Payments Conference 2026

REWIRING PAYMENTS
OPEN. CONNECTED. INCLUSIVE.

SOUTH AFRICAN RESERVE BANK

A Conversation on

Lessons from BRICS
Insights from India



INDIA'S DIGITAL PAYMENTS TRANSFORMATION

From fragmented electronic capability to a national, interoperable digital payments ecosystem

FIRESIDE CHAT

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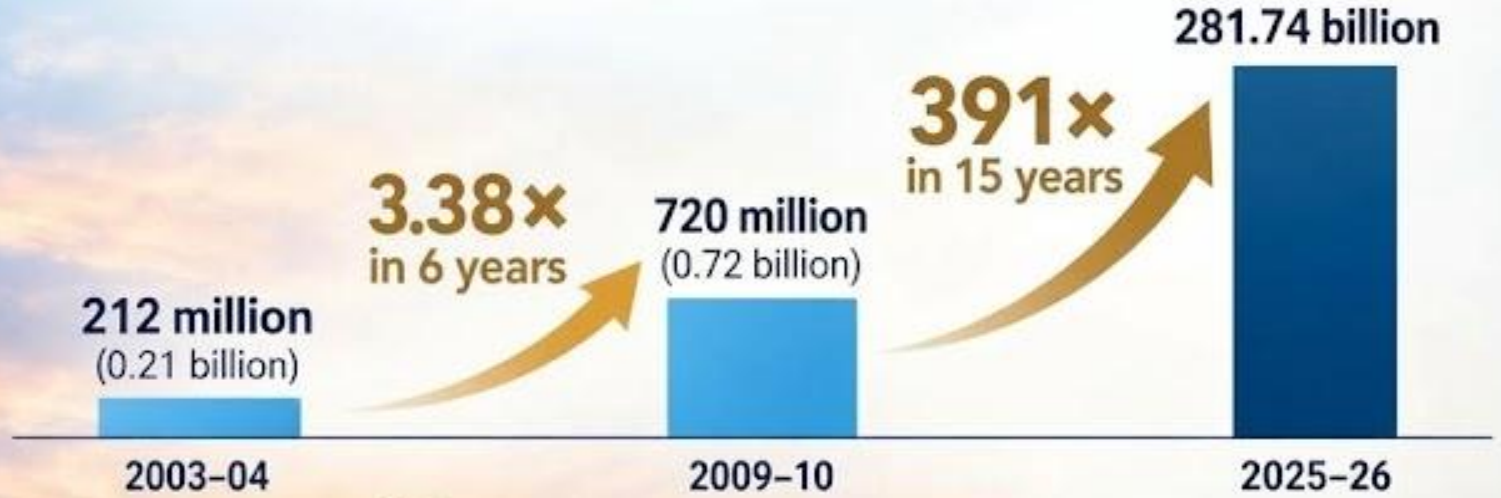
In conversation with

Ghita Erling
Former Chief Executive Officer,
Payments Association of South Africa

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INDIA'S DIGITAL PAYMENTS TRANSFORMATION

FROM 212 MILLION TO 281.74 BILLION TRANSACTIONS



2025-26: MAJOR RETAIL DIGITAL PAYMENTS

UPI	241.62 billion
NEFT	10.10 billion
PPI	9.87 billion
Cards	7.30 billion
IMPS	4.94 billion
APBS	3.39 billion
NACH Debit	2.16 billion
NACH Credit	1.83 billion

Selected major rails; total includes other systems.



From individual payment systems to **an interoperable digital payment ecosystem** at nation-wide scale

2003–04 | THE FIRST COMPREHENSIVE VIEW

India was still predominantly cheque-based, but electronic and card payments were already emerging.

2003–04

PAYMENT SYSTEM ACTIVITY

Cheque clearing	972.71m
EFT + SEFT	0.86m
ECS – Credit	20.32m
Credit cards	97.41m
Debit cards	86.38m

RTGS excluded*

* RTGS implemented on 26 March 2004; excluded from FY 2003–04.

2000 | THE SPARK

Citibank Global Transfers (CGT)

Launched by Citibank India in 2000 — one of the early real-time, online cross-border retail transfer systems.

Meeting SDG Goals of today then.

Came in 1996, to India in 2001.

A defining personal experience in designing and launching payment innovation. **It showed me what digital payments could become.**

2006 | THE PAPER

"Indian Payment Systems and Their Performance"

The Indian Banker • November 2006

01 **INNOVATION & CONVENIENCE**

National payments institution; nationwide electronic reach; ATM/kiosk transfers; 24×7 faster payments.

02 **INCENTIVES & COST REDUCTION**

Electronic cheaper than paper; differential pricing; promote e-channels; cost-based/non-profit clearing.

03 **LEGAL FRAMEWORK**

Settlement finality; payment-systems law; prompt credit & returns; accountability for delays.

04 **CONSOLIDATION & EFFICIENCY**

RTGS for wholesale; consolidate fragmented retail systems; NEFT for retail; deferred net settlement through RTGS.

Source: Reserve Bank of India, Annual Report 2003–04, Chapter XIII, Tables 13.1 & 13.2.

THE DIRECTION

NATIONAL + INTEROPERABLE + LOW-COST + DIGITAL

2003–2010 | BUILDING THE FOUNDATIONS

The architecture accumulated in layers — clearing, settlement, switching, identity and institutional capability.

01

RTGS + NEFT

RTGS began in 2003. EFT evolved through SEFT to NEFT, expanding electronic transfer reach.

02

ECS + CTS

Centralised/Regional ECS supported bulk payments. CTS began with a single MICR centre in Delhi.

03

Aadhaar + UIDAI

Digital identity created a new layer for inclusion and authentication.

04

NPCI + NFS + IMPS

NPCI was established; NFS moved to NPCI; IMPS was implemented on NFS infrastructure.

KEY POINT **India did not wait for a single "big bang". It kept adding interoperable building blocks to a common architecture.**

FOUNDATIONS — SETTLEMENT + CLEARING + SWITCHING + IDENTITY

2010–2016 | BUILDING THE ECOSYSTEM

India did not build one system. It built a portfolio — often reusing infrastructure that already worked.

01 **IMPS**

24×7 real-time A2A; built on NFS.

02 **CTS**

Cheque truncation expanded nationally.

03 **AePS**

Aadhaar + biometric last-mile access.

04 **RuPay**

Domestic card network..
Democratisaton of cards.

05 **APB + NACH**

DBT routing + national bulk clearing.

06 **NFS expansion**

Broader bank connectivity and shared switching.

A portfolio became more powerful than any single product: **NFS → IMPS →Aeps -> NACH → RuPay → UPI**

ECOSYSTEM INFRASTRUCTURE + ACCESS + ACCEPTANCE + PAYMENTS

2016 | WHY THE TIMING MATTERED

UPI was not the starting point. It arrived when the surrounding ecosystem had become ready.

01

PAYMENT INFRASTRUCTURE

NFS • IMPS • CTS • NACH • AePS • APB • RuPay • *99#

02

IDENTITY + ACCOUNTS

Aadhaar • PMJDY • DBT/APB • e-KYC

03

BANKING CAPABILITY

Banks substantially moving toward CBS and electronic/mobile channels.

04

MOBILE ENVIRONMENT

Rapid mobile penetration • smartphones • low-cost data • growing familiarity.

UPI

The convergence point of accumulated capabilities

WHY DID UPI SUCCEED?

It combined infrastructure, institutions, economics and user experience into one interoperable network.

01
EXISTING FOUNDATIONS
NFS → IMPS → UPI; national infrastructure and operational capability.

02
TRUST
Trusted institutions; bank-account based; banks at the core.

03
COMBINATORIAL INNOVATION
IMPS + APIs/SDKs + third-party initiation + QR codes.

04
FRUGALITY BY DESIGN
Reuse infrastructure; APIs; QR instead of expensive POS.
NPCI cost 10.2 paise/txn. Operational 5.35 paise /txn

05
INTEROPERABILITY + UX
One common rail; simple, real-time, mobile-first experience.

06
TAM/ NETWORK EFFECTS
Perceived usefulness, Perceived ease of use, TRUST
P2P + P2M + bills + collections + recurring payments.

07
LOW-COST ACCEPTANCE
QR and asset-light acceptance; zero MDR from 2020 accelerated adoption.

08
ADOPTION ACCELERATORS
Demonetisation 2016; COVID-19 2020; smartphones and affordable data.

THE LESSON
Scale came from the combination — not from one technology.

NOT TECHNOLOGY ALONE

Technology met circumstances. Institutions, policy, infrastructure, economics, people and timing were ready.

01 **INSTITUTIONS**

RBI • NPCI • banks • ecosystem, Fintechs

02 **POLICY**

Payment-system regulation • inclusion • Aadhaar • DBT

03 **INFRASTRUCTURE**

NFS → IMPS → NACH → RuPay → UPI

04 **ECONOMICS**

Frugal design • low-cost acceptance • zero MDR from 2020

05 **JAM, data costs**

- JANDHAN a/cs, AADHAAR, Mobiles
- affordable data

06 **TIMING**

Technology was not ahead of its time; the ecosystem had become ready.

VISIBLE PRODUCT **UPI** **← built on →** **THE ECOSYSTEM**

Infrastructure + institutions + policy + economics + JAM + Demonitisation

SOUTH AFRICA — DEMOGRAPHICS, INCLUSION & PAYMENT INFRASTRUCTURE

≈63.5m
TOTAL POPULATION

≈81%
FORMAL BANK ACCOUNT PENETRATION

The issue is not simply financial inclusion. It is how everyday, low-value payments are made.

DEBIT CARDS
25–28m
Meaningful penetration and usage

CREDIT CARDS
4.5–5m
Lower penetration; not the main opportunity

ACCEPTANCE
530k–550k POS
600k+ QR points

Existing infrastructure

CARDS @POS
≈6.0 billion txns

EFT Credit/Debits
≈2.0 billion txns

Payshap
≈0.5 billion txns

ATM Txns: ≈ 1.3 billion txns **CASH at POS Txns: ≈ 0.38 billion txns**

THE STRUCTURAL GAP

Debit cards are already used. But many frequent, low-value retail transactions remain cash-based — particularly in the informal and micro-merchant economy.

BRICS REAL-TIME PAYMENTS: SIMILAR TRAJECTORIES, DIFFERENT SCALES

Each system reached 1 billion transactions within around three years of launch, showing the power of interoperable, real-time, low-cost payments to drive rapid adoption.

INDIA
Unified Payments Interface (UPI)

UPI — UNIFIED PAYMENTS INTERFACE

Launched	1 billion transactions
April 2016	April 2018 (~2 years)

BRAZIL
Pix

pix — powered by Banco Central

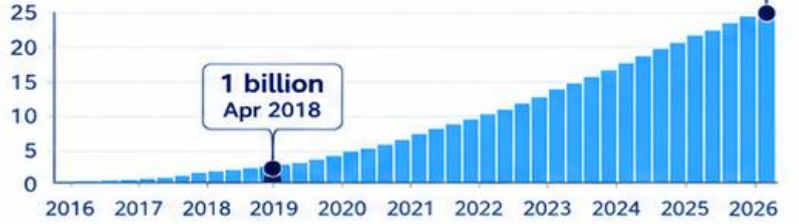
Launched	1 billion transactions
16 November 2020	March 2021 (~4.5 months)

SOUTH AFRICA
PayShap

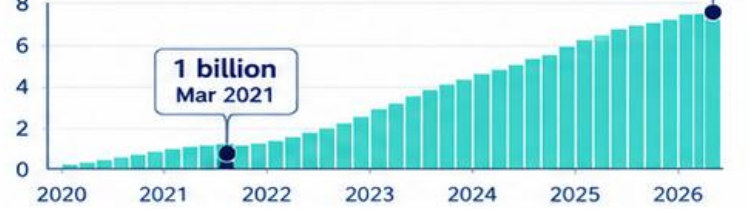
PayShap

Launched	1 billion transactions
13 March 2023	18 June 2026 (~3.25 years)

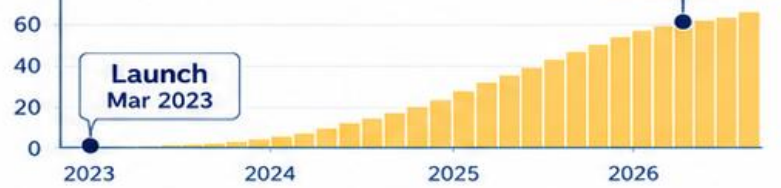
UPI MONTHLY TRANSACTIONS
(Billion)



PIX MONTHLY TRANSACTIONS
(Billion)



PAYSHAP MONTHLY TRANSACTIONS
(Million)



	INDIA	BRAZIL	SOUTH AFRICA
Population (2024)	1,408 million	213 million	61.9 million
Latest monthly transactions	24.1 billion (Sep 2026)	7.1 billion (Sep 2026)	60 million+ (Dec 2025)
Users / reach	~500+ million users (~35% of population)	170+ million individuals (~80% of population)	Growing rapidly (crossed 1 billion cumulative transactions)

Different markets. Similar early trajectories. A powerful validation of interoperable, real-time payments.

LESSONS FOR SOUTH AFRICA - specific

There is already uptake on fast payment, and cards ecosystem is also working well.

01 PRICE IT RIGHT

Sustainable economics without compromising adoption, simplicity or inclusion.

02 EXPAND ASSET-LIGHT ACCEPTANCE

Cards usage is good, with a strong acceptance ecosystem. Build on that foundation through interoperable QR and other low-cost acceptance models.

03 DEEPEN USE CASES & NETWORK EFFECTS

Move beyond P2P into P2M, bills, collections and other everyday payment use cases.

04 PRESERVE INTEROPERABILITY

Compete on customer experience while keeping the underlying payment infrastructure interoperable.

BUILD ON THE MOMENTUM — DON'T FRAGMENT IT.

THE DEEPER LESSON

Digital payments are a continuing transformation

A digital payments transformation is rarely about one payment product.

Consumers • Merchants • Banks • Fintechs • Regulators • Governments

There is no single, definitive solution.

Every successful resolution creates the next set of questions.

It is about building the conditions in which interoperable infrastructure, trusted institutions, simple user experiences and low-cost acceptance can scale together.

BUILD. LEARN. ADAPT.
RESOLVE THE NEXT PROBLEM. KEEP MOVING.

India's experience is a set of principles — not a template.

THANK YOU.

COMPARATIVE DIGITAL PAYMENT TRENDS: INDIA & SOUTH AFRICA (CPMI DATA SUMMARY)

5 Years Details

	TOTAL DIGITAL TRANSACTIONS (BILLIONS)		PER CAPITA DIGITAL TRANSACTIONS (TRANSACTIONS PER INHABITANT)	
	INDIA	SOUTH AFRICA	INDIA	SOUTH AFRICA
2020	~34.5B	~2.6B	~25	~44
2021	~45.8B	~2.8B	~33	~47
2022	~71.9B	~3.0B	~51	~50
2023	~113.8B	~3.3B	~81	~54
2024 Latest	~164.5B	~3.6B	~115+	~59

*Trend summary based on BIS CPMI Data and common trends. Precise annual variations may occur.

LESSONS FOR SOUTH AFRICA

The lesson is not “copy UPI”. It is to understand the principles behind the outcome.

01 **BUILD TRUSTED INSTITUTIONS**

Clear roles, credible governance and operational capability.

02 **BUILD SHARED INFRASTRUCTURE**

Common rails can lower duplication and enable scale. Economies of scale and scope.

03 **INTEROPERABILITY BY DESIGN**

Competition can happen at the interface while the rail remains common.

04 **ACCEPTANCE MATTERS**

Digital payments scale only when merchants can accept them simply and cheaply.

05 **SCALE INCREMENTALLY**

Build, reuse and extend proven capabilities rather than waiting for a perfect end-state.

06 **DESIGN FOR INCLUSION**

Infrastructure must work for the users and merchants who are hardest to reach.

CAUTION **Every country has its own legal, regulatory, market and digital context. Adapt the principles — do not copy the architecture.**