Terms of Reference of Developing a Digital Rating Scoring Model - DCSM

Scope of Work

Digital Credit Rating and Scoring Model

Background

PMIC sits at the centre of Pakistan's microfinance system, supporting partner Microfinance Institutions (MFIs). Recognizing this need, PMIC engaged a third-party firm to develop a comprehensive and scalable Digital Credit Scoring Model (DCSM) prototype that combines diverse data sources with appropriate human engagement to enable more cost-effective, efficient and risk-sensitive credit decisions across the microfinance sector.

1. Purpose

PMIC aims to hire a software development firm to use the solution design document produced by the 3rd party firm developing the prototype of credit scoring model and develop a Digital Credit Scoring Model. Because quality digital data is not yet available, the model is built using an **expert (judgmental) methodology**. It enables automation, reduces lending cost, improves borrower experience reflecting clients' repayment capacity, risk profile and probability of default.

The DCSM will comply with applicable SECP and SBP regulatory requirements and include variants for key microfinance segments such as agriculture, livestock, enterprise, housing , energy and related industries. The model will be user-friendly and integrated with PMIC's Loan Management System (LMS) to support efficient, data-driven and risk-sensitive credit decisions. Following successful development and validation, PMIC intends to make the DCSM available to MFPs on a commercial basis, enabling them to strengthen credit assessment and lending efficiency while creating a sustainable revenue stream for PMIC and reinforcing its role as an ecosystem enabler for the microfinance sector.

4. Deliverables

The selected firm will be required to develop the DCSM in line with the existing prototype document, which provides the basis and key parameters for developing the scoring model. The firm will be responsible for the end-to-end development and operationalization of the DCSM, including the following deliverables:

4.1 Digital Application and Data Capture

- Develop digital forms for capturing customer, business, financial, operational, and risk-related information.

4.2 Scoring Model Configuration

- Configure PMIC-approved characteristic categories and assessment parameters.
- Configure score ranges, weightages, formulas, thresholds, and rating grades.
- Support quantitative and qualitative assessment criteria.
- Apply applicable positive and negative scoring rules.
- Calculate the overall customer score automatically.
- Assign a rating grade and risk category based on approved thresholds.

4.3 Score and Rating Generation

Each applicable attribute is assigned a partial score; the total credit score is simply the sum of all partial scores. Higher-risk attributes score lower; lower-risk attributes score higher.

4.4 Workflow and Approvals

- Provide role-based workflows for preparation, review, recommendation, and approval.
- Allow the assessment to be returned for correction or additional information.
- Maintain a complete history of workflow activities.

4.5 New and Existing Customer

- New customer assessment
- Retrieve previous customer assessments.
- Support periodic and event-based reassessments.
- Compare current scores with previous scores.

4.6 Reports and Dashboard

The solution shall provide:

- Customer scorecard and rating report
- Category-wise score analysis.
- Customer rating history.

- Portfolio distribution by rating and risk category.
- Expiring and overdue assessment reports.
- User activity and audit reports.
- Management dashboard with filters and drill-down capability.

5. Integration Scope

The service provider shall integrate the solution, where required, with:

- PMIC's Loan Origination System.
- Credit information bureaus or approved third-party data providers.
- DataCheck or another nominated data source.

The final integration requirements will be confirmed during the requirements-gathering phase.

6. Technical Aspects

The solution shall:

- Be web-based, responsive, and compatible with commonly used browsers.
- Be deployed on PMIC-approved infrastructure.
- Provide secure APIs for system integration.
- Maintain detailed system, transaction, and user audit logs.
- Support data backup, restoration, and disaster recovery.
- Follow secure software development and database-management practices.
- Meet PMIC's cybersecurity, information-security, and data-privacy requirements.

7. Testing and Acceptance

The service provider shall conduct:

- Unit testing.
- System and integration testing.
- Security and vulnerability testing.
- Performance testing.
- User Acceptance Testing.

- Formula and scoring validation.

8. Additional Documents/Reports Required

The service provider shall deliver:

1. Business Requirements Document.
2. Functional and technical design documents.
3. Deployment and configuration documents.
4. User, administrator, and technical manuals.
5. Training for business, risk, and IT users.
6. Complete source code and database scripts.

9. Intellectual Property and Data Ownership

- All business data, configurations, formulas, scoring methodologies, reports, documents, and custom-developed source code shall remain the property of PMIC.
- The service provider shall not use or disclose PMIC information without written authorization.
- No external or third-party service shall process PMIC data without prior approval.
- Any third-party software or licensing requirement must be disclosed before contract award.

10. Support

The service provider shall provide an agreed warranty period after go-live, including:

- Correction of application defects.
- Resolution of scoring or calculation errors.
- Technical and operational support.
- Performance monitoring and optimization.
- Knowledge transfer to PMIC's IT team.

11. Duration

The service provider will be required to complete the assignment within 3-4 months.

12. Qualification and experience of firm

The firm with the following qualifications is invited to design the Digital Rating Scoring Model

1. A software house/firm which has expertise and experience in designing Software Application and API Integration with other System/Data Check
2. At least 5 Years of experience in software development.
3. Basic understanding about microfinance business and how a loan is sanctioned by Microfinance Providers – MFPs would be considered as an added qualification.
4. Demonstrate a strong understanding of credit scoring models, preferably with proven experience in developing such models for financial institutions.