The expected deliverables from the consultant include:

- Comprehensive initial analysis report.
- Validated and documented credit scoring model.
- Credit scoring system integrated with Futuro's systems.
- Validation and test reports of the developed model with historical data samples.

- Training, training plan, and capacity building for Futuro's team.
- Complete documentation of the system and model.
- User manuals for systems and model.
- Training manuals.
- Metrics and processes for continuous monitoring of the model.

7. Timeline

The deadline for completing all described activities is a maximum of 120 (one hundred and twenty) days from the contract signing:

Month 1 - Initial Analysis and Model Development

Weeks 1-2: Initial Analysis Report

- a) Initial meeting to understand requirements.
- b) Preliminary data collection and analysis.
- c) Preparation of initial analysis report.

Weeks 3-4: Validated and Documented Credit Scoring Model a)

- Initial development of the credit scoring model.
- b) Preliminary validation of the model with a test dataset.
- c) Initial documentation of the model.

Month 2 - System Integration and Model Validation

Weeks 5-6: Credit Scoring System Integrated with Futuro's Systems

- a) Development of integration between the credit scoring model and existing systems.
- b) Integration tests to ensure compatibility and functionality.

Weeks 7-8: Validation and Test Reports of the Model with Historical Data Samples a)

- Detailed model testing using historical data.
- b) Performance analysis and necessary adjustments to the model.
- c) Preparation of validation reports.

Month 3 – Training and Documentation

Weeks 9-10: Training, Training Plan, and Capacity Building for Futuro's Team a)

- Development of a training plan.
- b) Conduct initial training sessions for the team.

Weeks 11-12: Complete Documentation of the System and Model

- a) Finalisation of complete technical documentation of the system and model.
- b) Review and validation of documentation.

Month 4 – Manuals and Monitoring Metrics

Weeks 13-14: User Manuals for Systems and Model

- a) Creation of detailed user manuals for end-users.
- b) Review and validation of user manuals.

Week 15: Training Manuals

- a) Development of specific training manuals.
 - b) Review and validation of training manuals.
- Week 16: Metrics and Processes for Continuous Monitoring of the Model
- a) Definition of performance metrics for the credit scoring model.
 - b) Establishment of continuous monitoring and model update processes.

8. Work Location

The Consultant may perform their duties remotely, with visits to agricultural areas where Futuro operates.

9. Consultant Qualifications

The Agricultural Consultant should have the following qualifications:

- Proven experience in developing credit scoring models.
- Advanced knowledge in statistics and machine learning techniques.
- Experience in financial and credit data analysis.
- Experience in the agricultural sector in Mozambique.
- Ability to develop and integrate IT systems.
- Communication and training skills.

10. Selection Criteria

Selection will be based on the following criteria:

- Detailed technical proposal, including methodology and timeline (weight 15%).
- Consultant's experience and qualifications (30%).
- References from similar previous projects (15%).
- An example of similar projects, excluding confidential information (10%).
- Financial proposal with competitive pricing (30%).

11. Proposals

Consultants should submit their proposals by [21st September 2024], including:

- Technical proposal.
- Financial proposal.
- Consultant's curriculum vitae.
- References from previous projects.

12. Working Conditions

The consultant will be responsible for providing their own equipment and will have access to all necessary information for the consultancy. The financial proposal must include all expenses.

13. Remuneration

The consultant will be paid a fixed fee based on the defined stages, with Futuro withholding the taxes required by law. Payment will be made according to the table below:

Deliverables Stages | % Payment

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Initial Analysis Report | 10%

Validated and Documented Credit Scoring Model | 15%

Credit Scoring System Integrated with Futuro's Systems | 20%

Validation and Test Reports of the Model with Historical Data Samples | 20%

Training, Training Plan, and Capacity Building for Futuro's Team | 10%

Complete Documentation of the System and Model | 10%

User Manuals for Systems and Model | 5%

Training Manuals | 5%

Metrics and Processes for Continuous Monitoring of the Model | 5%

14. Submission of Applications

Proposals should be submitted in the language specified in the terms of reference (Portuguese and/or English) and sent in PDF format to the email address etelvino.zuber@futuromcb.com. The deadline for submission is 21st September 2024.

Note: Futuro Mcb, in line with its commitment to gender equity and women's empowerment, strongly encourages applications from Mozambican women-led enterprises.

15. Supervision and Monitoring

The supervision and evaluation of the work described in this terms of reference will be the responsibility of Futuro, which will report directly to Futuro according to the agreed activity plan.

16. Contact

For further information, interested parties may contact Etelvino Zuber at etelvino.zuber@futuromcb.com or telephone +258 843140799.

17. Final Provisions

This Terms of Reference may be adjusted as necessary by Futuro Mcb S.A. and in agreement with the selected consultant.