



RWANDA BANKERS' ASSOCIATION

"Together for a better banking environment"

RBA ANNUAL BANKING RESEARCH CONFERENCE 2026

June 25th, 2026

Payments First: Using Transactional Access as an Entry Point to Formal Finance

Presenters:

Gabriel Ruhan

Eric Niyongira

Yves Dusabirema

Executive Summary

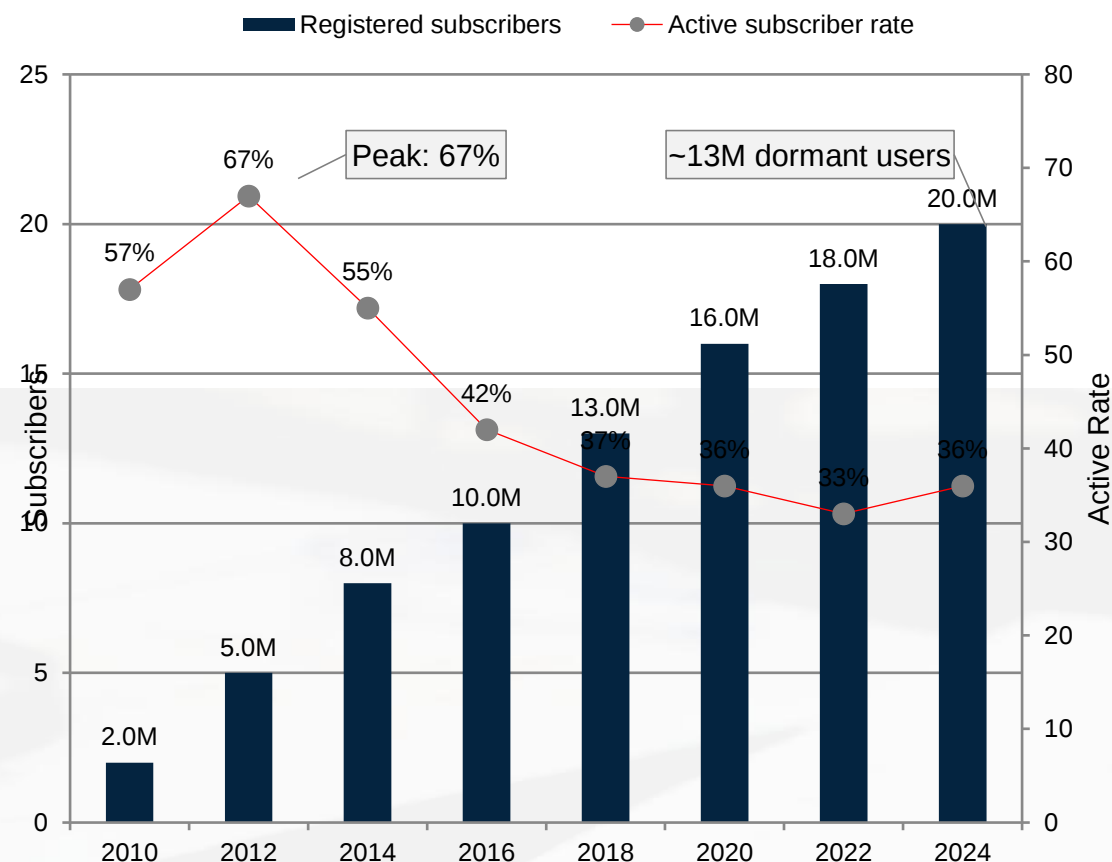
Rwanda has achieved near-universal financial access — **96% overall inclusion** and **92% formal inclusion** — surpassing the National Strategy for Transformation target of 90%. However, widespread availability of accounts and digital wallets has not translated into consistent, everyday usage across the economy.

- **The Access-Usage Paradox:** Mobile payment registrations surged to over 20 million by 2024, yet the active subscriber rate declined from a peak of 67% to approximately 36%, leaving an estimated 13 million registered users functionally excluded.
- **Payments Infrastructure as the Binding Constraint:** The challenge is no longer access but the functionality and performance of the payments layer.
- **A Sequenced Payments-First Strategy:** The paper proposes a three-phase approach — first stabilising everyday payments through acceptance, reliability, and liquidity; then anchoring habitual usage through wages and government payment flows; and finally deepening financial intermediation once usage is established.
- **Empirical Corroboration:** Analysis of 52 quarters of National Bank of Rwanda payment system data confirms a stable long-run cointegrating relationship between transactional access and formal financial participation, with 22.6% of disequilibrium self-correcting each quarter.

The next phase of financial inclusion must shift from expanding access to deepening usage, reliability, and economic participation — treating payments as national economic infrastructure with governance, reliability, and coordination as central policy levers.

Rwanda achieved near-universal financial access, but a widening gap between registration and active usage signals the next inclusion challenge

Mobile Money Registrations vs Active Subscriber Rate (2010–2024)



The Access-Usage Paradox

- **Formal inclusion surged from 21% (2008) to 92% (2024)**, exceeding the NST target of 90% — yet active mobile money usage declined from 67% to ~36%
- **~13 million registered users are effectively dormant** — formally included but not transacting regularly in daily economic life
- **Usage remains episodic**, concentrated around salary receipt, transfers, and deposits/withdrawals (cited by **93%** of users as primary activity)
- **Cash dominates everyday transactions** — food, transport, education, and informal trade — where acceptance, reliability, and immediacy matter most
- **62% of non-users state they "do not need the product"** — signaling that current digital offerings do not align with real economic activity patterns
- The binding constraint has shifted from **access** to **functionality, acceptance, and reliability**

Functional financial exclusion describes a population that is formally included yet unable to transact regularly and reliably in daily economic life

What We Measure Today



% of adults with accounts

Measures registration and account ownership — currently at 92% formal inclusion



Registered merchants

Counts enrolled merchants regardless of whether they actively accept digital payments



Payment rails deployed

Tracks infrastructure supply without assessing real-world performance or reliability



What We Should Measure



% transacting digitally at least monthly

Distinguishes nominal inclusion from functional economic participation



Active merchant acceptance density

Reveals coordination gaps — where merchants actually process digital payments regularly



Transaction success rates & settlement predictability

Captures system performance from the user's perspective — the trust that drives habit

The gap is structural, not behavioural — it reflects where payments are accepted, how reliably they function, and how well they align with everyday economic activity

Cash persists not from habit or ignorance, but because it outperforms digital alternatives on acceptance, reliability, and immediacy

Why Cash Works



Universal acceptance — Accepted by every merchant, trader, and service provider without exception or technical prerequisite



Immediate settlement — Value transfers instantly at the point of exchange with no processing delay or confirmation uncertainty



No connectivity dependence — Functions regardless of network availability, power outages, or system downtime



Predictable and simple — No fees, no failed transactions, no dispute resolution needed; the user retains full control



Why Digital Payments Stall



Coordination failure in acceptance — Merchants wait for consumer usage to rise; consumers wait for acceptance to become universal



Cost and liquidity friction — Transaction fees erode thin margins on low-value payments; agent liquidity shortfalls block cash-out and destroy trust



Reliability and fragmentation — Network failures, delayed settlement, and incompatible provider systems create unpredictable outcomes



Context mismatch — Informal markets, agriculture, and micro-enterprises operate at high frequency and low value, where even modest friction deters adoption

Payments systems should be recognised and governed as national economic infrastructure, comparable to transport or telecommunications



A conceptual reframing: from financial inclusion as a social objective to payments as the backbone of productivity, competitiveness, and economic participation

Infrastructure performance is defined by four core attributes:

- **Reliability** — transactions complete consistently and predictably
- **Acceptance** — payments are universally recognised across merchants and contexts
- **Interoperability** — systems connect seamlessly regardless of provider
- **Predictability** — users can anticipate outcomes, fees, and settlement timing

Where these attributes are consistently present, digital payments become embedded in routine economic life. Where they are absent or uneven, users rationally revert to cash — not from habit or ignorance, but because cash outperforms on the dimensions that matter most.

This reframing situates payments within Rwanda's broader productivity and competitiveness agenda — shifting the policy conversation from access metrics to economic infrastructure performance.

System-wide coordination and governance — not individual institutional performance — determine whether the payments ecosystem delivers reliable outcomes



- **National Bank of Rwanda** — System steward setting performance expectations, convening stakeholders, and aligning incentives where collective action is required
- **Commercial Banks** — Anchors of settlement, liquidity, and trust; linking retail payments to the broader financial system
- **MNOs & Payment Service Providers** — Driving access and innovation; reaching users and merchants that banks have historically struggled to serve
- **Government** — Catalyst for coordination through aligned public payment flows (wages, transfers, taxes) that reinforce acceptance and habituation
- **Rwanda Bankers Association** — Coordination platform facilitating dialogue, joint initiatives, and alignment around shared infrastructure investment



Fragmentation reflects insufficient coordination, not technical failure. Interoperability exists technically but user experience remains uneven due to fee differences, settlement timing, and transaction limits.

Last-mile inclusion requires offline-capable infrastructure, biometric identity, and agent networks



Agent Networks as Core Infrastructure

- Rwanda's agent network reached **183,216 agents** by 2024
- When an agent cannot fulfil a cash-out request, users experience it as digital money failing
- Fragmented float management creates predictable shortfalls at high-demand periods and in low-density geographies
- Agents must be treated as **core infrastructure** with sustained attention to liquidity management, incentives, and oversight



Offline-Capable Payment Architecture

- Connectivity-dependent systems underperform precisely where inclusion is most needed
- Transactions are authorised locally against a secure credential and queued for settlement once connectivity is restored
- Coverage can be extended **incrementally** without requiring large-scale network build-out as a prerequisite
- Complementary to eKash: the switch handles real-time interoperability; offline endpoints extend reach to intermittent connectivity zones



Biometric Identity via NIDA

- Identity verification remains the most persistent structural constraint at the last mile
- A fingerprint is a **persistent, portable credential** that cannot be lost, forgotten, transferred, or stolen like a document or PIN
- Leverages Rwanda's existing national biometric identity programme (NIDA)
- Eliminates PIN-based failure as the single most common source of transaction error for new and low-literacy users



These three design features address structural barriers — not behavioural ones. Functional inclusion depends on systems that perform reliably in the conditions where exclusion is concentrated.

A three-phase sequencing strategy prioritises stable everyday payments before layering wages, public flows, and ultimately financial intermediation

Phase One

Stabilise Everyday Payments

- Expand and stabilise **merchant acceptance** across informal and peri-urban markets
- Strengthen **agent liquidity** management to ensure reliable cash-out
- Improve **transaction reliability** and settlement predictability
- Reduce operational friction and **user complexity**

Success metric: frequency, continuity, and confidence in usage

Phase Two

Anchor Habitual Usage

- Route **government wages** through interoperable eKash rails
- Channel **G2P transfers** and social protection payments digitally
- Digitise **agricultural payments** (crop payments, input subsidies)
- Create recurring touchpoints that reinforce merchant acceptance

Precondition: acceptance and reliability already in place

Phase Three

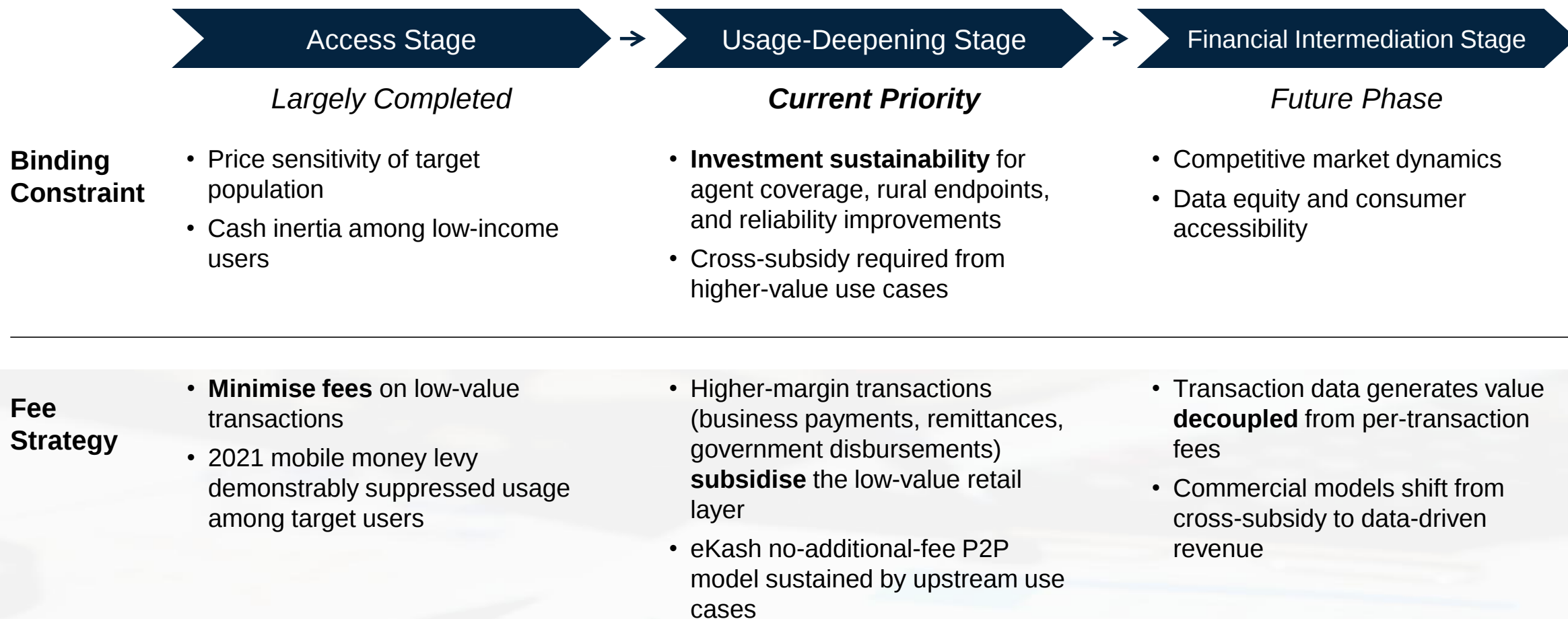
Deepen Financial Intermediation

- Leverage transaction data for **cash-flow-based credit** scoring
- Develop **savings products** tailored to observed payment patterns
- Introduce **risk-mitigation tools** for households and enterprises
- Build shared transaction data utility for licensed lenders

Precondition: payments usage is stable and habitual

Restraint is essential: complex product innovation and advanced analytics must not precede stable payments usage — trust, coordination, and habit formation cannot be accelerated through feature proliferation.

Fee design must evolve with system maturity — from minimizing adoption barriers, to sustaining infrastructure investment, to enabling data-driven models



Fee design should be treated as an actively managed policy instrument — the binding constraint on cost structure changes as the system matures, and structures at each stage must be consistent with the investment requirements of the next.

Proportionate regulation must shift from enabling entry to enabling sustained usage, with transaction limits and consumer protection calibrated to real-world behaviour

1

Transaction Limit Review

- Conduct formal review of **Tier 1 and Tier 2 limits** against actual NBR payment system data
- Where limits are binding constraints on legitimate low-value activity rather than risk tools, they should be adjusted
- Publish review findings with transparent evidence base for the industry

2

Consumer Protection Standards

- Mandate **dispute resolution timelines** and transaction error reversal across all eKash-connected providers
- Require **fee disclosure and transparency** at point of transaction
- Standardised protection builds the trust that converts first-time users into habitual ones

3

AI Fraud Detection Guidance

- Issue clear regulatory guidance on AI-powered fraud detection under FSDS digital payments agenda
- Require providers to report **false positive rates** in supervisory returns
- Prevent poorly calibrated systems from disproportionately blocking informal sector users

4

Regulatory Sandbox Integration

- Utilise FSDS 2025-2030 sandbox (17 approved fintechs) to test simplified onboarding models
- Sandbox outcomes must feed **directly into regulatory policy updates** within defined timeframes
- Treat sandbox as a policy instrument, not a research exercise



The principal regulatory risk is no longer under-regulation, but misalignment — rules calibrated for formal, higher-value transactions unintentionally constrain the low-value, high-frequency payments that dominate everyday economic life for households and micro-enterprises.

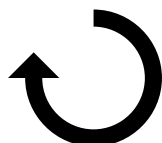
Empirical analysis of 52 quarters of NBR data confirms that transactional access is a stable, self-correcting gateway to formal financial participation



4.527

F-Statistic (Bounds Test)

- Exceeds the **5%** upper bound critical value of 3.38
- Confirms a stable long-run cointegrating relationship between payment channels and formal inclusion



22.6%

Quarterly Error Correction

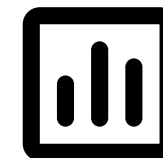
- Disequilibrium self-corrects by **22.6%** each quarter
- System naturally returns to its stable equilibrium path following market shocks



0.181

Internet Banking Elasticity

- Largest long-run positive impact on formal financial participation
- Confirms that reducing friction for higher-frequency users drives durable inclusion gains



117.5%

Internet Banking CAGR

- Mobile payments grew at **79.5% CAGR** over the sample period
- ATM infrastructure grew at only **5.9%**, confirming structural shift to digital channels



The payments-first hypothesis is empirically validated: transactional access serves as a reliable, self-correcting gateway to formal financial participation, with digital channels progressively substituting traditional cash-based infrastructure.

Success must be measured through payments-centric KPIs that capture economic participation rather than access alone

Traditional Access Metrics		Payments-Centric KPIs
 Broad participation — % of adults with accounts		 Active user rate — Monthly transactors as % of registered users
 Regular usage — Number of registered wallets		 Habit formation — Share of users transacting weekly
 Merchant readiness — Number of registered merchants		 Merchant acceptance density — Active eKash merchants per 10,000 population by district
 System reliability — Platform availability		 Transaction success rate — Settlement predictability from user perspective
 Liquidity access — Number of agents deployed		 Agent liquidity availability — Cash-out fulfilment success rates
 Public integration — Digitised payment programmes		 Public flow integration — Share of wages and G2P via interoperable systems

Nine policy recommendations provide the operational roadmap for converting near-universal access into deep, habitual economic participation

- 1 Formalise NBR's system stewardship
- 2 Maximise eKash as the foundation
- 3 Resolve the active usage gap
- 4 Anchor usage through government flows
- 5 Implement proportionate regulation
- 6 Address agent liquidity as systemic risk
- 7 Adopt payments-centric measurement
- 8 Build transaction data infrastructure
- 9 Treat fee design as active policy



Recommendations are anchored to Rwanda's existing policy instruments — the FSDS 2025-2030, the NFIR 2025-2030, and RNDPS 2.0 / eKash — and sequenced to stabilise everyday payments before layering deeper financial intermediation



RWANDA BANKERS' ASSOCIATION

"Together for a better banking environment"



THANK YOU!