Proposal Submission Document

"Automated Regulatory Reports and Management Information System (MIS)"

Submitted to: **AB Bank PLC**

Submission Deadline: **August 25, 2025**

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Executive Summary

FinSight Software & Technologies Limited is pleased to submit this proposal in response to AB Bank PLC's Request for Proposal (RFP) for the **Automated Regulatory Reports and Management Information System (MIS)**.

Our solution is designed to comprehensively address AB Bank's regulatory compliance, MIS reporting, and IFRS 9 ECL requirements while ensuring future adaptability, scalability, and robust data governance.

Key Solution Highlights

- **Regulatory Reporting Automation**: End-to-end automation of Bangladesh Bank–mandated reports including **CIB, CL, SBS, ISS, FX Daily & Monthly Returns, Thursday Position, and Risk-Based Supervision (RBS)**. Reports are auto-generated in BB-prescribed formats with validation, reconciliation, and full audit trails.

- **Future Regulatory Report Adaptability**: System architecture ensures new or revised reports can be quickly configured using **SQL data extraction, SSRS templates, and Report Inventory integration** without disrupting existing processes.

- **MIS Dashboards & Analytics**: Real-time interactive dashboards for **NPL ratio, LDR, ROA, ROE, CAR, Cost-to-Income, Liquidity Ratios, and Profitability Analysis**, with drill-down views by product, branch, zone, and customer segment.

- **Customer Segmentation & Behavior Analysis**: Tools for profiling customers by demographics, transaction behavior, and profitability, enabling **churn detection, cross-sell, and retention strategies**.

- **IFRS 9 ECL Reporting**: Full automation of **PD, LGD, and EAD** computations, staging classification, and impairment calculations. Out-of-the-box reports include Stage 1–3 impairment, portfolio-based ECL, and stage movement analysis, with support for trend and scenario analysis.

- **Data Warehouse & Integration**: Centralized **SQL Server–based Data Warehouse/Data Lake** with SSIS-driven ETL for CBS, Treasury, Finance GL, Risk Systems, and manual inputs. Ensures **single version of truth, data lineage, and reconciliation**.

- **Archiving & Audit Trails**: Automated archival of submitted reports in both database and file formats with **maker-checker logs, version history, and retrieval for audits**.

- **Enhanced Governance Features**: Role-based access control, workflow approvals, alerts & notifications, and compliance-ready system logs.

- **Scalability & Resilience**: Optimized for performance and scalable growth, with support for **disaster recovery, business continuity, and extensibility for future needs**

Technical Architecture
&
Solution Design

1. Technological Approaches

1.1 System Architecture Overview

The proposed solution is built on a modular, layered, and enterprise-grade architecture that supports robust data processing, regulatory compliance, and real-time MIS generation. The system ensures maintainability, scalability, and security in an on-premises environment with full control over deployment and performance tuning.
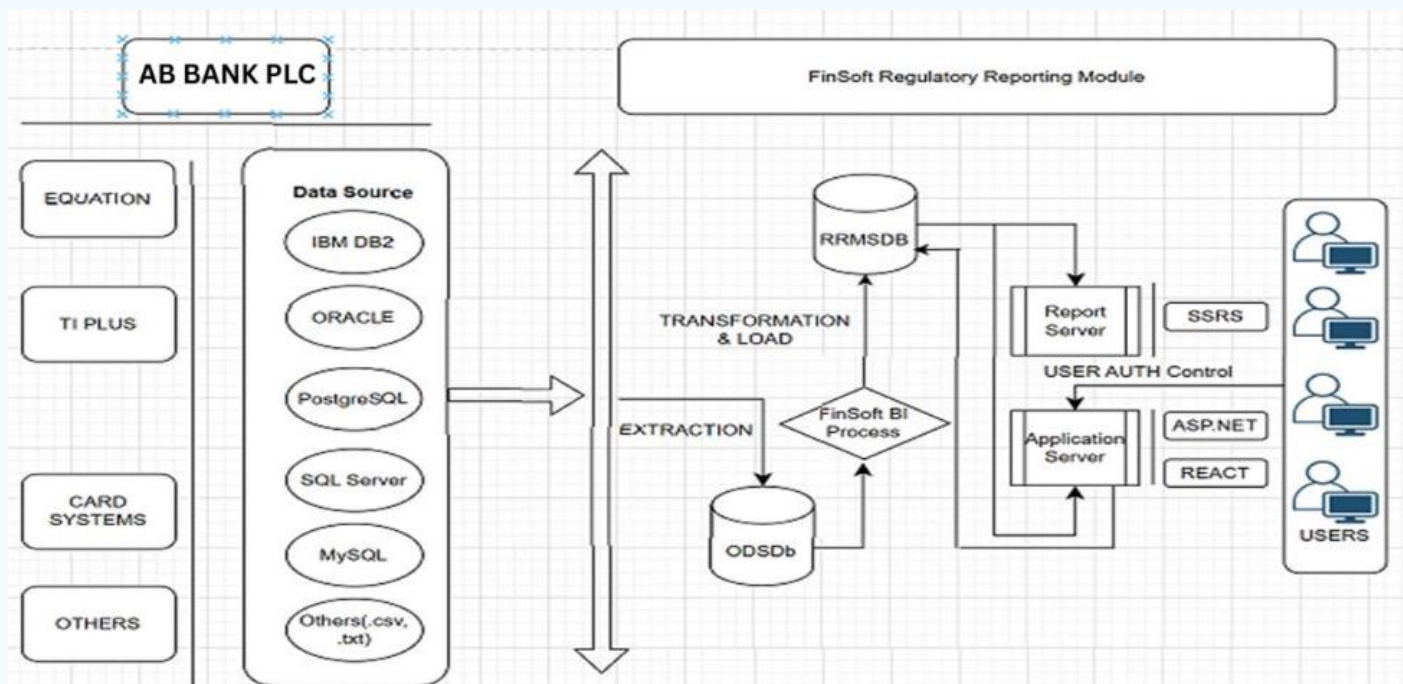
1.2 Modular and Layered Architecture

The system adopts a three-tier architecture with clear separation of concerns:

Presentation Layer (React.js)

- Developed using React.js, offering a modern, dynamic, and responsive user interface.
- Supports dynamic dashboards, drill-down capabilities, and regulatory report interactions.
- Communicates with backend services securely via HTTPS using Axios or Fetch.
- Responsive design tailored for internal desktop use.

Business Logic Layer (ASP.NET Core Web API)

- Built with ASP.NET Core (C#), providing RESTful APIs to handle business processes, report triggers, and system validation logic.
- Encapsulates core logic for various reports.
- Manages workflows, logging, authorization, and integration points.

Data Access Layer (SQL Server)

- Interfaces with a centralized on-prem SQL Server using Entity Framework Core or ADO.NET, as required.
- Employs stored procedures, UDFs, and views for high-performance data access.
- Supports staging, reporting, and analytics schemas.

1.3 ETL Framework:

The system uses a hybrid ETL architecture combining SQL Server Integration Services (SSIS) and Hangfire to perform data ingestion, transformation, and loading from multiple internal and external systems.

a. SSIS ETL Packages

- Handles large-volume, batch-oriented data ingestion from:
    - DB2 for IBM iSeries (AS400)
    - DB2 for AIX
    - Oracle Database
    - Microsoft SQL Server
    - External files (Excel, CSV)
    - Other RDBMS and third-party systems
- SSIS Packages will:
    - Extract, clean, and transform raw data
    - Load data into staging and operational tables
    - Perform lookup transformations and referential integrity checks

b. Automated ELT Management Tool

- Integrated into the ASP.NET Core backend for dynamic job scheduling
- Responsibilities include:
    - Orchestrating SSIS package executions via SQL Agent or command-line interface
    - Managing lighter ETL or ELT tasks (e.g., incremental loads, validation)
    - Triggering jobs based on regulatory calendar or user actions
- Features:
    - Retry logic
    - Persistent job tracking in SQL Server
    - Real-time job monitoring dashboard

1.4 API Integration Layer

- All internal and external interactions are powered by RESTful APIs built using ASP.NET Core.
- APIs enable:
    - Data extraction from source systems (CBS, DB2, Excel)
    - Dashboard and KPI integration
    - Report submission workflows
    - Real-time data synchronization and task triggering

- Security:
    - Token-based authentication (JWT)
    - Audit logging
    - Role-based access (RBAC)

1.5 Centralized Data Warehouse

- Built on Microsoft SQL Server, hosting:
    - Historical and current regulatory data
    - MIS data marts with dimensional models (star/snowflake)
    - Model data (e.g., PD, LGD, EAD calculations)
- Features:
    - Ensures consistency and a single source of truth
    - Supports historical trend analysis and early warning analytics
    - Maintains complete data lineage and version control

1.6 Archival & Retention Strategy

- **Archive Scope**
    - All processed data related to generated reports
    - Metadata including generation time, user ID, report parameters
    - Original and transformed datasets
    - Validation and exception logs
- **Archive Storage**
    - Stored in secure SQL Server tables or compressed files in encrypted folders
    - Retention policy aligned with Bangladesh Bank regulations (minimum 5 years, extendable)
    - Archived data is read-only with time-based access control
- **Audit Features**
    - Version control with checksum for data integrity
    - User access logs, generation history, and change tracking
    - Easy retrieval interface for internal auditors and external regulators
- **Backup & Disaster Recovery**
    - Daily incremental and weekly full backups of archive tables and files
    - Secure off-site backup replication (if applicable)
    - Restore procedures validated quarterly

1.7 Deployment Approach

- **Hosting Environment**
    - Fully on-premise, hosted within IFIC Bank's data center infrastructure
    - Compatible with Windows Server 2019 or above
- **Monitoring Tools**
    - Health checks using built-in ASP.NET Core diagnostics
    - Logging using Serilog or ELK Stack (optional)
    - Hangfire Dashboard for job status and analytics

1.8 Technology Stack Summary

Layer	Technologies Used
Frontend	React.js, Redux, Material UI / Bootstrap
Backend	ASP.NET Core Web API (C#), RESTful services
ETL	SSIS / Hangfire (with SQL Server storage)
Database	SQL Server (staging, reporting, historical models)
Security	JWT Auth, RBAC, HTTPS, Internal Firewall Policies
Deployment	On-Premise (Windows Server or Linux)

Compliance Matrix
System Design Details

2. Compliance Matrix-System Design Details

2.1 Regulatory Reporting –Section 3.1

FinSight Software & Technologies Ltd. offers its **Regulatory Reporting Solution** an end-to-end automation platform that eliminates manual processes, integrates seamlessly with Core Banking Systems (CBS), and ensures error-free, on-time submissions**.**

Key solution highlights:

- **Automated Data Extraction & ETL** from multiple sources.
- **Supplementary Data Uploads** where CBS data is incomplete.
- **Built-in Validation & Error Handling** aligned with Bangladesh Bank's rules.
- **Dynamic Dashboards & Real-time Alerts** for deadlines, submissions, and exceptions.
- **Comprehensive Report Inventory & Archival** with regulatory circular preservation.
- **Multi-layer Authentication & Secure Reporting** for sensitive financial data
- The system has been architected to **ensure seamless adaptability for new or revised regulatory reporting requirements** mandated by Bangladesh Bank or any other authority.

Itemized Solution Coverage

1	CIB Reports (Enquiry request management, Report Generation & Submission etc.) **Status:** Available	**Automated Enquiry Generation**: System generates enquiry requests. For existing customers, it will retrieve required borrower level data directly from Core Banking System (CBS) based on the data mapping provided by the Client. For new customers, user needs to input the data in FinSight application**.** **Batch & Real-Time Requests**: Supports both individual (real-time) and bulk (batch) enquiry submissions. **RPA Integration**: Uses Robotic Process Automation for automatic login and enquiry submission to the CIB portal, reducing manual workload. **Seamless CBS Integration** – Direct extraction and processing of borrower and loan data from Core Banking Systems. **OCR Integration** – Extracts and validates data from downloaded CIB reports from BB CIB Platform. **Automated CIB Reporting Cycles** – Handles daily (T+1), weekly, and monthly reporting with minimal manual effort.

		o **Subject & Contract Code Generation** – Auto-creates and validates codes, including terminated contracts.
		o **Error Detection & Validation Engine** – Applies BB rules, highlights errors, and suggests corrective actions.
		o **Enhanced Error Prediction & Correction** – Predicts potential errors before submission.
		o **Terminated Contract Management** – Auto-adjusts balances/installments for terminated loans.
		o **CNF/SJF File Generation** – Creates submission-ready files in BB formats (TXT/XLSX).
		o **Reconciliation & Exception Reporting** – Identifies mismatches, duplicates, and generates variance reports.
2	Loan Classification & Provisioning (CL) Reports **Status:** Available	o On Demand and Quarterly Report Generation
		o **Dynamic Data Integration** – Extracts loan data from CBS based on the data mapping provided by the Client and supplements with external inputs if required.
		o **Provisioning Calculation Engine** – Automatically computes required provisions (%) for each loan category per BB guidelines.
		o **Accuracy Check-** Highlights data discrepancies, overdue misclassifications, and missing data in CBS (Source System).
		o **Loan Listing:** Loan details report with all required data for CL report validation
		o **Previous CL Status:** Capacity to preserve previous CL status and movement of CL status.
		o **Automated Report Generation** – Prepares CL and provisioning reports in BB-prescribed formats (XLS, TXT, CSV)
		o **Topside Adjustments** – Allows controlled adjustments with full audit trail before final report submission.

3	SBS-1, SBS-2, SBS-3 Reports **Status:** Available	o **Automated Data Extraction** – Directly pulls balance sheet and off-balance sheet data from CBS based on the data mapping provided by the Client and supplementary systems o **Predefined Mapping & Validation** – In-built mapping of CBS accounts to Bangladesh Bank's SBS line items with validation rules. o **Segmentation & Classification** – Automates sectoral, currency, and product-wise classification for SBS-3 reporting. o **Multi-Format Report Generation** – Produces SBS-1, SBS-2, and SBS-3 in BB-prescribed formats. o **Topside Adjustments with Audit Trail** – Controlled adjustments allowed, tracked with Maker–Checker–Admin approval.
4	ISS Reporting **Status:** Available	o **Automated Data Mapping** – Extracts data from Core Banking Systems based on the data mapping provided by the Client and maps it directly to ISS Chart of Accounts (CoA) prescribed by Bangladesh Bank. o **Dynamic CoA Maintenance** – Supports regular updates to ISS CoA structure based on BB circulars, ensuring reports remain compliant. o **Automated Report Generation** – Prepares monthly ISS reports in BB-required formats. o **Data Reconciliation** – Identifies mismatches between CBS GL and ISS CoA, generating variance reports for correction. o **Supplementary Data Uploads** – Enables manual input/upload of data where CBS data is not available. o **Topside Adjustments with Audit Trail** – Controlled adjustments allowed, tracked with Maker–Checker–Admin approval. o **Branch-wise Pending Submission Tracker** – The system automatically monitors pending or delayed regulatory report submissions across all branches. o **Centralized Monitoring Dashboard** – Head Office users can view a consolidated status of pending, completed, and upcoming submissions.

		o **Direct Follow-up via Email** – Head Office can trigger follow-up emails directly from the system interface for pending submissions to Branches, ensuring faster compliance without manual interevtion.
5	Weekly Reporting (Thursday Position) **Status:** Need Customization	o BRD required to prepare the report

6	FX Daily Bulk Uploads & Monthly Returns
	
	Status: Available
		o **Automated Data Extraction** – Pulls foreign exchange transaction data directly from CBS and Trade systems based on the data mapping provided by the Client.
		
		o **Daily Bulk Uploads** – Prepares daily FX transaction reports in Bangladesh Bank's prescribed format for bulk upload.
		
		o **Monthly FX Return** – Automated report for Statement 1- Statement 13 with associated schedules in BB-prescribed formats (CSV, XML, XLSX).
		
		o **Available Daily Reports (Out-of-the-Box):**
		  ✓ Online Report of Export Proceed Realization (Triplicate EXP Reporting)
		  ✓ Online Foreign Import LC Open & Amendment Report
		  ✓ Online PII reporting Online Foreign Import LC Payment Report
		  ✓ Online Report of Local Import LC Open & Amendment
		  ✓ Online Report of Local Import LC Acceptance
		  ✓ Online Report of Local Import LC Payment
		  ✓ Online Foreign Import LC Acceptance Report
		  ✓ Daily Online Reporting of C FORM to Bangladesh Bank website
		  ✓ Daily Online Reporting of TM FORM to Bangladesh Bank website
		
		Supplementary Data Upload – Allows manual input/uploads for CBS unavailable data. Capacity to store HS Code and transaction wise commodity details (i.e-unit price, unit and quantity)

7	Risk Based Supervision System Reporting
	
	Status: In Progress/Need Customization
		Risk Based Supervision (RBS) is a new supervisory concept introduced by Bangladesh Bank.
		
		This RBS report contains 9(nine) RIT files with 35 (thirty-five) sheets. Since this is new requirement from Bangladesh Bank, we don't have readily available solution.
		
		However, we have designed the architecture based on initial assessment.
		
		Solution Approach
		
		The proposed solution follows standard **ETL-driven architecture**
		
		Extract: Automated ingestion from
		
		    o Core Banking System (loans, deposits, exposures)
		    o Finance / Treasury systems (GL, cash flow, P&L, balance sheet)
		    o Risk systems (OBS, ECAI ratings, concentrations)
		    o External Excel templates (for manual/manual-fill data)
		
		Transform: Standardize and validate data
		
		    o Map data to unified RBS_* schema
		    o Business validation rules: e.g., *Assets = Liabilities + Equity*, liquidity ratios (LCR/NSFR), exposure thresholds, past-due aging, etc.
		
		Load: Persist in
		
		    o Static reference tables: e.g., RBS_Product, RBS_ECAI_Agency, etc.
		    o Transaction tables: e.g., RBS_Liquidity_Metrics, RBS_Balance_Sheet_Summary, RBS_PnL, RBS_Past_Due, etc.
		
		Report Generation
		
		    o Standardized output formats: Excel, CSV, XML, PDF.
		    o Template-driven, auto-populated reports ready for submission.

API Delivery Layer (Future-Ready)

- o Expose curated RBS_* data via a secure API.
- o Enables **Near-Real-Time data integration** with Central Bank systems when API connectivity is established.
- o Supports granular queries: e.g., liquidity ratios by period, exposures by counter-party, segment, geography, etc.
- o Supports data push (scheduled) or API pull modes based on Central Bank guidelines.

Key Data Domains / Tables:

Transaction Tables (dynamic, period-wise data)

a) RBS_Deposit_Info
b) RBS_Loan_Info
c) RBS_CL_Status_Movement
d) RBS_Liquidity_Metrics (CRR, SLR, LCR, NSFR)
e) RBS_Balance_Sheet_Summary
f) RBS_OBS_Details (Off-Balance Sheet)
g) RBS_OBU_Metrics
h) RBS_CashFlow
i) RBS_PnL (Profit & Loss)
j) RBS_Related_Party_Exposure
k) RBS_Stressed_Assets
l) RBS_Past_Due
m) RBS_All_Claims
n) RBS_Deposit_Concentration
o) RBS_Top50_Borrowers & RBS_Top50_Defaulters
p) RBS_Large_Exposure_Register
q) RBS_Credit_Rating_Exposure
r) RBS_Investment_Bonds_CP
s) RBS_Shareholders (periodic)
t) RBS_Subsidiary_Info
u) RBS_Meetings
v) RBS_Documents_Submitted
w) RBS_AML_CFT_Controls

Static Reference Tables (master / reference data)

a. RBS_COA Code
b. RBS_Reporting_Period
c. RBS_Currency

		d. RBS_Product
		e. RBS_Business_Segment
		f. RBS_Geography
		g. RBS_Counterparty
		h. RBS_Limit_Breach_Type
		i. RBS_ECAI_Agency
		j. RBS_ECAI_Rating_Scale
		k. RBS_Org_Structure
		l. RBS_CodeBook
8	Future Regulatory Report Adaptability **Status:** Available	**Configurable Reporting Framework** The system has been architected to ensure seamless adaptability for new or revised regulatory reporting requirements mandated by Bangladesh Bank or any other authority. **Data Warehouse–Driven** Since all critical data points are consolidated in the central Data Warehouse/Data Lake, any new regulatory report can be accommodated by: 1. Extracting required data fields using SQL scripts. 2. Designing a new report template in SSRS (SQL Server Reporting Services). 3. Deploying the report template on the Report Server. 4. Configuring it into the Report Inventory module for user access. **Report Inventory Management** The Report Inventory functions as a centralized catalogue where new reports can be registered, versioned, and assigned access rights. Once configured, reports are available for scheduling, execution, and archival with no impact on existing reports.

2.2 Management Information System (MIS) Reports and Dashboards-Section 3.2

FinSight Software & Technologies Ltd. offers a comprehensive MIS Reporting & Dashboard Solution that transforms operational and financial data into real-time, interactive insights**.** The system is designed to integrate seamlessly with Core Banking Systems (CBS) and other financial applications (based on the data mapping provided by the Client) to provide branch, zone, and bank-level performance monitoring with advanced drill-down analytics. Key solution highlights:

- **Automated Data Extraction & ETL** from CBS, Finance GL, Treasury, and supplementary systems
- **Real-time KPI Dashboards** for management with drill-down by product, branch, zone, or customer segment
- **Dynamic Reporting** with slice-and-dice analysis, pivoting across multiple dimensions.
- **Built-in Validation & Accuracy Checks** ensure MIS reports align with regulatory and internal policies.

Itemized Solution Coverage

1	Financial Ratios
	
	Status: Available
	(Requires customization to cater to the bank's specific needs)
		The MIS solution will automatically compute key banking ratios directly from Core Banking System GL data. Ratios will be available at Bank, Zone, Branch, Product, and Customer Segment levels.
		
		  o Non-Performing Loan (NPL) Ratio
		  o Loan-to-Deposit Ratio (LDR)
		  o Return on Assets (ROA)
		  o Return on Equity (ROE)
		  o Capital Adequacy Ratio (CAR)
		  o Cost-to-Income Ratio
		  o Liquidity Ratios (e.g., Liquidity Coverage Ratio (LCR)
		  o Net Stable Funding Ratio (NSFR)
		
		Dynamic Dashboard available for graphical representation as bar or pie chart for Management Review.

2	Analytical Reports
	
	Status: Available
	(Requires customization to cater to the bank's specific needs)
		The MIS solution has interactive dashboards and reports covering product performance, collateral adequacy, and profitability as mentioned below
		  o Bank wise, Zone wise and Branch wise product mix
		  o Bank wise, Zone wise and Branch wise new product sales (Loans and Deposits) during the period.
		  o Collateral Coverage against loans (eligible collaterals only)

		o Profitability Analysis (by product, branch, and customer)
3	Customer Segmentation and Behavior Analysis **Status:** Available (Requires customization to cater to the bank's specific needs)	This report provides strategic insights into how different customer groups behave, contribute to profitability, and respond to banking products/services. It helps AB Bank to: o Identify high-value vs. low-value customers. o Detect at-risk customers (likely to churn). o Personalize offerings for cross-sell/up-sell opportunities. o Optimize branch, product, and channel strategies. **Data Required:** To build robust segmentation & behavioral analysis, the following data points are needed: 1. **Customer Demographics** 　o Customer Type: Retail, SME, Corporate 　o Age, Gender, Occupation, Income level 　o Geographic location (city, branch, zone) 　o Relationship start date (onboarding date) 2. **Product Holdings (Portfolio Depth)** 　o Deposits: Savings, Current, Fixed Deposits 　o Loans: Personal, Home, SME, Corporate loans 　o Cards: Credit/Debit 　o Other services: Trade Finance, FX, Internet/Mobile Banking 3. **Transaction History (Behavioral Indicators)** 　o Frequency: No. of transactions per month/quarter 　o Value: Total monetary value of transactions 　o Channels: ATM, Branch, Internet, Mobile, POS, RTGS/BEFTN 4. **Profitability Data** 　o Interest in income, fees, charges generated by customer 　o Allocated cost (OPEX per customer/segment) 　o Net profitability by customer
4	ALM Reports **Status:** Requires customization to cater to the bank's specific needs	**Purpose**: Manage maturity mismatch, interest rate risk, liquidity. **Data Required** o Loan maturities by bucket (e.g., <1M, 1–3M, 3–12M, >1Y) o Deposit maturities by bucket o Interest rate sensitivity (fixed vs floating) o Gap analysis (assets – liabilities per tenor)

		Reports: typically include –
		- Liquidity Bucket & Gap - Net Interest Income - Net Interest Margin These data elements will be sourced primarily based on the data mapping provided by the Client from: - Core Banking System (CBS) (loans, deposits, balances, customer data) - General Ledger (GL) (capital, income, expenses) - Treasury Systems (liquidity, ALM) - Risk Systems (credit risk, market risk, operational risk weightings)

2.3 IFRS 9 ECL Reporting-Section 3.3

FinSight Software & Technologies Ltd. offers a robust IFRS 9 Compliance & ECL Computation Solution, designed to fully automate the calculation, reporting, and monitoring processes required under the IFRS 9 framework. The solution integrates seamlessly with the bank's CBS and other associated systems and ensures compliance with both Bangladesh Bank guidelines and IFRS 9 international standards.

Itemized Solution Coverage

1	Historical Data Repository **Status:** Available	o **Extract historical loan-level data** — Capacity to extract from CBS and subsystems (subject to availability). o Create separate databases for storing historical data o Any period / any data extraction — Parameter-driven extraction for time windows/portfolios/attributes.

2	Automated Model Computation
	  o Probability of Default (PD),
	  o Loss Given Default (LGD),
	  o Exposure at Default (EAD)
	
	Status: Available
		System has the capacity to calculate PD, LGD and EAD as per Bank's defined ECL computation model.
		
		o **Model framework (PD/LGD/EAD)** - System computes per Bank-defined methodology (PIT/TTC).
		Notes: Bank needs to confirm which model they are willing to follow.
		o To consider macro-economic factors in ECL calculation, system has the capacity to store the required factors in its own database.
		o External and Internal credit ratings (ICRR) can be stored in system based on data availability.
		Notes: One-time bulk load possible (Excel/CSV).

3	The generation of IFRS 9-compliant Expected Credit Loss (ECL) reports. **Status:** Available	**Out of the box reports** o Impairment calculations for **Stage 1, Stage 2, and Stage 3** exposures. o Portfolio based ECL Report o Stage movement Report
4	The provision of capabilities for historical trend analysis to identify early warning signals and facilitate comprehensive scenario analysis **Status:** Need Customization	**Trend analysis** — Time-series trends of ECL, staging, default, recovery. o **Data required:** monthly snapshots, ECL outputs, stage/default flags. o **Customization scope:** Visualization & drilldowns aligned to Bank's MI. **Scenario analysis** — Apply macro scenarios to re compute & compare ECL sensitivities.

		o **Data required:** scenario definitions, macro-overlays, elasticity rules. o **Customization scope:** Bank to supply stress scenarios & overlay method.
5	Support for distinct staging classifications and associated impairment calculations. **Status:** Available	**Stage assignment** — Configurable rules for Stage 1/2/3 using SICR, DPD thresholds, rating migration, default triggers. o **Data required:** DPD, origination vs reporting PD, forbearance/restructure flags. **Notes:** Confirm SICR thresholding (e.g., PD multiple or notch move). **Impairment calculation** — 12-month ECL (Stage 1) and lifetime ECL (Stage 2/3) with discounting. o **Data required:** EAD profiles, contractual cash flows, LGD curves, EIR**.** **Notes:** Off-balance exposures (LC/guarantees) supported if data is provided.

2.4 Data warehouse/Data Lake-Section 3.4

FinSight' s Core solution architecture is ETL-driven, designed to ensure that all data required for regulatory, MIS, and IFRS 9 reporting is consolidated into a centralized SQL Server–based repository. This repository acts as the single source of truth, guaranteeing data quality, consistency, and integrity across the institution.

The solution uses SSIS (SQL Server Integration Services), which provides robust Extract, Transform, Load (ETL) capabilities. Using SSIS, the system can:

- **Extract data from diverse sources including**
  - Core Banking System (CBS) and all other associated systems
  - Manual inputs/uploads (where source system data is unavailable) and storing them within FinSight own database for recurring use (i.e-Sector code, HS Code, director details etc.)

- **Transform** data through validation, cleansing, mapping, and enrichment to ensure regulatory and business consistency.

- **Load** into the **Centralized Repository**, structured into well-defined transaction and reference tables for downstream reporting.

This design ensures seamless integration of automated feeds and manual inputs, while applying robust validation rules to detect, prevent, and correct inconsistencies at source. The result is a trusted, single version of the truth that underpins all reporting, dashboards, and analytics.

2.5 API Development, Integration and Bulk Data Handling-Section 3.5

- **API-driven Integration:** Supports real-time or small-scale data interactions through secure APIs.

- **Bulk Data Handling:** Large-scale data ingestion and synchronization handled via ETL pipelines (SSIS- SQL Server Integration Services). Secure file-based transfers (e.g., SFTP, secure cloud storage) can be provided as per Bank's requirement.

- **Future-Ready:** APIs can be extended to align with the Bangladesh Bank's future integration model, enabling direct regulatory data submission.

- **Secure Transmission:** All APIs and data transfers use encryption, authentication, and comply with both Bank and Bangladesh Bank security standards.

2.6 BACKUP and Restore-Section 3.6

The Solution will provide GUI for taking backup & restore as per predefined location & naming format.

2.7 Report and Data Archiving-Section 3.7

The proposed solution includes a baseline archiving framework.

1	Automated Archiving Processes	Coverage o Automated archival available for submitted reports only. o Archiving provided in both report format (PDF/Excel/CSV) and database format for long-term retention. o Separate Archival Zone with GUI, similar to production interface. o Strictly view-only mode – no edit/update permitted in archival environment. o Notes: Archiving rules (frequency, retention period, purging) to be finalized by the Bank.
2	Comprehensive Audit Trails & Version History	Coverage o Audit trail captures maker-checker logs (report generation, review and submission). o Version history maintained for each submission (report ID, timestamp, user ID, action type). o Supports internal & external audit requirements by providing immutable log records. *Notes: Additional customization required to align with Bangladesh Bank's audit/compliance framework.*

3	Efficient Search & Retrieval Functionalities	Coverage o Retrieval interface allows search by report name, period, user, or submission date. o Authorized users can view or download archived reports. o Retrieval limited to submitted reports; draft/temporary reports are not archived. *Notes: Search optimization (metadata indexing, tagging) to be developed in line with Bank's needs.*

2.8 Enhanced Requirements (Beyond Initial Document)-Section 3.8

1	User & Role-based Access Control **Status:** Available	Maker, Checker, and Admin roles with full audit trail.
2	Workflow and Approval Management **Status:** Available	FinSight Process Management section provides report wise separate workflow and approval management.
3	Alerts and Notifications **Status:** Available (but customization requires to cater Bank's specific needs)	Alert/Notifications are triggered both in the solution dashboard and via email to concerned branch users for impending or overdue submissions.
4	Data Governance and Lineage **Status:** Available**.** (Customization may be required if the Bank seeks additional functionality beyond the built-in features of the Data Accuracy Check Tool)	Using SSIS- SQL Server Integration Services, the solution maintains full data lineage from source to final report, ensuring transparency and accountability. Integrated Data Accuracy Check tool provides continuous monitoring of data consistency, validation, and exception handling.

5	Scenario Analysis and Forecasting **Status:** Need Customization	Requires specific BRD from Bank to cater this section. Based on the BRD, further analysis will be provided from FinSight.
6	Self-Service Business Intelligence (BI) **Status:** Need Customization	System will provide in common tables which will be required for future reporting as identified by Bank's. User will be able to generate reports from the common tables
7	Scalability and Performance **Status:** Available	The FinSight system is architected on SQL Server with SSIS-driven ETL, optimized for high performance and parallel processing. Its modular design ensures seamless scalability to handle growing data volumes and user loads without degradation.
8	Disaster Recovery and Business Continuity Planning **Status:** Available	Dependent on Bank's DR planning
9	Auditability and Compliance **Status:** Available	In built feature
10	Data Dictionary **Status:** Available	Will be provided
11	System Log **Status:** Available	Application Event & Database level log will be available.

2.9 Compliance Matrix Summary Sheet

SL	Deliverable Area	Key Components	Status
1	Regulatory Reports	CIB, CL, SBS, ISS, FX Reports and future regulatory report adaptability	Available
2	MIS Reports & Dashboards	Real-time KPI dashboards, drill-down analytics, custom report generation	Available
3	IFRS 9 ECL Reporting	PD, LGD, EAD automation, Historical Analysis, Scenario Analysis	Available
4	Data Warehouse / Data Lake	Centralized repository from CBS, DB2, external, and manual sources	Available
5	API Development	Open RESTful APIs for real-time data sync, secure data transmission	Available
6	Reports & Data Archiving	Long-term secure storage with version control, audit trails, easy retrieval	Available
7	User Management	Role-based access control, granular permissions	Available
8	Workflow & Approvals	Configurable report generation and approval workflows	Available
9	Alerts & Notifications	Automated alerts for KPIs, deadlines, data quality	Available
10	Data Governance & Lineage	Data lineage tracking, data quality monitoring	Available
11	Scenario Analysis	"What-if" analysis for financial planning and risk assessment	Need Customization
12	Self-Service BI	Intuitive tools for business users to create ad-hoc reports	Need Customization
13	Mobile Accessibility	Mobile-friendly interfaces or dedicated applications	Need Customization
14	Scalability & Performance	High performance design, ability to handle increasing data volumes	Available
15	Disaster Recovery	Data backup, recovery, and business continuity mechanism	Available

Project Plan

3. Project Implementation Plan with milestone

Project Duration: 1 Year & 3 Months

Phase	Duration	Key Activities	Deliverables
Phase 1 Inception	1 Month	• Project kickoff & stakeholder alignment • Requirement workshops • BRD & design sign-off • Environment readiness	BRD Sign-off; Design Baseline
Phase 2 Regulatory Reporting (CIB, CL, SBS, ISS)	3 Months	• Development & automation of CIB, CL, SBS1–3, ISS Reports • UAT & Go-Live	CIB, CL, SBS, ISS Reports Delivered
Phase 3 FX Daily & Monthly Returns	2 Months	• Development and automation of Bulk upload for FX Daily Reports • Development of FX Monthly Returns • UAT & Go-Live	FX Daily & Monthly Reports Delivered
Phase 4 RBS Reporting	3 Months	• Development of RBS modules (Liquidity, Capital Adequacy, Concentration, Stressed Assets, Related Party, etc.) • Consolidation & validations • UAT & Go-Live	RBS Reports Delivered
Phase 5 MIS Dashboards	2 Month	• Development of KPI dashboards (NPL, LDR, ROA, ROE, CAR, Cost-to-Income, LCR, NSFR) • Product Mix, Profitability, Customer Segmentation & ALM Reports • UAT & Go-Live	MIS Dashboards Delivered
Phase 6 IFRS 9 ECL	2 Months	• Development of ECL engine with PD, LGD, EAD • Stage classification & impairment reporting • UAT & Go-Live	IFRS 9 ECL Module Delivered
Phase 7 Data Lake & APIs	1 Month	• Data Lake / Warehouse setup • API framework (Regulatory & MIS; future BB integration-ready) • Archiving & retention • UAT & Go-Live	Data Lake, APIs & Archiving Delivered
Phase 8 Post Go-Live Support	1 Month	• Hyper-care support • Monitoring of production system • Knowledge transfer & documentation • Stabilization before transition to BAU	Project Closure; Smooth Handover

Company Profile

4. Company Profile

- **Company Name:** FinSight Software and Technologies Limited

- **Registered Address:** Shawon Tower (9th Floor), 2/C, Purana Paltan, Dhaka-1000.

- **Year of Incorporation:** 2025

- **Nature of Business:** IT Business, Consultancy, Software Development and Supply

- **Contact Information:** Mr. Golam Mahmood, Chief Technical Officer (CTO),
  Cell: +880 1688 463 862
  E-mail: mahmood@finsoftbd.com

- **Office Locations:**
  - **Dhaka Corporate Head Office:**
    Shawon Tower (9th Floor),
    2/C, Purana Paltan, Paltan, Dhaka-1000.

- **Specialization: FinSight Software and Technologies Limited** specializes in developing customized software solutions for the **financial sector** and businesses engaged in **financial operations**. The core strength lies in offering a **broad range of solution packs** tailored for banking, fintech, insurance, and other financial services. We also provide **bespoke software development, adapting solutions precisely to client-specific needs,** ensuring scalability, security, and compliance.

- **No. of Employee:** Nine (09)

- **Product Portfolio:**
  - FinSight Regulatory Reporting Solution
  - FinSight CIB Compliance Suite
  - FinSight Recovery Agency Module
  - FinConnect ERP Solution
  - FinSight Cheque Management Solution
  - FinSight Document Tracking System

4.1 Ownership Profile

A diverse and visionary leadership team proudly drives FinSight Software & Technologies Limited, combining expertise in technology, business, finance, and social development. The ownership comprises seasoned professionals and sponsor directors whose collective strength fuels the company's innovation and integrity.

Ahmed Hossain: Managing Director

Born in 1984, is a distinguished entrepreneur with a strong academic foundation, holding both B.Sc. (Hons) and M.Sc. degrees in Chemistry from the University of Dhaka. Known for his strategic vision and leadership, he has made significant contributions across multiple sectors in Bangladesh.

Current Roles:

- Managing Director**, FinSight Software & Technologies Limited**
- Director of **Mercantile Bank PLC- Asset Management**, a Subsidiary of Mercantile Bank PLC
- Director of **Fars Hotel and Resorts**
- Director of **Fars Holding & Associates Limited**
- Proprietor of **Tour Made Easy**
- Proprietor of **Coffee Buzz**

Tonmoy Bhowmik: Director

Tonmoy Bhowmik is a seasoned software engineer with over 8 years of experience in full-stack development, system design, and project leadership. He holds a Bachelor of Science in Computer Science and Engineering from Ahsanullah University of Science and Technology (AUST).

He has led the development of complex web and mobile applications for the internal clients in the USA and Japan, specializing in ASP.NET, Angular, Java, and modern database technologies. His work includes large-scale ERP systems, data visualization, and monitoring solutions.

As Director, Tonmoy brings deep technical expertise, strategic vision, and a strong commitment to innovation and quality.

Fahmida Akter: Director

Fahmida Akter holds a B.Sc. (Hons) and M.Sc. in Public Relations and Mass Communications from the University of Dhaka. As a Sponsor Director of the company, she also actively engages in various social welfare initiatives, contributing meaningfully to the community.

Mirza Tashrif Noman: Director

A dynamic businessperson and Sponsor Director, he has extensive experience in trading and import-export. He began his professional journey in the banking sector, gaining expertise in recovery management, trade operations, credit

management, general banking, and regulatory compliance. In the year of 2018, he left the bank, started Vehicle import from Japan, and also started Livestock farming & Agro Business.

Current Roles:

- Proprietor of **Automo Japan**
- Proprietor of **Haor Dairy & Fattening**

Shamsunnahar: Director

Shamsunnahar is a Sponsor Director known for her active involvement in social causes. A thoughtful philosopher and compassionate individual, her inspiring personality and integrity motivate those around her.

Afiya Kaniz Munni: Director

Afiya Kaniz Munni is a Sponsor Director of the company, bringing a unique blend of technical insight and social commitment. She completed her BSc in Food Engineering from Gopalganj Science and Technology University, where she developed strong analytical and problem-solving skills. Though her academic background lies in food engineering, her passion for innovation and technology led her to contribute meaningfully to the growth of the software industry. Her forward-thinking mindset and commitment to ethical leadership make her a valued member of the board.

4.2 Management & Team Profile

FinSight Software and Technologies Limited led by a team of Nine (9) highly skilled professionals with strong academic backgrounds and extensive experience in software development, architecture, and IT leadership. Guided by the Chief Technology Officer, the team brings extensive expertise in software development, architecture, and IT leadership. With prior experience in banking, they specialize in full-stack development, cloud computing, data integration, and quality assurance.

With members holding degrees from top universities such as Chittagong University of Engineering and Technology (CUET) and Ahsanullah University of Science and Technology (AUST), and a commitment to continuous learning, FinSight combines industry experience with innovative practices to deliver high-quality software solutions tailored to clients' needs.

1. Golam Mahmood: *Chief Technology Officer (CTO)*
Former Application Architect & Developer, IFIC Bank PLC [Joined as Management Trainee-IT]

Educational Qualification

- M.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET) ~ (pursuing)
- B.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET)

Technical Skills

- Front End: React.js, JavaScript, TypeScript, Material-UI, HTML, CSS
- Back End: ASP.NET, C#, .NET Core, Laravel
- Database: SQL Server, SSIS, SSRS, MySQL, DB2
- Cloud & DevOps:** AWS
- Other Tools:** Git, Jenkins, Agile/Scrum, Process Automation

CTO will lead the Project as **Project Manager.**

2. Chinmoy Bhowmik: *Head of Software Development*,
   Former Software Engineer (ITD), One Bank PLC, Dhaka.
   Former Lecturer (CSE), City University, Dhaka.

Educational Qualification

- M.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET) ~ Pursuing
- B.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET)

Technical Skills

- **Front End:** React.js, React Native, JavaScript, TypeScript, Angular, Material-UI, HTML, CSS
- **Back End:** ASP.NET, C#, .NET Core, Laravel, GraphQL
- **Architecture/Patterns:** Microservices, MVC, MVVM

- **Database:** SQL Server, MySQL, PostgreSQL, Oracle, MongoDB, DB2, SSIS, SSRS
- **Cloud & DevOps:** AWS, Jenkins
- **Tools & Methodologies:** Git, Agile/Scrum

Head of Software Development will coordinate with development team as **Technical Lead** and ensure end to end delivery of the Project under guidance of Project Manager.

3. Syed Ahsan Habib*: Senior Software Developer & QA Architect**,*
Former Software Developer One Bank PLC

Educational Qualification: B.Sc. in Computer Science and Engineering from Ahsanullah University of Science and Technology (AUST).

Technical Skills
- **Programming Languages & Frameworks:** C#, ASP.NET (WebForms, MVC, Core), JavaScript, jQuery, Xamarin
- **Database Technologies:** SQL Server, PL/SQL
- **Reporting Tools:** Crystal Reports, RDLC

4. Md. Naeem: *Senior Software Developer*

Educational Qualification: B.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET)

Technical Skills

- **Front End:** React.js, JavaScript, HTML, CSS3, Bootstrap
- **Back End:** ASP.NET, PHP, C, C++, C#, Python
- **Database:** SQL Server, MongoDB
- **Data Integration Solutions:** SQL Server Integration Services (SSIS).
- **Reporting Solution:** SQL Server Reporting Services (SSRS).

5. Md Zahid Hasan: *Senior Software Developer*

Educational Qualification: B.Sc. in Computer Science & Engineering, Ahsanullah University of Science & Technology

Technical Skills

- **Front End:** React.js, JavaScript, Laravel
- **Back End:** ASP.NET, PHP, C, C++, C#, Python
- **Database:** SQL Server, MongoDB

6. Mohammad Abul Kalam Azad: *Senior Software Developer*

Educational Qualification: B.Sc. in Computer Science and Engineering from Ahsanullah University of Science and Technology (AUST).

Technical Skills

- **Programming:** C/C++, C#, JavaScript, Laravel
- **Technology Backend:** Express JS, ASP.NET
- **Frontend:** React JS.
- **Database:** MongoDB, PostgreSQL, Microsoft SQL Server.
- **Data Integration Solutions:** SQL Server Integration Services (SSIS).
- **Reporting Solution:** SQL Server Reporting Services (SSRS).

7. Md. Al Amin Khan: *Junior Software Developer*

Educational Qualification: B.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET)

Technical Skills

- **Front End:** React.js, JavaScript, HTML, CSS3, Bootstrap
- **Back End:** ASP.NET, PHP, C, C++, C#, Python
- **Database:** SQL Server, MongoDB

8. Abu Saiyed Mohammad Sadat: *Junior Software Developer*

Educational Qualification: B.Sc. in Computer Science & Engineering, Chittagong University of Engineering and Technology (CUET).

Technical Skills

- **Programming:** C/C++, C#, JavaScript.
- **Technology Backend:** Express JS, ASP.NET
- **Frontend:** React JS.
- **Database:** MongoDB, PostgreSQL, Microsoft SQL Server.
- **Data Integration Solutions:** SQL Server Integration Services (SSIS).
- **Reporting Solution:** SQL Server Reporting Services (SSRS).

9. Sadik Haque: *Branding & Creative Head*

Educational Qualification: B.A in English

Working as Creative Head-[IT Expert], Vasa Creative, New York, USA [Remote]

4.3 Market Exposure

FinSight Software & Technologies Limited has proven expertise in delivering regulatory reporting and MIS solutions in the banking and financial sector. Our experience demonstrates both successful proof-of-concept (POC) engagements and ongoing project deliveries.

1. **IFIC Bank PLC**
   o Conducted a successful POC on automated regulatory reporting covering CIB, CL, SBS, ISS and ECL computation dashboard.
   o After successful demonstration, FinSight secured the work order through an open tendering process.
   o Currently, FinSight is actively implementing Automated Regulatory Report and MIS Solution at IFIC Bank PLC with modules covering ETL automation (SSIS), SQL Server–based centralized repository and dashboards, ensuring data quality, integrity, and consistency.

2. **AB Bank PLC**
   o Successfully carried out a POC for CIB, CL, and SBS reporting.
   o During the POC phase, FinSight demonstrated the full system capability, including:
     - ETL-driven data extraction, transformation, and loading using SSIS.
     - Validation and data consistency across sources.
     - Automated reporting aligned with Bangladesh Bank submission formats.

3. **FinanceConnect ERP – AI International Limited & Fars Holding & Associates Limited**
   o Our proprietary **ERP solution (FinanceConnect)** is currently in live use by **AI International** and **Fars Holding & Associates Limited.**
   o This solution integrates finance, HR, procurement, and reporting, showcasing FinSight's capability beyond regulatory reporting and proving our strength in building enterprise-grade platforms.

5. Deployment Strategy and Post-Implementation Support Plan

- The deployment will follow a structured **BRD → UAT → Go-Live** lifecycle. Each module will be released after successful validation and approval, ensuring quality and compliance. A **dedicated project team** will oversee all deployment activities, including requirement validation, user acceptance testing, and production rollout.

Two-Tier Post-Implementation Support Model

- **Hyper-care Support (Immediate Post Go-Live)**
  - ➢ Duration: First submission of all Regulatory Reports (except Daily reports) following Go-Live. For daily reports one (1) week hyper-care support will be provided.
  - ➢ Dedicated team will be available during regulatory report submission cycles.
  - ➢ Focus on issue resolution, user guidance, performance monitoring, and stabilization.
  - ➢ Direct coordination with business users to ensure confidence and seamless adoption.

- **Standard Support (SLA-Based Ongoing Operations)**
  - ➢ After hyper-care, the system transitions to formal support mode.
  - ➢ SLA-driven response and resolution timelines for incidents, service requests, and enhancements.
  - ➢ Regular monitoring of system performance, scheduled health checks, and preventive maintenance.
  - ➢ Continuous user helpdesk support (on-site or remote as agreed).