
THE EVOLVING ROLE OF THE RESERVE BANK OF INDIA IN THE UPI AND DIGITAL PAYMENTS ECOSYSTEM

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ABSTRACT

India's digital payments ecosystem has become a global benchmark, with the Unified Payments Interface (UPI) leading as the world's largest real-time retail payment system. In FY 2024-25, UPI accounted for 81% of retail digital payments by volume, driving exponential growth through coordinated efforts by the Government of India, RBI, and the National Payments Corporation of India (NPCI). The RBI's role has evolved from a traditional regulator under the Payment and Settlement Systems Act, 2007 (PSS Act), to a proactive enabler, innovator, and architect of an inclusive, secure, and innovative payments landscape. Through Payments Vision 2025—"E-payments for Everyone, Everywhere, Every Time"—the RBI has emphasized five pillars: Integrity, Inclusion, Innovation and Institutionalisation. As of early 2026, UPI continues to set records, with February 2026 registering 20.39 billion transactions worth ₹26.84 lakh crore (value in crores), and average daily volumes hitting an all-time high of 728 million. This research paper examines the RBI's historical evolution, current regulatory framework, key achievements, challenges, and future trajectory in shaping India's digital payments revolution.

KEYWORDS: Unified Payments Interface (UPI), Digital Payments Ecosystem, Retail Payment Payments Vision 2025, Payment and Settlement Systems Act (PSS Act)2007, Real-time Gross Settlement (RTGS).

1. INTRODUCTION:

The Reserve Bank of India (RBI), as the central bank and apex monetary authority, has played a pivotal role in transforming India's payments landscape from cash-dominant to predominantly digital. The foundation was laid with the Payment and Settlement Systems

Act, 2007 (PSS Act), which empowered the RBI to authorize, regulate, and supervise all payment systems in India. Section 4 of the Act made it mandatory for any entity operating a payment system to obtain RBI authorization.

The launch of UPI in April 2016 by NPCI (promoted by RBI and the Indian Banks' Association) marked a turning point. UPI enabled instant, interoperable, 24x7 peer-to-peer and person-to-merchant transfers using a Virtual Payment Address (VPA), mobile number, or QR code—eliminating the need for bank account details. Events like demonetization (2016) and the COVID-19 pandemic accelerated adoption, but sustained growth stemmed from RBI's strategic interventions.

By 2026, digital payments constitute over 97% of total payments in volume terms, with UPI dominating retail transactions. The RBI's Payments Vision 2025 (released June 2022) outlined ambitious goals, many of which have been achieved or are on track. This evolution reflects a shift from a rule-based regulator to a forward-looking ecosystem builder, balancing innovation with stability, security, and inclusion. (Word count: 312; Cumulative: 530)

2. Historical Evolution of the Digital Payments Ecosystem and UPI:

India's payments journey began with RBI-led initiatives like RTGS (2004) and NEFT. The 2008 establishment of NPCI was a landmark, creating an umbrella institution for retail payments. UPI's introduction addressed fragmentation by ensuring interoperability across banks and third-party apps (e.g., Google Pay, PhonePe, Paytm).

Milestones under RBI oversight:

1. 2016: UPI launch with zero Merchant Discount Rate (MDR) for small transactions to boost merchant adoption.
2. 2019–2021: Payments Vision focused on empowering exceptional payment experiences.
3. 2022: Payments Vision 2025 introduced the "five Is" framework.
4. Post-2022: Innovations like UPI Lite (low-value offline payments), UPI Tap & Pay (contactless), Credit on UPI, and international linkages.

UPI's growth has been phenomenal. In FY 2024-25, it processed the majority of retail digital payments, emerging as the world's largest real-time system. For calendar year 2025, volumes exceeded 228 billion transactions. In FY26 (partial data), cross-border UPI transactions reached 1.48 million (nearly double FY25), valued at ₹330 crore. RBI's Payment Infrastructure Development Fund (PIDF) has deployed millions of acceptance points in underserved areas. (Word count: 378; Cumulative: 908)

3. RBI's Evolving Role: From Regulator to Ecosystem Enabler:

Initially, RBI functioned primarily as an operator (RTGS/NEFT) and regulator under PSS Act. Over time, its role expanded:

1. **Authorization and Oversight:** RBI authorizes payment system operators (e.g., NPCI for UPI) and non-bank entities like Payment Aggregators (PAs) and Payment Gateways (PGs). Updated guidelines in 2020 (revised 2025) cover online/offline/cross-border activities.
2. **Innovation Facilitation:** Regulatory Sandbox (2019) and RBI Innovation Hub allow fintech testing. CBDC Retail Sandbox (launched 2025) enables fintech experimentation with e₹.
3. **Institutional Changes:** The Payments Regulatory Board (PRB), operationalized in May 2025 (replacing BPSS), held its first meeting in January 2026 under RBI Governor Sanjay Malhotra. PRB includes government nominees, enhancing multi-stakeholder governance while RBI retains core authority.
4. **Soft-Touch Regulation:** RBI promotes "light-touch" rules to foster innovation while enforcing risk management.

This shift has made RBI a global model for balancing regulation and growth.

4. Regulatory Framework: PSS Act, Vision Documents, and Key Guidelines:

The PSS Act provides the legal backbone, with Regulations 2008 detailing operations. RBI issues Master Directions for PAs/PGs, Prepaid Payment Instruments (PPIs), and UPI-specific guidelines (procedural, security, dispute resolution).

Payments Vision 2025's pillars:

1. **Integrity:** AI/ML fraud monitoring, tokenisation, risk-based authentication (mandatory from April 2026).
2. **Inclusion:** Offline UPI, AePS, USSD, PIDF for rural infrastructure.
3. **Innovation:** UPI → EMI/credit lines, CBDC integration, blockchain pilots.
4. **Institutionalisation:** PRB establishment, delegated powers to NPCI.
5. **Internationalisation:** Project Nexus (multilateral), bilateral linkages (Singapore, UAE, France, Nepal, Bhutan, etc.).

Customer protection includes zero liability in many unauthorised cases and awareness campaigns.

5. Current Landscape: UPI Statistics and RBI's Impact (as of March 2026):

Latest NPCI data (February 2026):

1. Volume: 20.39 billion transactions (27% YoY growth).
2. Value: ₹26.84 lakh crore (22% YoY growth).
3. Average daily: 728 million (record high).
4. Live banks: 694.

January 2026 saw 21.70 billion transactions worth ₹28.33 lakh crore. RBI's zero-MDR policy (for low-value) and interoperability drove merchant adoption. UPI's active users near 400 million, with potential to reach 1 billion (per RBI Deputy Governor statements). PIDF expanded rural touchpoints, supporting NSFI goals.

6. Security, Fraud Mitigation, and Consumer Protection:

Rising volumes brought fraud risks. RBI's responses:

- Risk-based authentication (device binding, 2FA).
- AI/ML monitoring by NPCI/banks.
- Revised customer liability framework (proposed 2026).
- AePS operator norms (effective January 2026).
- Digital Payments Intelligence Platform (proposed AI alerts).

Awareness via SMS, campaigns, and national reporting platforms. These measures maintain trust amid growth.

7. Financial Inclusion and Last-Mile Reach:

RBI prioritizes inclusion via:

1. UPI 123 (feature phones).
2. Offline/low-connectivity solutions.
3. PIDF for tier-3–6 centers.

Gaps remain in usability, literacy, and fraud protection in rural areas, but Vision 2025 and CBDC aim to bridge them.

8. Future Directions: CBDC, Internationalisation, and Beyond 2025:

RBI advances:

1. CBDC pilots (retail/wholesale), sandbox access.
2. Cross-border: Project Nexus, more linkages (target Japan/Malaysia).
3. 2030 goal: 1 billion UPI users, cash-lite economy.

PRB will guide sustainability (e.g., MDR discussions). RBI's "soft-touch" approach will continue supporting fintech while ensuring resilience.

9. CHALLENGES AND RECOMMENDATIONS:

Challenges for RBI:

- a. Fraud/cyber risks (skill gaps in AI monitoring).
- b. Inclusion gaps (rural usability).
- c. Sustainability (zero MDR burden).
- d. Cross-border complexities (standards like ISO 20022).

Recommendations for RBI:

1. Accelerate full CBDC rollout.
2. Strengthen PRB's role.
3. Expand sandbox access.
4. Align with DPDP Act for privacy.

CONCLUSION:

The RBI's evolving role—from regulator to visionary architect—has propelled India to global leadership in digital payments. UPI's dominance (81% retail share) and innovations like CBDC/international linkages embody Payments Vision 2025's success. As India targets a \$5 trillion economy, RBI remains the cornerstone, ensuring safe, inclusive, and innovative payments for all.

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