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**DIGITAL PAYMENTS IN INDIA &  
SAFETY MECHANISM**

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## DIGITAL PAYMENTS IN INDIA & SAFETY MECHANISM

### Context

- Recently, **India's Unified Payments Interface (UPI)** has **completed 10 years** of its operations as it has revolutionized financial inclusion and real-time payments. However, the rapid expansion has been **accompanied by rising fraud risks**, necessitating **regulatory intervention**.







### About India's Digital Payment Ecosystem

- Evolution and Growth of Digital Payments in India:** India has become one of the **largest digital payments markets globally**. UPI dominates with billions of monthly transactions and widespread adoption.
  - Growth driven by **Digital India Programme, JAM Trinity (Jan Dhan–Aadhaar–Mobile)**; and expansion of smartphones and affordable internet.
- India's digital payment ecosystem is built on **interoperability, innovation, and inclusion**, making it a global model.
- India accounts for a **significant share of global real-time payments**. Rapid increase in transaction volume, merchant adoption, and digital penetration in Tier-2 and Tier-3 cities.

### Key Components of the Ecosystem

- Unified Payments Interface (UPI):** It is developed by National Payments Corporation of India (NPCI) that enables **instant, interoperable bank transfers**.
  - It supports peer-to-peer (P2P) and merchant (P2M) transactions, and has become the **dominant retail payment system globally**.
  - UPI's scalability and low-cost architecture have made it a model for other countries.

### UPI in Numbers: Scale, Speed & Global Leadership

 <b>21.70 Billion</b> Transactions in January 2026 alone	 <b>₹28.33 Lakh Crore</b> Value processed in January 2026	 <b>81%</b> Share of all retail digital transactions in India
 <b>49%</b> India's share of global real-time payment transactions	 UPI: World's largest real-time payment system by volume (IMF)	 <b>Under 10 Years</b> Time taken to build a world-leading payments ecosystem

- Supporting Payment Systems:** Immediate Payment Service (IMPS), National Electronic Funds Transfer (NEFT), Real-Time Gross Settlement (RTGS); Aadhaar Enabled Payment System (AePS); and Bharat Bill Payment System (BBPS) etc.
  - This multi-layered structure ensures flexibility and resilience.

### Impacts of India's Digital Payment Ecosystem

- Financial Inclusion and Accessibility:** Expansion of **bank accounts under PMJDY**; integration with **Aadhaar and mobile connectivity** and enabling access to digital payments even in rural areas.
  - It facilitates **Direct Benefit Transfers (DBT)** directly into bank accounts.
  - India's ecosystem is unique in combining **inclusion, technology and scale**.
- Convenience and Efficiency:** Instant, 24x7 transactions; reduced dependency on cash and physical banking; and lower transaction costs

- ◆ Digital payments improve **transaction efficiency and reduce time and operational costs**, benefiting both consumers and businesses.
- **Boost to Economic Growth:** Promotes **formalization of the economy**; increases **tax compliance and transparency**; and enhances **ease of doing business**.
  - ◆ Digital payments contribute to **economic development by improving financial flows and reducing leakages**.
- **Empowerment of Small Businesses and MSMEs:** Easy onboarding via QR codes and mobile apps; access to digital transaction history for **credit eligibility**; and increased participation in the formal economy.
- **Transparency and Reduction in Corruption:** Minimizes cash handling and informal transactions; creates **digital audit trails**; and reduces leakages in welfare schemes.
- **Digital Economy and Innovation Boost:** Growth of **FinTech ecosystem**; integration with e-commerce, gig economy, and services; and encourages innovation in payment solutions, credit delivery, and financial products.
- **Inclusion of Rural and Marginalized Sections:** UPI and Aadhaar-based payments enable access in remote areas; and bridges the **urban-rural divide**.
  - ◆ Digital payments have **significantly improved rural financial participation and service delivery**.
- **Global Leadership and Soft Power:** India leads in **real-time digital transactions globally**; and UPI is being exported internationally (cross-border payments).
  - ◆ Positions India as a **global model for digital public infrastructure**.

### Concerns and Issues in India's Digital Payment Ecosystem

- **Rising Cyber Fraud and Security Risks:** Sharp increase in **digital payment frauds**, especially UPI-related scams;
  - ◆ Growth of **Authorised Push Payment (APP) frauds** (social engineering)
  - ◆ Phishing, fake apps, identity theft;
  - ◆ Fraud cases increased from **0.26 million (2021) to 2.8 million (2025)**.
  - ◆ Annual fraud value exceeds **₹22,000 crore**.
  - ◆ Transactions above ₹10,000 contribute **about 98.5% of total fraud value**.
- **Data Privacy and Protection Concerns:** Risks of **data breaches and misuse of personal financial data**; inadequate awareness about data-sharing practices; and concerns around **Aadhaar linkage and surveillance**.
- **Digital Divide and Exclusion:** Limited access to smartphones, internet connectivity, and digital literacy; Rural and elderly populations face barriers.
  - ◆ Despite growth, **digital inequality continues to restrict inclusive adoption**.
- **Lack of Digital Literacy and Awareness:** Users often unaware of fraud risks, and safe digital practices leading to vulnerability to scams.
  - ◆ Low financial and digital literacy directly increases fraud susceptibility.
- **Infrastructure and Technical Issues:** Network failures and transaction delays; system outages due to high volume; and dependence on stable internet connectivity.
  - ◆ These issues affect **reliability and user experience**, especially in rural areas.
- **Regulatory and Institutional Challenges:** Coordination challenges between RBI; Banks; and FinTech companies.
  - ◆ Regulatory frameworks often **lag behind innovation**, creating gaps.
- **Overdependence on Technology:** System vulnerabilities to cyberattacks, technical failures, and risk of systemic disruption.
  - ◆ A highly digitized system increases **systemic risk if safeguards are weak**.

### Safeguarding India's Digital Payment Ecosystem

- **RBI's Payment Security Framework:** Mandatory **cybersecurity guidelines** for banks and payment operators; regular **audits, compliance checks, and risk assessments**; and strengthening of **data protection and fraud monitoring systems**.
- **RBI Discussion Paper on Fraud Prevention (2024–25):** Key proposals include:
  - ◆ **Cooling-off period** for high-value transactions;
  - ◆ **Additional authentication** (trusted person mechanism);
  - ◆ **Transaction caps for risky accounts**;
  - ◆ **Whitelisting of beneficiaries**;
- **Payments Vision 2025:** Focus on security and resilience, user protection, and technological innovation; to promote **safe, secure, and inclusive payment systems**.
- **AI-Based Fraud Detection:** Use of **machine learning and real-time analytics**; and behavioral monitoring to detect anomalies.
- **Tokenization and Encryption:** Card tokenization reduces exposure of sensitive data; and end-to-end encryption ensures secure transactions.
- **Real-Time Monitoring Systems:** Continuous transaction surveillance; and instant alerts for suspicious activities.
- **Regulatory Sandbox:** Allows testing of fintech innovations in a **controlled environment**; and balances innovation with consumer protection.
- **Strengthening Banking Infrastructure:** Investments in cybersecurity tools, fraud analytics, and incident response systems.
- **Consumer Protection Initiatives:**
  - ◆ **Zero Liability Protection:** Customers protected against unauthorized transactions (subject to conditions)
  - ◆ **Compensation Mechanisms:** RBI mandates **timely compensation for failed transactions and fraud cases**
  - ◆ **Grievance Redress Systems:** Ombudsman scheme, and faster dispute resolution frameworks.
- **Awareness and Digital Literacy Campaigns:**
  - ◆ **'RBI Kehta Hai' Campaign:** Educates users about safe digital practices.
  - ◆ **Cyber Awareness Initiatives:** Grassroots campaigns; and cyber volunteers and awareness drives.
- **Other Initiatives:**
  - ◆ **Central Bank Digital Currency (CBDC):** RBI's Digital Rupee aims to provide a **secure alternative to private digital payments**
  - ◆ **Strengthening Data Protection:** Emphasis on **privacy laws and data governance frameworks**
  - ◆ **Cross-Border Payment Security:** Secure integration of UPI with global systems

### Conclusion & Way Forward

- India has adopted a multi-layered strategy to safeguard its digital payment ecosystem, combining **regulation, technology, consumer protection, and awareness**.
- As fraud risks evolve, the focus must remain on **proactive, technology-driven, and user-centric safeguards** to ensure sustainable growth.
- A balanced approach combining **technology, regulation, and awareness** is essential to sustain UPI's growth while mitigating risk. These include:
  - ◆ **Targeted safeguards** instead of blanket restrictions
  - ◆ **Opt-out provisions** to preserve user autonomy
  - ◆ **Strengthened digital literacy programs**
  - ◆ **Enhanced institutional coordination** among banks, RBI, and law enforcement.

### Daily Mains Practice Question

[Q] India's digital payment ecosystem has achieved scale but faces rising security challenges. Discuss the growth of digital payments in India and evaluate the effectiveness of safety mechanisms.

Source: BS

