

# Instant Payments: Driving Economic Progress and Digital Payment Access

Best Practices in Scheme Design, Implementation and Adoption



Treasury and Trade Solutions



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# Introduction

Humans have transacted for many thousands of years: commerce most likely began with a bartering system, where consumers exchanged goods for goods. The advent of metal coins millennia ago and paper money centuries ago began a transformation that is still ongoing. The invention of the credit card in the 1950s helped pave the way for electronic payments; the creation of the internet and the boom in eCommerce in recent decades has turbocharged this trend.

> Now, there is a widespread drive to minimize the use of cash and move towards a wholly electronic world. Today's focus is on payment facilitators - such as PayPal - escrow payments, one-click payments, and e-wallets. Instant payments are a key development in this new world.

Instant payments are made via dedicated schemes that are usually operated by established clearing systems. Their crucial feature, as the name suggests, is near real-time availability of funds to the beneficiary. Instant payments offer enormous potential benefits to all. However, as with other payment methods, it is imperative to align implementation strategies across the financial industry in an effort to facilitate streamlined consumer to consumer, consumer to business, and business to business transactions.

The payments industry is responding to the evolution of payment methods and working to help businesses, consumers, and financial institutions find ways to engage with one another faster, at lower cost, in greater safety and more effectively. The opportunities presented by new payment methods, including instant payments, means that competition between financial institutions (and new entrants such as fintechs) is intense.

Citi's global payments business maintains over 200 financial market infrastructure membership connections, approximately 30 of which are IP schemes. The depth of our global presence provides a wide landscape across which we can assist our clients. As importantly, it gives us a unique ability to identify characteristics of best-in-class schemes. By leveraging our experience across these schemes, we can share our view of practices that we believe should be replicated across the payments industry, thereby enabling effective local, global, and cross-border engagement.

This paper will be the first in a series where Citi - leveraging our substantial global footprint and broad experience with instant payments schemes around the world - explores instant payment best practices, messaging standards and rulebook creation.

# Why Instant Payment Schemes are Important

## The Rise of Instant Payments

Instant payment (IP) schemes are fast developing in many countries around the world. These schemes enable consumers and businesses to send and receive payments 24\*7 with near real-time availability of funds for the beneficiary. There are currently over 50 IP schemes live, encompassing countries that represent approximately 85% of the world's GDP; many more are under development.



The rapid growth of IP schemes globally is attributable to the many benefits they offer to individual consumers, businesses, and governments.

While IP schemes have predominantly developed as domestic payments infrastructure, we believe they could be a key enabler of lower friction crossborder payments as well. The Financial Stability Board (FSB) notes that there are currently four specific challenges in cross-border payments: high costs, slow speeds, limited access, and insufficient transparency. The intrinsic immediate nature of instant payments coupled with 24\*7 operating hours, and extremely high straight through processing (STP) rates makes them a potential contributor to the FSB's Enhancing Cross-Border Payments Roadmap - they reduce friction and improve inclusivity in relation to cross-border transactions in markets which allow for international flows. While common offerings are still forming, ensuring industry alignment and collaboration when IP schemes are introduced not only addresses the challenges noted by the FSB, but also drives a broader cross-border vision that should allow for potentially flawless execution among all relevant actors.

## Key Benefits of Instant Payments



Customers

For

- \*24/7 Availability
- Real-time funds availability to payee
- Real-time information for payers on transaction status
- Enhanced information provides better reconciliation
- Real-time transaction funding
- Request to Pay provides an alternative to Credit Cards
- Ease of digital execution particularly with mobile phones



- Creates financial system innovation and stability
- Improves in financial inclusion and bancarization

## For Business and Governments (In addition to above)

- Increase in taxation and control when digitizing more financial transactions (moving away from cash only)
- Companies and individuals will benefit from cheaper transaction costs which could cascade to supplier and consumers generating economic growth
- Modernization of the country Payments infrastructure

#### **Financial Inclusion**

In addition to the technical benefits, we see IP schemes as a key enabler of economic progress and financial inclusion in the markets where they operate. Many low to moderate income consumers are heavily reliant on cash as a primary payment method and do not have access to a traditional bank account, particularly in emerging markets. India, for example, has a population of approximately 1.4 billion people with only 50 million credit card holders. These consumers are forced into a cash economy with inconvenient, costly, and time-consuming financial solutions, and are at risk of getting left behind given their inability to access the digital financial system.

Traditionally, cash has been the predominant payment method within emerging economies. Cash allows workers and small merchants to receive their payments immediately and without the fees and wait periods of traditional payments. It is easily accessible to cohorts of society that may not have a bank account or are self-employed. The direct cost of holding cash is low for consumers if the cash is left in a bank. However, if consumers hold physical cash, there is the potential for theft; about \$500 million in cash is stolen each year in the U.S. alone. In addition, holding physical cash results in forfeited interest compared with having the money in the banking system. The Federal Reserve's general deposit rate in the U.S. in 2017 was between 0.5% to 1%. Considering possible theft and foregone interest, physical cash sitting in a dresser drawer or under a mattress costs 0.25% every year.<sup>1</sup>



In Latin America, there are over 120 million people who are considered unbanked or underbanked and do not have access to a debit card, credit card, or bank account. While consumers may by choice or by circumstance be excluded from the financial banking structure, their money movements contribute to the economy. A study conducted in Brazil in 2017 found that while 70% of the population was bancarized (i.e., has access to formal financial services), 49% said they did not trust banks and 31% did not believe they had enough money to maintain a bank account - this group of consumers contributed nearly \$204 billion to the country's economy annually.<sup>2</sup> PIX, the Brazilian Central Bank's IP scheme rolled out in November 2020, aims to incorporate these consumers into the financial system. In March 2021, after only five months live, 394 million PIX transactions had taken place, 64% of which were attributable to P2P transactions.<sup>3</sup>

While the road to complete financial inclusion may be long, instant payments have an important role to play in the journey. They have some cash payment characteristics, including facilitating time-sensitive payments, such as bill or person-to-person payments that do not require the end user to maintain a bank account. IP schemes that utilize technology such as QR codes (leveraging smartphones) offer similar cash-like benefits but in a safer, more controlled way. Such schemes allow for faster and safer transactions and also offer the potential to increase sales and productivity for corporates, which can be hindered by the use of cash.

While the road to complete financial inclusion may be long, instant payments have an important role to play in the journey.

<sup>2</sup> https://business.ebanx.com/en/resources/payments-explained/pix-instant-payment-system <sup>3</sup> https://www.bcb.gov.br/en/financialstability/pixstatistics

## Successful Use Cases

Use cases are one of the best ways to develop a framework for industry alignment.

#### India

India's Unified Payment Interface (UPI), which launched in 2016, remains at the frontier of IP schemes and is one of the few domestic schemes that can process payments from abroad. UPI was among the first scheme to give customers the flexibility to select between phone numbers, account numbers and domainbased aliases (e.g., user@bank) as a form of identification for purposes of receiving payments.<sup>4</sup> One of the most notable features of UPI – and the feature that has driven tech companies like Google to champion UPI's design – is that it separates customer experience from account ownership. Customers can use the app of any bank or non-bank to initiate a UPI-based payment, regardless of which institution holds their account. Even fintechs that do not directly participate in UPI (e.g., Google Pay) can access UPI indirectly through a participant. This works through a set of APIs that link user interfaces and players. The APIs provided by UPI enable two entities to execute a payments transaction by exchanging the bare minimum amount of information required.<sup>5</sup>

UPI facilitates immediate money transfer through pull and push payments, merchant payments, utility bill payments, and QR code (scan and pay)-based payments.<sup>6</sup> One example of this is through Request to Pay (R2P) which allows clients to send a request for payment to the party initiating payment. Once this request is accepted by that party, an Instant Payment is initiated from their account, including all details provided in the original request. Unlike Direct Debits, a Request to Pay relies on the one-off payment authorization and does not require a mandate to be set up upfront. Once approved by the party initiating the payment, it is typically irrevocable. Enabling online payments and collections Real time and 24\*7. Instant collection solutions like Request to Pay can provide merchants a cheaper alternative to cards.



Its diverse set of options in conjunction with its flexibility and open innovation has helped drive usage and financial inclusion in the Indian market. With over 2 billion transactions in February 2021 alone, UPI marked a year-on-year growth of over 70% in transaction volume.<sup>7</sup> Much of the volume is attributed to those segments of the Indian population who were previously unbanked and underbanked.

The structure of UPI sets an industry standard to create IP schemes that do not restrict how consumers move their money and which facilitates collaboration across the industry.

- <sup>4</sup> https://www.cgap.org/blog/comparing-indias-upi-and-brazils-new-instant-payment-system-pix
- <sup>5</sup> https://medium.com/wharton-fintech/your-guide-to-upi-the-worlds-most-advanced-payments-system-b4e0b372bf0b
- <sup>6</sup> Reserve Bank of India, https://www.bis.org/cpmi/publ/d191.pdf
- <sup>7</sup> https://www.statista.com/statistics/1034443/india-upi-usage-by-platform/

#### Thailand

Thailand's IP system, PromptPay, was launched in 2016 by the National ITMX as part of its national e-payment initiative. First designed to deliver government welfare, it has since expanded to individuals and businesses.

National ITMX, which is co-owned by Thailand's largest commercial banks and governed by the Central Bank of Thailand (BOT), is responsible for developing and delivering Thailand's digital payments infrastructure, including card-based, non-card-based, and account-to-account payments. ACI Worldwide's real-time payments solution has been successfully implemented across all 33 ITMX member banks, bridging the ISO 20022 and existing ISO 8583 standards.<sup>8</sup> ACI High Value and Low Value Real-Time Payments promise to drive further growth with ISO 20022-compliant bulk processing, enhancing the existing real-time payments infrastructure and enabling new use cases such as B2B payments.



# *Thailand's IP system, PromptPay, was launched in 2016 by the National ITMX as part of its national e-payment initiative.*

The service can be used across a variety of different channels including ATMs, bank counters, mobile banking, internet banking and other payment apps. It requires users to link their bank account with a mobile number, email address, eWallet ID or national ID number, after which they can conduct immediate fund transfers and make payments at merchants with the security of not having to divulge their bank account details.<sup>9</sup>

The proportion of real-time, digital payments in Thailand is expected to rise from 13.3% in 2020 to 30.1% by 2025, primarily taking market share from paper-based payments that currently account for 60.1% of all transactions. Real-time payments' share of non-paper-based digital transactions is anticipated to rise from three in 10 to more than four in 10 over the next five years, spurred by high mobile wallet usage (84% of adults in the past year).<sup>10</sup>

PromptPay is an example of how banks can work closely with scheme makers and governments to provide an efficient service for consumers.

<sup>&</sup>lt;sup>8</sup> https://investor.aciworldwide.com/news-releases/news-release-details/aci-worldwide-powers-real-time-payments-growth-thailands#:~:text=and%20Exchange%20(ITMX)-,ACI%20Worldwide%20Powers%20Real%2DTime%20Payments%20Growth%20for%20Thailand's%20National,Transaction%20Management%20and%20Exchange%20(ITMX)&text=ACI's%20real%2Dtime%20payments%20solution%20has%20been%20successfully%20implemented%20 across,the%20existing%20IS0%208583%20standard.

<sup>&</sup>lt;sup>9</sup> https://go.aciworldwide.com/rs/030-ROK-804/images/ACI\_Prime\_Time\_for\_Real-Time\_Report.pdf

<sup>&</sup>lt;sup>10</sup> https://www.businesswire.com/news/home/20210202006085/en/ACI-Worldwide-Powers-Real-Time-Payments-Growth-for-Thailand%E2%80%99s-National-Interbank-and-Transaction-Management-and-Exchange-ITMX

## Key Standards and an Aligned Industry Approach

Governments and scheme makers keen to gain the financial and social benefits of IP schemes must decide on the preliminary features of the scheme, the desired functionality, and outline a roadmap for future enhancements and services. It is also important to establish a cohesive market-based strategy for commercialization and utilization in order to help ensure efficiency. For example, in the event that a market has more than one scheme, the use cases should be clear and defined for each, so that confusion and competition does not impede adoption. As new schemes are looking to go live and existing schemes seek to add value to their offering by upgrading their standards to ISO 20022 or creating new features, it is beneficial for scheme owners to review best practices from successful schemes around the world. There is a large collective industry experience, and we are hopeful that by sharing best practices, schemes can align key standards and create additional global value.

Tackling challenges as a collective will be equally as important as solidifying a set of industry key standards. For many organizations, the move to real-time payments involves a broader update to legacy infrastructures that may not be ready for increased volumes and real-time transactions. Although such upgrades may have upfront costs, if they are implemented correctly, they may lower operating expenses in the long run due to efficiency gains and reduction in the total cost of ownership. This itself can be an incentive for many banks to make the shift to real time.<sup>11</sup>

"https://www.vocalink.com/news-insights/research-reports-white-papers/financial-inclusion-accelerated/



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# Key Characteristics of a "Best in Class" Instant Payments Scheme

While the mechanics of instant payments are fairly standardized, to become the go-to payment method, all actors must agree on the focus areas most critical to strategy alignment and industry harmonization. Our experience has shown that there are four foundational elements of a "best in class" scheme:

- 1. 24\*7 scheme and processing availability
- 2. Speed of processing
- 3. Global harmonization of standards: including aligning to global ISO 20022 standards and, where applicable new capabilities that allow for one-leg-out transactions like gpi Instant
- 4. Transaction limits

Aligning governments, financial institutions (FIs), and businesses across these four areas aids adoption of instant payments by consumers, increasing financial inclusion in the digital payments space, and driving economic progress globally.

IP scheme flows operate in a standard way, as shown by the diagram below:



#### 24\*7 Scheme and Processing Availability

Until recently, sending money via domestic ACH systems could take up to three days and was subject to operational banking hours. This is a common factor in deterring people who are unbanked and underbanked from participating in the financial system. Best in Class IP schemes allow for the transfer and receipt of funds to occur 24\*7. For example, participants can send and receive money during a night out at 2:00am, send funds to a car service at 10:00am on a banking holiday, or accept payment for groceries at the local market on Sunday.

24\*7 processing availability is one of the key standards inherent to instant payments' value proposition and is accepted as a prerequisite across the industry. However, while a standardized feature of instant payments, it is not without its challenges. The technical architecture required to send and process instant payments in real time is quite different from the existing infrastructure as system performance, availability and scalability are critical characteristics for the smooth operation of a 24\*7 service.<sup>12</sup>

To adequately service participants transacting outside of typical payment system operating hours, governments, scheme makers, and businesses need to ensure effective service capabilities. Sufficient service capabilities may require additional upfront investment, but will yield benefits to the consumer, which will help ensure frictionless engagement. All actors should prioritize necessary investment in 24\*7 is aligned processing to guarantee the experience is aligned with the expectations and need of consumers.

#### Speed of processing

Technological advancements in mobile technology and high-speed internet networks have changed the way consumers interact with services and are fueling the demand for faster interbank systems.<sup>13</sup> Instant payments exemplify this trend: by definition, they must be processed rapidly.

Most IP schemes process and settle payments in less than 20 seconds – some schemes operating on new infrastructure process transactions in just 10 seconds. Financial and government entities in countries that do not have real-time rails can also use Application Programming Interface (APIs) to boost payment speeds.<sup>14</sup> While it is important that the speed of instant payments is attractive for eCommerce flows, from an industry perspective it is essential that speeds do not vary considerably in order to avoid putting additional stress on global systems.

One of the biggest challenges to the speed of processing is the general scalability of IP schemes. Increasingly, as instant payments become more widespread, we are seeing schemes hit transaction per second (TPS) limits, leading to transaction drop offs that affect an FI's daily activity. Some markets do not allow file-based payments during peak hours and limits the number of TPS during non-peak hours. As a collective, the industry must manage a scheme's scalability before it reaches a ceiling where it cannot "compete with businesses like Visa, which handles an average of 150 million transactions every day or around 1,736 TPS."<sup>15</sup>

Additionally, it is preferable that the clock begins ticking on the transaction at the moment it is fully processed by the client and bank (including any applicable internal reviews). For incoming payment SLAs, schemes should provide adequate options for banks to ensure compliance with regulatory requirements. Aligning on these points allows all actors to package instant payments in a way that is beneficial to all users.

#### Global Harmonization of Standards Convergence to ISO 20022 message format

Instant payments tend to have richer data standards than standard payment instruments as most conform with the ISO 20022 payment format and global conventions. ISO 20022 was developed by the International Organization for Standardization (ISO), an independent, non-governmental standard-setting body. The ISO 20022 payment message is a flexible XML structured message format used for transferring financial information between FIs to process payment. It enables interoperable communications between financial institutions, their market infrastructures, and their end-user communities and incorporates

<sup>&</sup>lt;sup>12</sup> https://www.ncr.com/content/dam/ncrcom/content-type/brochures/230318\_FIN\_Real-time-Payment\_bro\_web.pdf

<sup>&</sup>lt;sup>13</sup> https://www.ncr.com/content/dam/ncrcom/content-type/brochures/230318\_FIN\_Real-time-Payment\_bro\_web.pdf

<sup>&</sup>lt;sup>14</sup> https://www.pymnts.com/news/faster-payments/2019/how-apis-help-drive-faster-payments/

 $<sup>^{15}</sup> https://towardsdatascience.com/the-blockchain-scalability-problem-the-race-for-visa-like-transaction-speed-5cce48f9d44$ 

highly structured data sets that increase machine readability and enable faster, more effective transactions. While ISO XML provides for structured data, it does not require it, creating opportunities for migration, but challenges to move to a richer, better handling of data.

As an industry, we need to ensure that schemes are built to be compatible with the Cross-border Payments and Reporting Plus (CBPR+) High Value Payments Plus (HVPS+), or Instant Payment Plus (IP+) ISO standards. This will ensure that if a payment originates as a cross-border transaction after the SWIFT ISO migration, as long as it ends in a domestic instant payments infrastructure, it will be fully compatible.

# SWIFT gpi Instant will make it easier for banks to participate in the crossborder instant space by establishing a standard format for banks to exchange cross-border flows with domestic payment infrastructures.

Some domestic schemes have insufficient fields or space to allow for information carried in cross-border payments (i.e., information on ultimate debtor and creditor). This results in truncation or loss of data, which has both practical and regulatory consequences. Additionally, schemes not built for cross-border legs may need to redesign fields to include identifiers for cross-border transactions within payment messages, as cross-border transactions require a different level of screening/compliance monitoring than domestic transactions. It is best to incorporate such requirements upfront rather than trying to redesign infrastructure after going live in order to increase field length, add additional fields, or change compliance requirements. Changes to existing infrastructures typically place a greater burden on banks that participate in a scheme.

#### For Consideration: SWIFT gpi Instant

In 2020, SWIFT extended its global payments innovation (gpi) initiative to link cross-border payments on the SWIFT network with instant payment infrastructures. The SWIFT gpi Instant payments service is designed to provide a cross-border instant payments experience, connecting international and domestic instant payment systems.<sup>16</sup> gpi Instant offers a globally scalable model to define the standards and rules to integrate gpi flows onward and inward via domestic IP schemes globally. Based on the interbank clearing model for settlement, gpi Instant incorporates gpi tracking, SLAs and rulebooks to create a consistent and standardized cross-border instant experience into participating markets. SWIFT gpi Instant is currently live in the UK with the Faster Payments Scheme and in India with IMPS. We see this service as being a key enabler of consistency in standards and approaches across IP schemes. It also helps ensure that end users have a consistent experience across infrastructures, including the incorporation of gpi tracking for confirmation of credit to the end beneficiary.

SWIFT gpi Instant can make it easier for banks to participate in the cross-border instant space by establishing a standard format to exchange cross-border flows across domestic payment infrastructures. It relies on the current intrabank clearing model for payments settlement, rather than providing direct access and connectivity to domestic IP schemes.

#### **Transaction Limits**

Standardizing transaction limits across different IP schemes is extremely challenging. Countries often introduce a new scheme with a low transaction limit, typically around \$250,000, although some schemes have significantly more modest limits. This provides time for the schemes and participants to adapt to the new offering. As the offering becomes more mature, schemes raise the limit, with \$1 million being a typical amount, although some schemes have removed the transaction limit altogether. For example, The Clearing House's RTP network has a transaction limit of \$100,000, whereas UK's Faster Payments scheme's limit is £250,000.<sup>17,18</sup>

There is a difference between a threshold set by the IP scheme and a threshold set by the operator of a scheme. TARGET Instant Payments System (TIPS) has no upper limit for payments unless participants agree to individual thresholds. EBA Clearing, which operates the RT1 infrastructure, increased its SEPA Credit Transfer limit from €15,000 to €100,000 in July 2020 but also allows participants to agree to a higher threshold. Domestic thresholds will typically differ per scheme, which is addressed by gpi Instant via an annex to its rulebook per country.<sup>19</sup>

The wide range of transaction limits presents an imbalance in the instant payments space, making it difficult to standardize client experience and enable FIs to manage liquidity. Managing intraday liquidity in real time, specifically after operational banking hours, is tricky with instant payments. Intraday liquidity is managed during the day via monitoring tools, bank treasury teams making adjustments as necessary. However, when managing liquidity outside of operational banking hours, these teams must either tap the pre-funded Central Bank account during off-hours or create a prediction model to optimize clearing and settlement 24\*7. As IP schemes are relatively new, creating an accurate prediction model is complex.

To mitigate against the potential effects of varied transaction limits, coupled with the inherent 24\*7 functionality of instant payments, all actors must collaborate, share successful use cases, and learn from the missteps of previous schemes so as to provide a standard level of service for all clients.

#### Standardization Checklist

Although the previously mentioned four focus areas are most critical to the success of instant payment schemes, there are additional ancillary standards that will need to be addressed to further aid instant payment implementation and transparency within cross-border transactions. These are listed below:

Key Standard Checklist	Considerations for Scheme Rules
Beneficiary Customer Statements	<ul> <li>Details of the credit/debit to the beneficiary customer's account should be applied to the account statement.</li> </ul>
	<ul> <li>Valuable details to include: the date of posting, amount and the statement entry reference for the beneficiary (if supplied).</li> </ul>
	<ul> <li>The provision of additional information (e.g., extended reference or remittance data and currency conversion information if provided), delivery method and timing should be standardized.</li> </ul>
	<ul> <li>Where information is provided electronically, allow the inclusion of additional information.</li> </ul>
	<ul> <li>Where additional customer information is included, the account servicing institution should be able to provide it to their customer proactively.</li> </ul>
	<ul> <li>Inclusion of the unique transaction reference should be mandatory in all reporting.</li> </ul>

<sup>17</sup> https://www.theclearinghouse.org/payment-systems/rtp/institution

<sup>19</sup> https://www.europeanpaymentscouncil.eu/news-insights/news/sct-inst-transaction-limit-increased-100000-euros

<sup>&</sup>lt;sup>18</sup> https://www.fasterpayments.org.uk/transaction-limits

Key Standard Checklist	Considerations for Scheme Rules
Incoming transactions acceptance rate	<ul> <li>Schemes should establish a percentage of transactions that participants can accept in principle but reject if required later. This is to allow global banks to perform sanction screening on transactions that are flagged for review.</li> </ul>
	• The optimal percentage for this status is between 10%-15%: it should match the Level 1 referral rate for that country.
Information included with the transaction	<ul> <li>Each payment can include a statement entry reference for the beneficiary customer. This can be used to provide additional forms of account identification for the end customer (invoice number, etc.).</li> </ul>
	<ul> <li>Unique reference for initiating party - this should be carried end to end, including any associated transactions (i.e., returns).</li> </ul>
	<ul> <li>Where remittance information is included, the account servicing institution should be able to provide it to their customer proactively or on request.</li> </ul>
	<ul> <li>Include initiating party name and address.</li> </ul>
	<ul> <li>Include underlying Initiating party name and address and ultimate debtor ID, and creditor name and address.</li> </ul>
	<ul> <li>Allow for inclusion of originating country for cross border originations.</li> </ul>
	<ul> <li>Allow for automated information exchange between banks to screen for AML/ sanctions without requiring additional information from customers.</li> </ul>
Notification of receipt to beneficiary	<ul> <li>Notifications should appear in 'funds available' totals (e.g., via a balance enquiry on their online banking platform).</li> </ul>
	<ul> <li>Members of the IP scheme may choose to provide additional notification services to their customers, e.g., real-time output of payment details, SMS or email notifications, etc. as a value-add service.</li> </ul>
Beneficiary participant error checking guidelines	• Where a member accepts an incoming payment without qualification IP Schemes should have checked, at a minimum, that the 'beneficiary customer account number' details quoted in the payment exists and is open for credits, or that the account reference that identifies the true individual customer account (e.g., a credit card number) quoted in the statement entry reference in the payment (where present) exists and is open.
Remittance data	• The credit transfer dataset should accommodate a remittance data field, which may be used to carry structured remittance data of up to 140 characters or to carry unstructured remittance data of up to 140 characters.
Transaction finality	• All transactions should be irrevocable once sent to clearing.
	<ul> <li>Request to Pay should be irrevocable once the debtor confirms acceptance of the transaction.</li> </ul>
Settlement Model	• New schemes may begin by implementing Interbank settlement during working hours only but should move to real-time 24*7 settlement in the short to medium term.
	• Settlement mechanism is defined to reduce risk and either collateralize limits fully or through real-time settlements among banks.

# Key Considerations for Driving Adoption

Payment innovation has always focused on the interaction between consumers, businesses, and governments. With the emergence of IP schemes, the distance between these actors has shrunk and the net of consumers has widened to include those who were previously excluded from the financial system. Having outlined the role that consumers, businesses, and governments must play in IP implementation, we can examine how financial institutions can drive adoption by connecting these three groups.

## Scheme Participation

To drive instant payment adoption, financial institutions must become members of new IP schemes, despite the resourcing and financial effort it requires and the challenges to capacity that occur when global and regional banks are required to launch and update multiple schemes simultaneously.

There are two types of instant payments membership: direct and indirect. An FI can typically become a member of a scheme if it holds a reserve account with the central bank for the settlement of instant payments. All direct members connect to the scheme's central infrastructure and receive detailed membership rules, which are defined and documented by the scheme.

A direct member may also process payments on behalf of payment service providers (PSPs). In this case, agencies will send and receive messages via a sponsoring member on its own behalf or on behalf of its clients. These PSPs will essentially have indirect membership through the scheme members, which will process transactions on their behalf.

#### The role of PSPs

PSPs refers broadly to businesses that make electronic payments on behalf of their customers. This can include businesses that are authorized payment institutions (i.e., PayPal, Stripe, etc.).

The role of PSPs and the type of transactions and services they are permitted to support varies from country to country. While in some countries PSPs can only provide value-add services that overlay banking services (such as analytics and reporting), in other countries PSPs can hold clearing memberships. In fact, many countries are considering allowing PSPs to open accounts with the central bank.

Given the global trend of allowing non-banking institutions to provide banking services, it is important to ensure that this does not increase credit risks for FIs. For example, where a scheme allows PSPs to be members, it is imperative that settlement between members happens either by prefunding or in real time, and that the clearing scheme ensures that transactions are only accepted where the initiating party has sufficient funding to meet its obligation. In addition, such funding must be either debited or earmarked to ensure a guaranteed settlement.

#### Best Practices to Help Drive Adoption

While the role of PSPs is growing, FIs remain the principal link between consumers, business and governments for the foreseeable future. Therefore, it is key that FI considerations are taken into account in order to efficiently drive adoption. The following are some key adoption best practices:

- Early and reasonable timelines to go live with new IP schemes and/or products:
  - Banks should be advised as soon as possible of the intent to create an IP scheme in a new country.
  - There should be at least 12 months' notice between the time that the final scheme specifications are issued and the go live date.
- There must be engagement of FIs in designing scheme specifications:
  - Having input on best practices and considerations ensures a feasible and best-in-class solution.
- Timely and considered scheme specifications issuance:
  - Scheme specifications should not be released until key considerations have been addressed.
  - Releasing specifications only to amend them a few months later causes significant costs and time delays for all parties involved.
- Consumer banks should be actively encouraged to join IP schemes and develop solutions that will enhance client experience.
- IP schemes must develop and provide services that are value-enhancers and allow for a more efficient and enjoyable user experience. This includes the use of standardized QR codes, E-Mandates/ Instant Direct Debits, Request to Pay, and mobile commerce enabled flows that allow a consumer to transact via their mobile app, without ever exiting the app.

Schemes must encourage the development of services that are value enhancers and allow for a more efficient and enjoyable user experience.

### Conclusion

From the first good-for-good trading to today's myriad electronic tools, the payments industry has consistently created payment methods to facilitate the relationship between consumers, corporates, and governments, with financial institutions acting as the bridge between the three.

IP schemes are a relatively new vehicle and a key component of the evolving payments landscape. The inherent dynamic nature of instant payments enables financial inclusion, especially in emerging economies, and engages all actors within the financial marketplace by providing alternate payment methods for unbanked segments of the population. These schemes also create avenues for all actors within the payments hierarchy to engage with one another without the pain points that can come with a traditional banking relationship.

Despite the many benefits offered by instant payments, the success of these schemes are not inevitable. There are challenges associated with instant payments that should not be tackled by individual institutions; industry collaboration and standardization are essential. Citi has identified four areas that are critical to strategy alignment and industry harmonization:

- 1. 24\*7 scheme and processing availability
- 2. Speed of processing
- 3. Convergence to industry standards including the ISO 20022 format
- 4. Transaction limits

Each of these areas have their own set of obstacles. Addressing them collaboratively at industry level is not only the most effective way forward but would help eliminate some of the challenges to cross-border payments noted by the FSB in its Enhancing Cross-Border Payments Roadmap, including high costs, slow speeds, limited access, and insufficient transparency.

The creation and implementation of best practices, messaging standards, rulebook creation, and considerations of capabilities relating to these four elements can pave the way to successful IP schemes. As a result, instant payments will be better able to mobilize the unbanked and underbanked, thereby increasing financial inclusion in the digital payments space, driving economic progress globally, and enabling a more frictionless cross-border experience for all actors.

# Contributors



Melissa Tuozzolo Payments Financial Market Infrastructure and Industry Head, Director Treasury and Trade Solutions, Citi



Elena Gomez Instant Payments Global Head, Director Treasury and Trade Solutions, Citi



Afsheen Ali Citi Payments Insights Head, Senior Vice President Treasury and Trade Solutions, Citi



Abikie Ince-Chess Global Payments Regulatory Risk Manager, Vice President Treasury and Trade Solutions, Citi



Sofia Sotelsek Instant Payments Global Product Manager, Vice President Treasury and Trade Solutions, Citi



Sadie Gray Payments Financial Market Infrastructure and Industry Initiatives, Analyst Treasury and Trade Solutions, Citi

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