

# Payments Newsletter

**Trends in national payments rails**

September 2019



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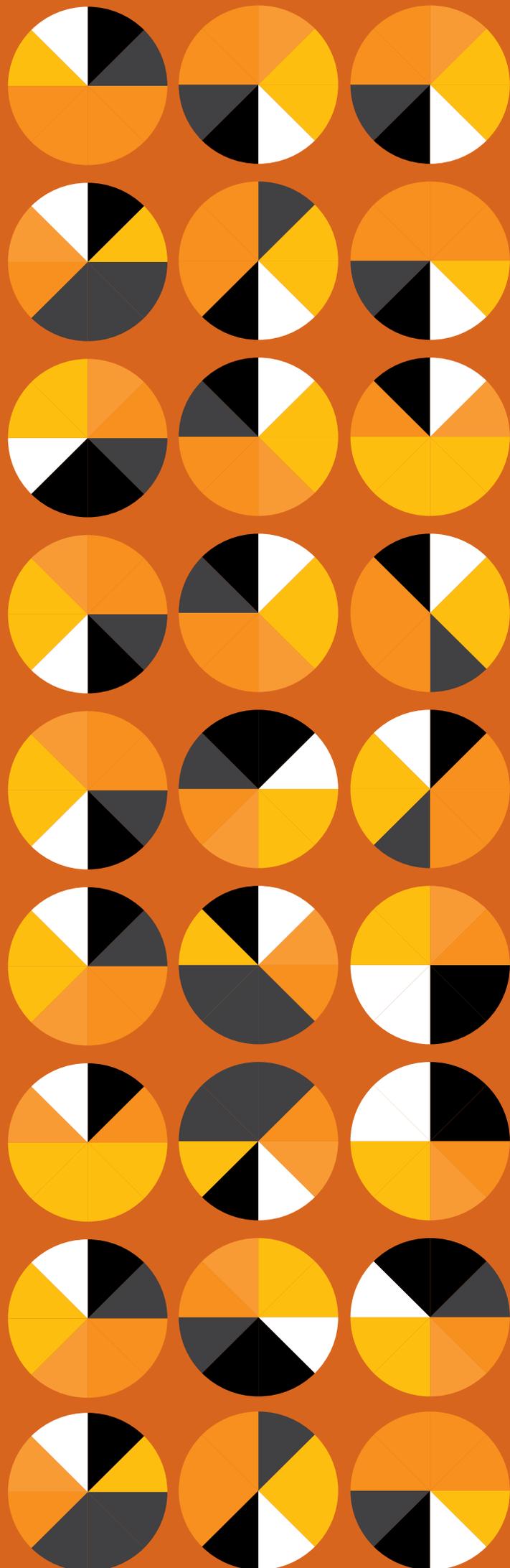
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## Foreword

Dear readers,

It is our pleasure to bring to you the latest edition of our payments newsletter in which we take a look at key trends shaping centralised payments infrastructure across the world. Payments technology is changing at an unprecedented pace and it is imperative for countries to transform their existing payments infrastructure or roll out new future-ready payments rails.

Faster payments or real-time payments have been a key focus area for many countries and central banks in the last few years. We discuss transformation projects undertaken by various central banks, key considerations for developing a robust national payment rail and possible trends that will enable faster adoption of digital payments.

We hope you find this newsletter to be an insightful read.

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# Introduction

Given the rapid pace of change in payments technology and evolving needs of citizens, countries and central banks around the world are undertaking steady transformation of national payments rails to make them future ready. Payments rails refer to platforms or networks that enable movement or transfer of funds from one party to another – domestic or cross-border. For instance, in India, the National Payments Corporation of India (NPCI) has payment products that cater to various use cases like National Automated Clearing House (NACH) for bulk clearing, cheque clearing through Cheque Truncation System (CTS), bill payments through Bharat Bill Payment System (BBPS), faster payments through Immediate Payment Service (IMPS) and Unified Payments Interface (UPI), and National Electronic Toll Collection (NETC) for e-toll payments.

**The objectives of transforming existing payments rails or creating new payments rails by central banks/ payments operators are:**

- Reduce reliance on cash
- Faster economic development
- Safety and security of the payments infrastructure
- Standardisation and unification of payments processing

Over 2008-12, Moody's Analytics conducted a study<sup>1</sup> covering 56 countries that contribute around 93% of the world's GDP. As per the study, greater usage of electronic payment products added USD 983 billion (in real terms) to GDP. The real GDP growth was 1.8%. Without increased card usage, the growth would have been 1.6%. The worldwide cost of handling cash exceeds USD 300 billion per year. Increased card usage has a positive impact as it reduces the cost of printing, handling cash, frauds, the informal economy, etc.<sup>2</sup>

There is huge potential for banks and non-banks to leverage the existing payments infrastructure and open

banking Application Programme Interface (APIs) to enable interoperability in faster payments.

In the last decade, major developments in national payments rails have been focused on faster payments systems (FPS). Countries that have implemented FPS are witnessing benefits like faster processing and clearing of funds in high-volume and low-value payments, convenient transfers via mobile number, email address or aliases, common standards that may result in lower processing fee, etc.

**Below are examples of ongoing/future projects undertaken by central banks:**

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- **Canada: Real-time rail (RTR)** scheduled to go live in 2021. The RTR will support ISO 20022 format, with functionalities to process low-value payments.
  - **European Central Bank: Target Instant Payments Platform (TIPS, 2018)**, which aims to provide pan-Europe instant payment and settlement services.
  - **Hong Kong: Faster Payments System (2018)**, which is a multi-currency service to allow customers to make retail payments and fund transfers 24/7 real time.
  - **Singapore: Fast and Secure Transfer (FAST, 2014)**, an electronic funds transfer service that enables customers of participating banks to transfer Singapore dollar funds from one bank to another in Singapore almost instantly.
  - **United Kingdom: New Payment Architecture (NPA)** scheduled to go live in 2021. NPA is a new architecture that will embrace competition, modularity and innovation while providing security, stability and resilience.
  - **Federal Reserve (United States): Fedpay** will be launched by 2023–24 to offer real-time payment services.

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1,2 <https://usa.visa.com/content/dam/VCOM/download/corporate/media/moodys-economy-white-paper-feb-2013.pdf>

Such initiatives of central banks are driven by various factors. Some of them are listed below:

### Speedy transfers with interoperability

1

Customer demand for quick payments is driving the need for improving speed of existing payment rails with real-time settlement. With availability of multiple payment channels, interoperability is an intrinsic need to further the cause of convenience by digital payments.

### Open/API banking

2

With emergence of non-banking entities like FinTech players and payment service providers, APIs have become the new norm for providing products and services in banking. It is imperative for national payment rails to make provisions for the utilisation of APIs. For instance, the introduction of PSD2 in EU with initiatives like open banking opened the doors for non-banking players to develop innovative payment products. Regulators across countries in the Asia Pacific are also formulating a policy on open/API banking like the Monetary Authority of Singapore (released API playbook) and Hong Kong Monetary Authority (released the API frame book).

### Strengthening of payments security

3

As the financial impact of payments fraud is significant, it is imperative that all steps that boost security and data privacy like use of EMV, biometrics, machine learning, DLT and real-time analytics are tested and rolled out by central banks.

### Emphasis on common standards

4

Establishing common standards has become a priority for regulators and is enabling richer data flows. ISO 20022/8583 is an important step towards richer data and international interoperability.

SEPA, SCTInst and Saudi Arabia RT-ACH are implementing ISO 20022. Also, the development of national rails may reduce the dependency of entrenched overseas entities in the ecosystem and encourage indigenous players to build new products which may have benefits like reduction in transaction processing cost, storage of data storage in home country, among others.

#### Australia: Focus on New Payments Platform (NPP)

- In 2012, the Reserve Bank of Australia (RBA) highlighted the need for a payments platform that could provide real-time payments at any hour with each transaction.
- In Feb 2018, the RBA launched the NPP which is open access infrastructure for fast payments in Australia, providing 24x7 fast payments.
- The NPP 'Overlay Service' feature allows for additional functionality, or schemes, to be launched on the infrastructure.
- To remove settlement risk, each participant maintains a pool of funds at the central bank.
- In Feb 2018, NPP clocked 200 million monthly transactions with a total value of AUD 0.2 million. In Dec 2018, the numbers were 11,600 million transactions worth AUD 13.4 million.<sup>3</sup>



<sup>3</sup> <http://www.theasianbanker.com/updates-and-articles/australia%E2%80%99s-national-payments-platform-npp-expected-to-surpass-74-million-transaction-by-end-of-2018>

# Key considerations

While there is a focus on the development of national payments rails by various countries, there are a few strategic decisions that the central bank needs to take for such big transformational projects:

## 1. Procure a new platform or enhance the existing platform

The total cost of ownership (TCO) comprising initial investment, operating costs, cost of support, change management complexities and monetary business benefits needs to be considered. Over the last 10 years, more than 80% of central banks have built new platforms – for instance, STET in France has built a modern modular clearing settlement mechanism (CSM) for European operations. In India, the UPI system has been built on the existing IMPS infrastructure of NPCI.

## 2. Modular infrastructure

Central banks can utilise open APIs to enable a 'platform for innovation'. They can consider having modular infrastructure to stimulate competition as components can be delivered by different service providers.

They can also look at building value-added services (VAS) and other allied functionalities as an added feature in payments rails subsequently. A few such functionalities could be near real-time fraud monitoring to alert partners in case of any anomaly, analytical dashboards, among others.

To cater to the challenges of rising payment volumes and tougher customer demands, financial institutions are moving towards payment service hubs. A payment service hub helps in achieving a fully unified banking platform. With payment hubs, financial institutions are developing the ability to manage multiple payments rails across any customer type, scheme, instrument, channel, etc., over a single platform.

## 3. Integrated wholesale and retail system

Central banks are already taking multi-year initiatives to implement FPS and developing countries have ramped up efforts significantly. In a few countries,

high-value transactions are processed and settled through Automated Clearing House (ACH). These countries may look at having separate system for FPS/RTGS and ACH payments with a different transaction limit and settlement cycle.

For example, Australia has implemented a Fast Settlement Service (FSS) that operates in conjunction with the RITS (RTGS) and New Payments Platform to deliver high-volume and low-value payments rails.

## 4. Cross-border instant payments

The implementation of cross-border payments is always a challenge considering 150+ currencies with different central bank regulations. However, aided by new age technologies and partnerships with service providers and Financial Institutions (FIs), standardised instant cross-border payments are now in focus.

The pain points which FinTechs and other new age institutions are trying to address are foreign exchange fees, different risk mitigation process and settlement in different currencies. The extension of domestic national payment rails for processing international transactions offers exciting opportunities.<sup>4</sup>

### SWIFT Global Payments Innovation (GPI)

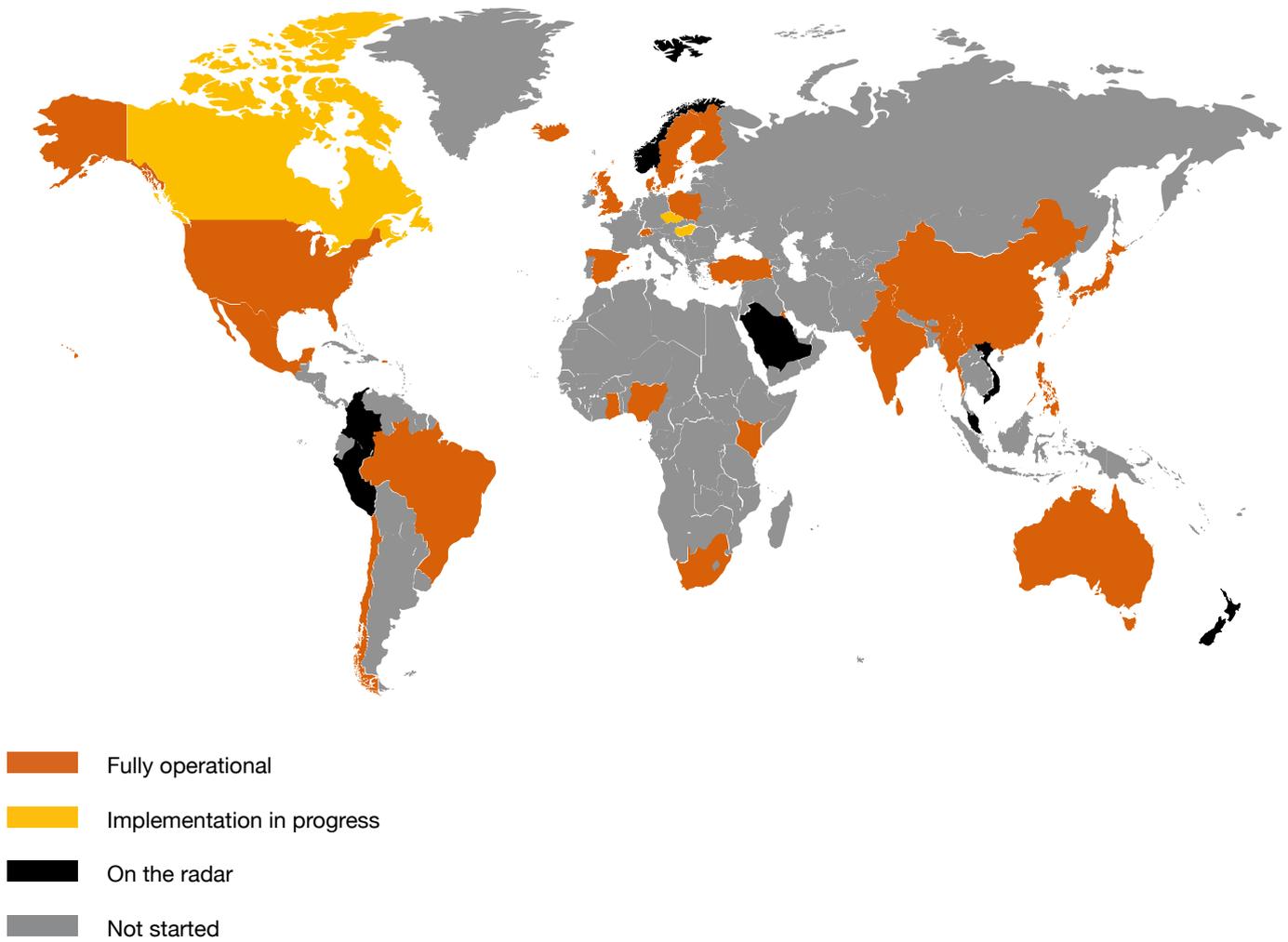
SWIFT has implemented and tested (GPI instant in seven countries (Australia, China, Canada, Luxembourg, the Netherlands, Singapore and Thailand).

It has linked the domestic faster payments system in these countries to GPI to speed up cross-border instant payments.

<sup>4</sup> <https://www.mckinsey.com/~/media/McKinsey/Industries/Financial%20Services/Our%20Insights/A%20vision%20for%20the%20future%20of%20cross%20border%20payments%20final/A-vision-for-the-future-of-cross-border-payments-web-final.ashx>

The illustration below captures the status of implementation of FPS across multiple countries:<sup>5</sup>

### Global overview of FPS implementation status



<sup>5</sup> <http://empower1.fisglobal.com/rs/650-KGE-239/images/FLAVOR-OF-FAST-Report-2018.pdf>

# Way forward

Countries around the world are making efforts to understand the best practices for national payments system modernisation. Countries like India, China, and Russia have built a self-owned domestic card scheme to encourage digital payments. A few areas which offer exciting opportunities include enablement of bill payments across various acceptance modes such as BBPS, cross-border multi-country payments such as SEPA, standardised rails for enabling micro-payments at POS. The following are a few key enablers for building successful and robust national rails:

## 1. Trade-off between security and convenience to boost digital adoption

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Regulators must strike a balance between robust security/authentication protocols and a desire for frictionless (and even invisible) consumer interfaces. Insufficient security measures endanger the integrity of the ecosystem; however, excessive measures risk stifling innovation and reducing uptake. As an instance of a trade-off, the RBI decided to allow transactions which are less than INR 2,000 in value to be authenticated without two-factor authentication, i.e. without PIN.

## 2. Explore use of innovative technology

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While innovative technology such as Distributed Ledger Technology (DLT) is still maturing, central banks/ infrastructure providers should focus on enabling their systems to interface with this technology. DLT enables verification of payments to be decentralised, removing the need for a third party. The possibility of using DLT to synchronise cross-border transactions in real time with other central banks should be explored.

Bank of Canada and Central Bank of China are currently exploring options to replace a message-based digital ledger with an encapsulated secure token.

## 3. Setting up a regulatory sandbox to support innovation

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Central banks are setting up a sandbox where FinTechs can test their applications before introducing them to customers. Generally, regulators encourage such solutions, which highlight gaps in the existing financial system and have the capability to address such gaps. Countries like Brazil, the UAE, Kenya, and Australia have set up a regulatory sandbox to encourage innovation.

# Payment technology updates

## The next evolution in commerce: Invisible payments

pymnts.com

Consumers' adoption of mobile payments has lagged analysts' projections in the US. A survey conducted by the Board of Governors of the Federal Reserve System in March 2013 found that only 15% of the respondents had made mobile payments.

[\(Read more.\)](#)

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## MasterCard: Invisible payments power mobility as a service

pymnts.com

In a recent discussion with Karen Webster, Will Judge, head of Urban Mobility at MasterCard, explained MasterCard's view of the Mobility as a Service concept, why it will become integral to the smart city of the future and how MasterCard is lining up its pieces to become a pioneer in this emerging space.

[\(Read more.\)](#)

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## Can less digital security actually be more secure?

pymnts.com

The article relates to the different parameters which has added to the authentication for secure transactions.

[\(Read more.\)](#)

## Walmart files patent application effectively new mobile payments tool in a crypto coin

paymentweek.com

Retail giant Walmart has applied for a cryptocurrency patent that bears some similarities to the Libra token proposed by Facebook in mid-June.

[\(Read more.\)](#)

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## Fed to launch real-time payment and settlement service

financialregnews.com

The Federal Reserve announced that they are working on a real-time payments system and would be called as FedNow.

[\(Read more.\)](#)

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## Mastercard acquires Nets account-to-account payments business

finextra.com

Mastercard has acquired the clearing and instant payment services, and e-billing solutions of Nets' Corporate Services business for US \$ 3.2 billion.

[\(Read more.\)](#)



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