

Risk-Based Supervision for Inclusive Digital Financial Services

Capstone Scenario: Meridia

The central bank of **Meridia** (a large, low-middle-income economy) is seeking to modernize its supervisory and regulatory approach. The country was recently removed from FATF’s “grey list”, which had constrained correspondent banking and raised compliance burdens for banks and other financial institutions.

Although the central bank issued guidelines for risk-based customer due diligence (CDD) to advance inclusion, strict practices by banks and nonbank financial services providers (FSPs) continue to exclude vulnerable segments. The central bank’s limited supervisory capacity and skills tend to encourage institutions towards being strict, due to fears of being subject to international limitations again.

The board of the central bank has secured a substantial, one-off budget to fund an organizational transformation program to drastically improve supervision and the regulatory process. The program is also hoping to include an innovation pilot for data-driven supervision to demonstrate how technology can simultaneously strengthen AML/CFT controls and expand financial inclusion.

COUNTRY PROFILE: MERIDIA

Indicator	Value (Synthetic)
Total population	120 million
Gender distribution	Female 50.5%, Male 49.5%
Age segmentation	0–14: 35%; 15–24: 20%; 25–54: 35%; 55–64: 5%; 65+: 5%
Urbanization	45% urban / 55% rural
Literacy (15+)	78%
Internet penetration	55% of population
Smartphone penetration	68% of adults
National ID coverage	70% of adults (uneven rural coverage)
Diaspora size	3 million (primary remittance corridors to EU & Gulf)

FINANCIAL SECTOR STRUCTURE

Subsector	Size / Notes
Licensed commercial banks	43 (top-5 hold approximately 65% of assets)
Insurance companies	27 (life: 12, non-life: 15)
Microfinance institutions	220 (mix of deposit-taking and credit-only)
Savings & credit cooperatives (SACCOs)	12,000 (heterogeneous supervision)
Nonbank lenders incl. digital lenders	85 (fast-growing, varied licensing)



Mobile money providers (MMPs)	3 major mobile network operator-led (MNO-led) schemes; 30 million active wallets
Payment service providers (PSPs)	25 (gateways, aggregators, PIS/AIS-type services)
Agent network	≈250,000 active agents (rural coverage improving)
Fintech ecosystem	~400 startups; partnerships with banks increasing

FINANCIAL INCLUSION AND USAGE INDICATORS

Indicator	Value (Synthetic)
Adults with any formal account (bank or mobile money)	72% (Men: 78%; Women: 66%)
Adults with bank account	45%
Adults with mobile money account	58% (overlap exists)
Monthly active digital payments	35% of adults
Formal savings usage (past 12 months)	30% of adults
Formal credit usage (past 12 months)	18% of adults
Insurance penetration	Premiums ≈3% of GDP; low microinsurance uptake
Average remittance cost (diaspora → Meridia)	8% per \$200
Primary barriers to inclusion	<p>Strict CDD (overcompliance); limited ID coverage; low income & informality; limited public trust due to previous banking crisis when deposits were frozen (withdrawals were limited); lack of appropriate products targeting low-income segments.</p> <p>The overall lower levels of formalization in of enterprises and the lack of access, by the financial sector, to information about MSEs, from the MSE registers and tax authorities</p>

OVERALL BANK CONTEXT

Supervision Departments

The central bank has two supervision departments: one for banks and one for nonbanks. These departments are focused on prudential supervision and have recently adopted risk-based prudential supervision manuals prepared by a resident IMF advisor.

The IMF Advisor conducted one training session with the senior supervisory staff from the two departments. This advisor is leaving Meridia to be located elsewhere, next month.

Compliance-Based Supervision

Overall, the supervisory staff has been applying a compliance-based supervision approach and is relatively comfortable with the current approach and procedures.

Most staff do not fully understand what will change with the adoption of risk-based supervision and the new supervisory manuals.



After the adoption of the new manuals, the annual planning continues to be standardized, meaning that staff time is allocated to a fixed number of inspections covering the whole spectrum of risks of each institution. The plan does not vary over the years.

Payments Department

There is a payments department, which is responsible for operating a few payment infrastructures, such as the large value real time gross settlement (RTGS) system, the recently launched fast payment system and the cheque clearing system.

This department is also responsible for supervising payment operations and nonbank payment service providers, although capacity is lacking to effectively undertake these two responsibilities.

Market Conduct Supervision

Market conduct supervision is done in each supervised sector by dedicated staff members (one for each department), who have been selected from among the prudential supervision teams.

Each of these staff members is independently developing their supervision manual for market conduct, focused on consumer protection, and defining new reporting templates, separate from prudential data templates, to improve the analysis of consumer risks by incorporating new indicators.

Inter-Departmental Innovation Group

The central bank has just created an inter-departmental innovation group (not full-time) with the task of studying the risks and opportunities of innovation and fintech developments.

Trends this group has identified:

- Increasing use of partnerships by licensed FSPs with FinTech's
- A range of new FinTech's operating in the market, offering both customer-facing and back-office services to licensed FSPs
- A few FinTech's operating based on a Banking-as-a-Service (BaaS model), where customers see the brand of the non-licensed entity
- Fintechs are increasingly providing digital loans to the population, especially young males in urban areas, but there is concern with the potential consumer risks of such fast growth.
- Increasing use of AI for credit scoring, insurance underwriting, customer services
- The population is increasingly having access to virtual assets issued abroad, offered in the country by virtual asset service providers abroad. Migrants living abroad are the main users of virtual assets, which they use to remit money back home, to support their families. A recent survey showed that the main reason for the adoption of virtual assets was twofold: the prices charged by money remittances operators and the lack of bank accounts by the families back home.
- Not enough information about the size of fintech activities, since most fintechs are not regulated

Using SupTech

The central bank has been interested in leveraging SupTech to improve prudential and conduct supervision while promoting financial inclusion. A previous SupTech project, pushed by an international organization partnering with a SupTech vendor, tried to implement chatbots to receive complaints directly from consumers of the bank to improve supervision.

The project failed to have the expected impact, because the system provided by the vendor – including the data it collects from customers and the reports it produces – was not customized to the needs of market conduct supervisors. This resulted in supervision not effectively incorporating this system to increase efficiency in the use of customer complaints data.

The contract with the vendor did not allow for the central bank to have control over the system's algorithms. This meant that the central bank could not update or improve the system after the contract was over.

Financial Inclusion

There is a separate unit at the central bank focused on financial inclusion. This unit is responsible for producing a yearly report on financial inclusion.

There are concerns with quality and granularity of the data produced and published, which does not allow segmented analysis by gender and other demographics.

The data only includes high-level indicators, such as the total number of accounts, are segmented by gender. This unit collects data separately from the data collection done by other central bank units.

Data Collection

There is no centralized unit managing and coordinating all data collection and reporting requirements across all central bank units. Each department creates its own data reporting templates, based on the experience and needs of their own staff, following data definitions and standards created for each template.

Most of the reports are sent by FSPs via a web-based reporting portal recently implemented with the support of the Ministry of Communications. FSPs complain that there is duplication of data reporting requirements across different central bank departments.

The lack of uniformity of data standards and definitions across departments increases compliance costs for FSPs. It also creates inconsistencies when using the data in a centralized manner by the central bank.

AML/CFT CONTEXT

Removal from "Grey List"

The country has recently been removed from the FATF's "grey list"; correspondent relationships are improving.

High cash usage

The use of cash in Meridia remains high.

Virtual Assets

Increasing cross-border virtual asset activity by diaspora via overseas virtual asset service providers, which are not regulated in Meridia. Increasing concerns with the use of virtual assets for remittances and other purposes, which could increase the risk of financial crimes.

Customer Due Diligence

FSPS adhere to strict CDD despite central bank's risk-based CDD guidelines. Simplified CDD adoption remains limited.

Suspicious Transactions

The average monthly suspicious transaction reports (STRs): Approximately 3,000. There is very limited advanced analytics, which is based on excel formulas created by a staff member at the Financial Intelligence Unit (FIU). There are also a high number of false positives in transaction monitoring systems of FSPs.

Financial Intelligence Unit (FIU)

The FIU is located in the Financial Stability Department of the central bank. It is responsible for receiving and analysing STRs and reports of transactions above certain thresholds determined in the regulation. The reports are sent by FSPs via a dedicated system that can be accessed by any central bank employee.

There is a draft law to create an independent FIU, but the central bank is pushing back on this reform because it believes it will make it difficult for prudential supervisors to access information about the reports.

Prudential Supervision

The prudential supervisors in each sector (banks and nonbanks) are responsible for assessing how well FSPs manage their ML/FT risks.

These supervisors usually incentivize overcompliance based on traditional customer documentation and methods to check and produce customer profiles.

PROBLEM STATEMENT

The central bank board has secured a substantial, ring-fenced budget to "radically improve the efficiency and effectiveness of the central bank, ensuring balance across statutory mandates."

Management seeks the following:

1. An organization-wide transformation toward data-driven, risk-based supervision (RBS) for Digital Financial Services (DFS) within five years.
2. A pilot demonstrating that responsible AI can strengthen AML/CFT outcomes while enabling more inclusive CDD practices (especially simplified CDD and proportional monitoring).

YOUR TASKS AND DELIVERABLES

Task 1: 5-Year Strategy for Data-Driven RBS of DFS [60 marks]

1. Produce a board-ready strategy that sets Meridia on a path to full adoption of data-driven, risk-based supervision for DFS within five years.
2. Your strategy should be between 5 and 10 pages.
3. The strategy should include:
 - **Supervisory Philosophy and Outcomes:**
Describe how you will facilitate the shift from rules-heavy enforcement toward judgment-led, pre-emptive, proportionate supervision based on high quality data and clear outcome metrics. Supervisors need to support the use of technology and alternative means of AML/CFT controls that balance financial crime prevention with inclusion goals.
 - **Data reform plan:**
Highlight the main changes and outcomes of a data reform strategy. You do not need to be a data specialist, but you need to be able to identify the main aspects on which the central bank can work to fix the current data problems. Possible examples include data collection/ingestion, validation, analytics, visualization, cross-departmental interoperability, reporting taxonomies.
 - **SupTech:**
List the main use cases for SupTech investment that could have the most organizational-wide impact to support the change in supervisory philosophy and the data reform plan. Point out the desired characteristics of vendor relationships, in case the SupTech solutions are to involve vendors.
 - **Organizational Design:**
Propose a new structure by market segments (e.g., banks, fintech and other nonbank lenders, mobile money providers and other PSPs) and supervisory functions (such as prudential, market conduct, AML/CFT, data collection/management, data analytics).
 - **Capabilities and Staffing:**
Identify the skills needed, hiring strategy, training needs, use of secondments, retention strategy. Describe the type of organizational culture the central bank should pursue, and how supervisors will become more able to assess the impact of overcompliance on inclusion goals.
 - **Risk register:**
Identify the main risks to the implementation of the project.
 - **Roadmap & milestones:** [For extra marks]
Produce a phase plan and main milestones (Year 1–5), with assignment of responsibilities for different departments.

Task 2: AI-Enabled Inclusive AML/CFT Pilot [40 Marks]

1. Prepare a pilot proposal on how AI and improved data quality can help reduce financial exclusion while improving AML/CFT effectiveness.
2. Your proposal should be between 3 and 5 pages.
3. The proposal should incorporate both the Central Bank's supervisory perspective and that of the FSPs.
4. The proposal should show how technology can generate better data, more timely supervisory insights, and more proportionate AML/CFT implementation.
5. Here is further guidance on what to include:
 - Define the AML/CFT Problem and Inclusion Challenge
Provide a summary of the AML/CFT and financial inclusion issues relevant to the pilot. Include, for example:
 - Key AML/CFT weaknesses affecting FSPs and supervisors
 - Practices that contribute to overcompliance or financial exclusion
 - Data, reporting, and coordination limitations
 - Specific constraints that the pilot aims to address.

Note: The section should summarize the context; do not propose solutions here.

- Describe the Pilot for the Use of AI and Better Data:
Present a clearly defined pilot that uses AI and enhanced data processes for both FSPs and the central bank. Your description should include, for example
 - Purpose of the pilot: State the specific AML/CFT and inclusion objectives the pilot will test.
 - FSP Perspective: Describe how participating FSPs will use AI to:
 - strengthen their AML/CFT controls
 - support more inclusive and proportionate CDD and their ongoing monitoring of customers
 - help reduce unnecessary exclusion.

Note: Focus on conceptual descriptions how AI assists processes – not technical design, coding methods, or algorithms.

- Supervisor perspective:
Describe how the central bank will use technology to, for example,
 - obtain more timely, structured supervisory insights
 - improve the effectiveness of monitoring and analysis of FSPs
 - increase AML/CFT effectiveness while achieving financial inclusion objectives
 - detect and address overcompliance
 - enhance supervisory efficiency and judgment

Note: Do not forget to discuss how supervisors interpret and act on the insights generated by the pilot.

- Data requirements and governance:
Describe, at a high-level:
 - types of data the pilot will rely on
 - general standards or principles (e.g., accuracy, transparency, proportionality)

- overall safeguard to ensure responsible and secure data handling.

Note: You're not expected to provide detailed technical specification, data schemas, architectures, or coding details.

- Explain how the pilot supports more inclusive AML/CFT practices:
Describe how the pilot:
 - Supports more proportionate, risk-based AML/CFT
 - addresses current barriers or overcompliance
 - enable inclusion benefits
 - The indicators that will be used to assess inclusion outcomes.
- Explain implementation approach and governance:
 - Provide a high-level, practical implementation plan. Include:
 - the entities and teams involved
 - Roles and responsibilities
 - Operational steps and sequencing
 - Realistic timeline
 - Governance decision-making arrangements
 - The approach to vendor engagement or procurement (if relevant).
- Prepare an assessment of the major risks associated with the pilot.
Identify the risks, and for each risk, propose a feasible mitigation approach.
Your assessment could cover:
 - regulatory and supervisory risks
 - Operational and implementation risks
 - Data quality, privacy, and governance risks
 - Technological and model-related risks
 - Risks to inclusion objectives
 - Reputational risks.