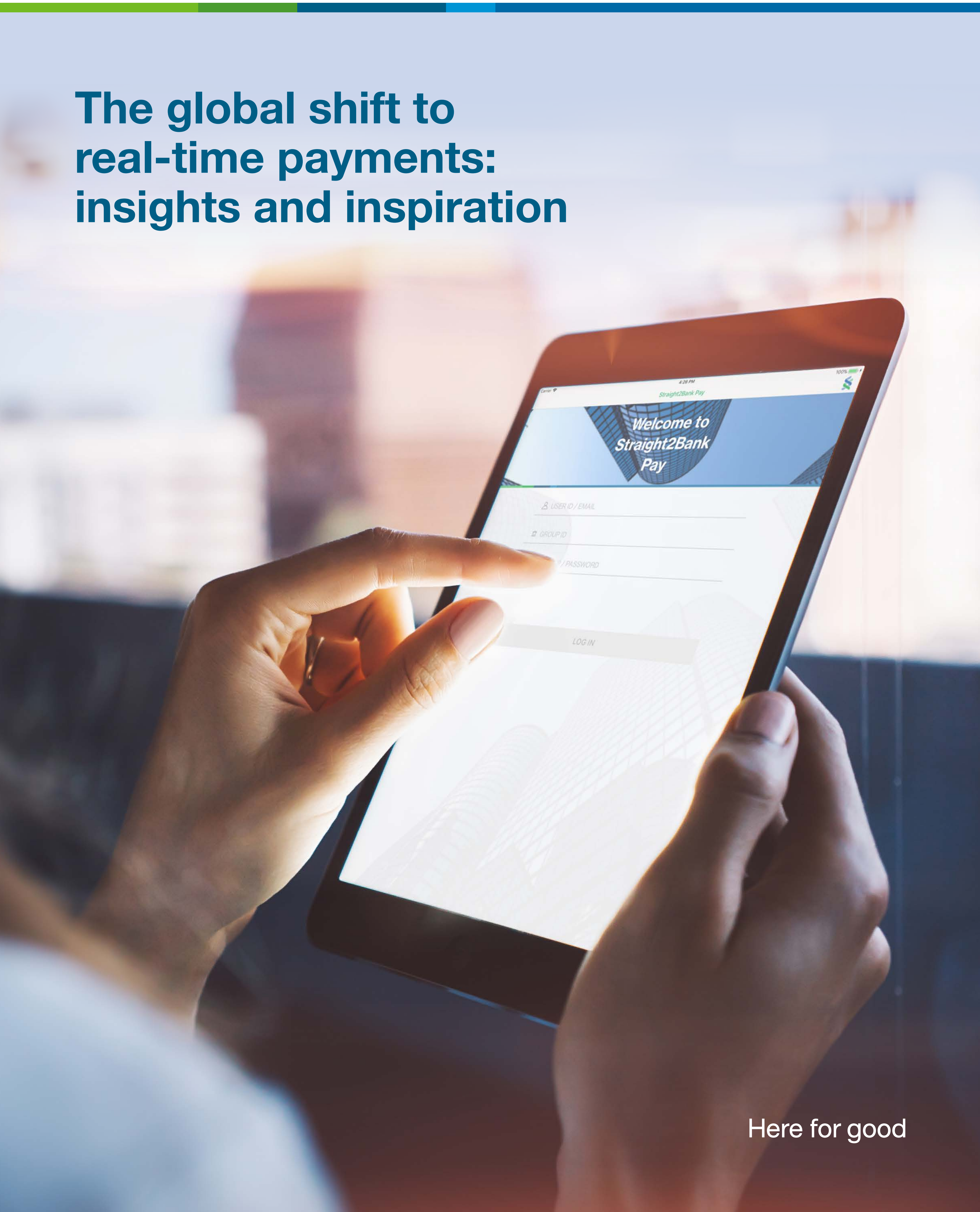
Standard Chartered

The global shift to real-time payments: insights and inspiration



Here for good

The global shift to real-time payments: insights and inspiration

Real-time and instant payments are becoming a global phenomenon as digital business models proliferate. For corporations of all sizes, embracing real-time payments creates the opportunity to reduce costs, delight customers and grow their business, as Uber and Google discuss in this special Standard Chartered white paper.

Introduction

E-commerce, digital business models, and industry ‘disrupters’ are rapidly changing what, how, and how quickly we buy and sell. This has an impact on ecosystems as the exchange of products, services, cash and data between industry partners accelerates to deliver an instant experience to the end customer.

Payments are at the heart of any transaction, whether physical or digital. Friction or delay in the exchange of cash is a major drag on commercial transactions and ultimately ecosystems. One response to this growing challenge is the **development of real-time or instant payment schemes**, now a global phenomenon. Although the drivers for real-time payments differ across markets, the aims are generally the same: to make the payment and collection experience as fast, frictionless and integrated with the related commercial transaction as possible.

Treasurers have often refined their payments and collections strategy over many years, and may be reluctant to disrupt what already works. However, real-time and instant payments offer significant opportunities to **reduce costs** and **enhance working capital**. More compelling still, the ability **to delight customers and suppliers**, particularly consumers and SMEs[i], through a seamless, dynamic and real-time user experience can be instrumental in creating competitive advantage. Consequently, treasurers and commercial managers need to work together closely – and quickly – to understand, evaluate and harness the cost, convenience and competitive benefits of new, instant methods of payment.

A global phenomenon

The speed and priority with which real-time and instant payments are being introduced in each country differs according to the relative importance of e-commerce and digital business models, the maturity of the payments industry, regulatory policy, and the existing payments culture, such as the use of cards. For example:

Figure 1. Global real-time payments

Real-time payments around the world

45 schemes now live

8 hybrid schemes

13 planned or in development

https://www.instapay.today/tracker/

Digital cash. In countries such as Singapore and India, the aim is to reduce cost and risk in the financial system, improve the experience for consumers, and promote a cashless society.

Financial inclusion. In countries such as Kenya and other parts of Africa others, increasing financial inclusion (i.e. access to financial services who may not previously have had a bank account) for the world's 1.7 billion[1] unbanked adults is a driver of real-time payments, particularly through mobile wallets. Mobile wallets have a transformational impact in countries with large unbanked population, but where the number of people with mobile phones is high. Globally, two-thirds of unbanked adults have a mobile phone.

Digital commerce. A key driver of real-time and mobile payments, however, is commercial, particularly with the rise of e-commerce and digital business models. While payments have traditionally been the banks' domain, digital native businesses and 'bigtechs' have increasingly looked to alternatives to deliver the seamless customer experience they are seeking. Consequently, third-party PSPs[ii] and other tech giants delivering mobile wallet solutions, have emerged, such as PayPal, ApplePay, AliPay, WeChat Pay and in India, GooglePay.

Google Pay: Leading real-time payments adoption in India

Launched in April 2016, India's Unified Payments Interface (UPI) is India's national real-time payment system. Developed by the National Payments Corporation of India, UPI facilitates instant inter-bank transfers via a mobile platform, allowing providers to build innovative, integrated real-time payment solutions. There were 141 members of UPI as at August 2019[2], with over 920 million transactions in the month, a threefold increase over the previous 12 months, with a value of INR1.55trn (US$219bn).

A flagship example of real-time, mobile payments based on UPI is Google Pay. Saif Ashraf, Head of Treasury's New Business Implementations at Google explains,

"Google always looks to solve for user need, and UPI represented a huge opportunity for us to create excellence in the customer experience, and support the Indian government objective to increase financial inclusion.

Originally, we launched Google Pay as a peer-to-peer platform, enabling people to send money to family and friends instantly and at zero cost, direct from their bank account via their mobile device, even if the recipient of funds did not have a Google Pay account. As the demand for Google Pay quickly became clear, however, we extended the platform to support B2C payments, including bill payments, mobile top-ups, ride hailing, food delivery, online and in-store shopping.

Key to the success of Google Pay is that it is not simply a payments platform. Our aim was to integrate payments as a seamless part of a wider experience. This could be whether making an online purchase or booking a ride through a vendor platform, or chatting to friends and family online through the Google Pay app. These unique and added-value features, combined with the ability to win scratchcards and other rewards, which update the user's account automatically, means that Google Pay has become an industry leader in India. At our recent Google for India event, we announced that there are now 67 million active users transacting every month, totalling US$110bn annualised, making Google Pay the biggest platform in the country[3].

While we have already achieved a great deal with Google Pay in supporting the country's digitisation and financial inclusion objectives, there is still more to do. At the event, we announced that tokenised debit and credit cards would be added to the platform, and a host of additional features to continuously enhance the user experience are in the pipeline."

Journeys to real-time payments

While the drivers of real-time payments are different across markets, so too is the timing and journey (Table 1). Using the world's two largest markets as examples:

China has traditionally had a cash-based consumer culture, with relatively limited use of cards, in part due to lack of consistent credit scoring, and low acceptance rates. As e-commerce platforms such as Alibaba developed, payments needed to become digital, faster and mobile to match the changes in consumer demand. Without a readily accessible payment method that met this need, AliPay was born. China has rapidly become the world's largest e-commerce market. A major factor in this has been the ability for consumers to make purchases and pay directly and seamlessly from their e-commerce or social media platform. Over 60 billion mobile payments were processed in China in 2018, an increase of 61 per cent on 2017 (source: PBOC)[4].

In the United States, the development of e-commerce and digital business has been less dependent on new payment methods as the use of cards is prevalent. However, cards can be expensive, and settlement is not instant. The use of checks and cash is still popular, which is a major obstacle to the digital economy. Consequently, there are compelling financial and commercial factors that drive the need for frictionless, secure, rapid and cost-effective payments and collections to support increasingly digitally-driven ecosystems. As a result, The Clearing House (TCH) in the US has developed and implemented Real-Time Payments (RTP), which financial institutions to offer real-time fund transfers 24/7, 365 days a year. RTP is open to all US depository institutions and is expected to achieve widespread participation in 2020.

The speed and priority with which real-time and instant payments are being introduced in each country differs.

Table 1. Example real-time payment methods

	Real-time ACH[iii]	Request to Pay	Mobile wallets
Description	• Real-time, 24x7 credit transfer via a national payments infrastructure	• Seller makes a payment request to the buyer (for single or regular payments, and the payment is then initiated once the buyer has approved it.	• Virtual wallets that can be preloaded or funded from a bank account and accessed via a dedicated mobile app or website, or integrated into other apps
Use	• Real-time alternative to existing ACH and wire transfer capabilities	• Alternative to direct debits in markets where these do not exist or are uncommon	• P2P[iv] and C2B[v] payments. Also B2C[vi] for refunds etc.
Use cases	• As for ACH and wire transfers, although payment value limits mean these are best suited to B2C, C2B and smaller corporate payments.	• Utilities, mortgages, telecom and subscription payments; one-off C2B payments e.g. high value purchases	• Varies depending on payment culture. e.g. migrant remittances (e.g. Hong Kong to Philippines) peer-to-peer (e.g. UK Paym, US Venmo) consumer online purchases e.g. Paypal, Alipay, WeChat Pay, Google Pay. • Digital alternative to traditional banking e.g. M-PESA in Kenya and others; Standard Chartered digital banks in Cote d'Ivoire and 7 further countries
Examples	• US – RTP (Real-Time Payments) • Europe – SEPA CTInst (Instant Credit Transfer) • UK – Faster Payments	• India – UPI (Unified Payment Interface) • Thailand – PromptPay	• US, Europe etc. – ApplePay, PayPal • China, HK etc. – WeChat Pay, AliPay • Philippines – Gcash • US – Venmo (peer-to-peer)

Making the business case

In very few cases will firms be able to manage all payments and collections via a single payment method. Consequently, treasurers and colleagues in procurement, sales, human resources and related functions need to work together to understand the company's payment and collection use cases, and design a strategy that meets the needs of both payers and payees.

While most companies have relative freedom in their choice of outgoing payment methods, there are wider commercial considerations for collections, particularly for C2B payments. In particular, **competitive factors**, and a desire to **optimise the customer experience** may drive the choice of payment methods that are supported, as the experience Uber demonstrates.

As Table 2 illustrates, one problem is that the same benefits do not necessarily accrue to both buyer and seller. **Consequently, it is important to understand the value of a proposed payment method on both sides of a transaction.**

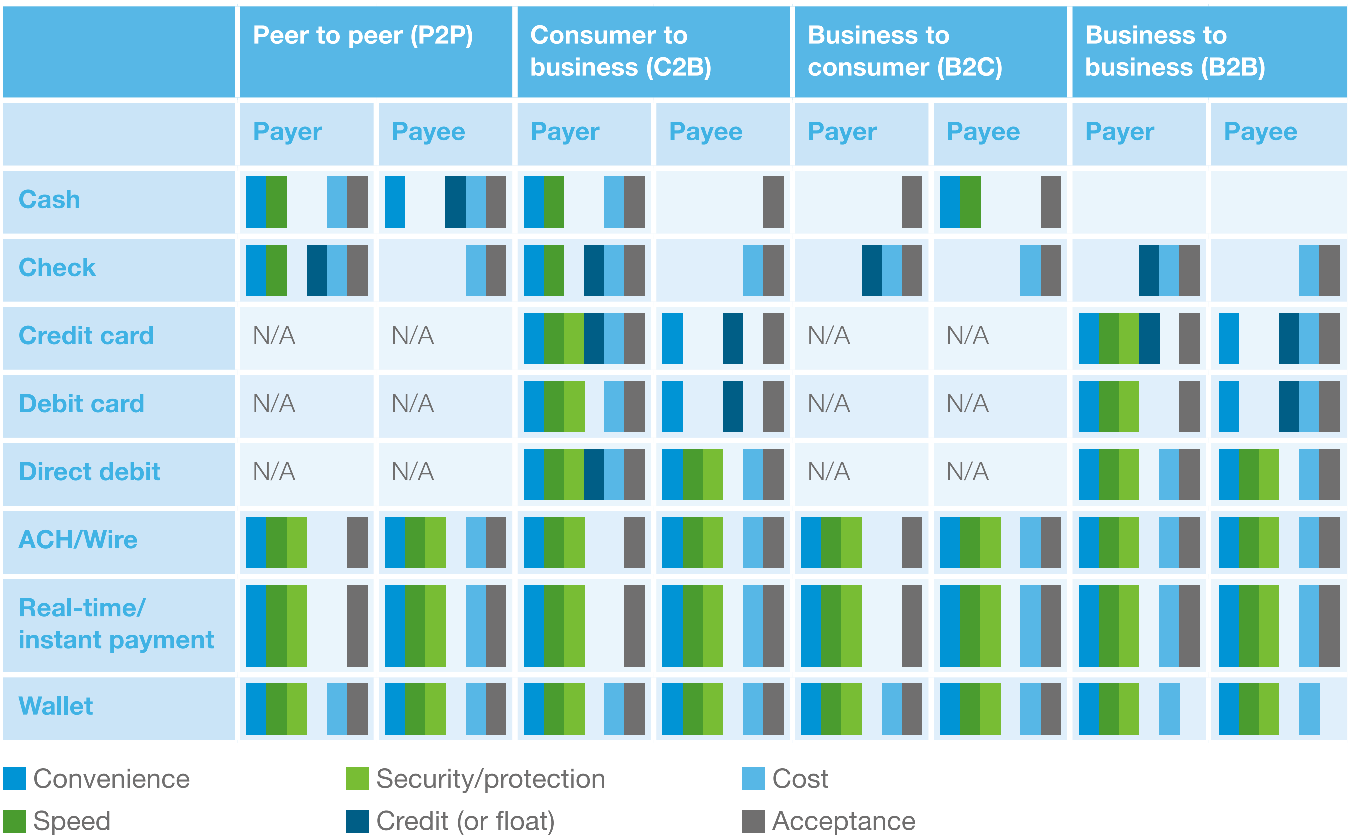
For example, many consumers and small businesses still prefer cash and checks, partly due to the perceived benefit of the effective credit period through mailing and float. However, processing cash and checks is expensive, time-consuming and high-risk for businesses, and these methods do not support the digital economy. According to a 2018 IHL Report, the cost of handling cash ranges between **4.7 – 15 per cent of transaction value**[5]. For checks, costs **average US$7.78 per check**, but this can reach **US$26** according to some reports[6], and higher still once mailing costs and the effect of the float period is taken into account.

Cards are convenient and widely accepted, and the credit component can be attractive for payers, but for merchants, they can be costly to process and value is not received instantly. While charges vary, these can average **1.5 – 3.5 per cent**. This can create a significant drag on businesses with large volumes of consumer transactions. Uber's IPO filing[7], for example, reported card processing fees of US$749mn in 2017 alone, up from US$461mn in 2016. Converting even one-tenth of this to an alternative wallet-based or other real-time remittance, for which the costs could be as much as 90 per cent lower, would deliver annual savings of US$65mn and growing. These massive potential savings numbers is why instant payment schemes will be inevitable (assuming they are implemented correctly) and why credit card options will increasingly become less emphasized.

Treasurers and related functions need to work together to understand the company's payment and collection use cases, and design a strategy that meets the needs of both payers and payees.

Furthermore, the quality and consistency of data can be instrumental in automating processes such as reconciliation and immediate posting to customer accounts. This is essential in allowing the dynamic exchange of goods and services across ecosystems.

Table 2. Example of payment method characteristics/benefits



Uber: Delighting Customers, Driving Success through Digital Payments

"Uber operates in over 60 countries globally, with different payment methods and payment cultures in each one. With such a high volume of transactions, maximising the efficiency and convenience of customer payments, is essential to our business model.

In some countries, such as the United States, the use of cards is well-established, so our business model has been based on digital payments since the start. As adoption of wallets and other mobile payment methods grow over time, we will accept these methods in line with evolving customer demand. We want to enable customer choice as much as possible.

In countries such as India, where card use is far less prevalent, cash must also be accepted. However, cash is expensive to process, inconvenient for both Uber and our drivers, and doesn't present a magical experience. Younger generations, in particular, are rapidly embracing new digital payments, particularly mobile wallets. By supporting these methods, we can reduce our costs and offer a more seamless experience for customers. We expect to form partnerships across our markets with both international and domestic payment providers to support digital payments that ultimately benefit our partners and our customers.

Central to our payments and collections strategy is our use of data. We have spent significant time and effort on managing our data effectively to extract key insights. As a result, we now have full visibility over the processing cost for every transaction and payment method in each country. This is essential to help shape our future partnerships and ensure that we continue to meet customer demand in a cost-efficient manner."

***Kothai Senthil**, Global Payments Acceptance – Strategy & Operations, Uber*

Working with customers and suppliers

While real-time and wallet-based payments offer advantages to both buyer and seller, not all users will be equally convinced. It is easy to assume that factors such as convenience and security are payment users' main priorities. However, when comparing Table 2 with user preference, it becomes clear that **some factors have a higher priority than others**. For example, despite the disadvantages of checks, their use is a difficult habit to break in markets such as the US. This suggests that the credit component (in the form of float) as well as the loyalty "points" outweigh the disadvantages of checks for many users. The same problem relates to the use of credit cards in some countries, even though the cost for merchants (payees) is high.

To encourage the use of cost-effective, secure, digital payments – which are increasingly taking place in real-time – throughout their ecosystems, treasurers and commercial managers need to create a positive experience for buyers that outweighs the perceived value of credit or float. Companies may offer **incentives** for customers to use – and suppliers to accept – preferred payment methods. These could include:

Offering an alternative to credit:

- **Discounts.** e.g. for purchases using certain payment methods, customer loyalty points or promotions, as well as an easier purchasing experience;

- **Partnerships.** e.g. with microfinance providers to support transactions with credit, particularly in more economically vulnerable communities, empowering individuals and families, and helping communities and economies become more sustainable.

Increasing convenience for consumers:

- **Proxy addresses.** One obstacle for some digital payments is the need for payers to set up payees' bank account instructions. In some countries, such as Singapore and India, this is being addressed by enabling real-time payments to be made via PayNow or UPI respectively via a proxy address, such as mobile phone number or national insurance number. Likewise, in the UK and US too, proxy addresses is also in use for peer-to-peer payment platforms such as Paym (UK) and Venmo (US). This makes real-time, peer-to-peer payments far more convenient and crucially, more convenient than cash or checks.

  For corporates too, proxy addresses enable far easier payments to consumers than issuing checks or equivalent, as these can be directed from the Bank's electronic banking portal in the same way as any other ACH or wire transfer, but without the need to source and store bank account details. Consumers also benefit from quicker, more convenient payment of insurance claims, refunds etc. Proxy addresses can also be a useful way to pay short-term contractors, migrant workers or freelance providers as a replacement for cash or checks in some countries.

- **QR codes.** The use of QR codes, including both static and dynamic codes, is also very popular in locations such as China, Hong Kong, India and Singapore. These complement real-time payments by enabling a buyer to scan a code to purchase and pay instantly, whilst the seller can use the data linked to the QR code to process and reconcile the transaction automatically.

By June 2019, Standard Chartered had created more than 100 APIs and published a comprehensive standards catalogue aligned with international API standards, and developed internal, external and developer engagement aXess platforms.

Incentivising suppliers to use preferred methods

- **Enhanced payment processes.** e.g. digital invoice submission, prompt or earlier payment, and remittance information. to help with reconciliation.

- **Partnerships.** e.g. with banks or supply chain platforms to offer suppliers early payment discounts.

Creating an integrated payments and collections infrastructure

One of the major obstacles for any company adopting or accepting a new payment method is the implementation effort, and the risk of fragmenting existing systems, processes and reporting. However, this is becoming less of a problem with:

i) **Payment Aggregator bank portals** such as Standard Chartered's Straight2BankPay. This solution help treasurers to integrate multiple collection methods, including low value/high value, instant payments and mobile wallets through a single channel. It can be linked directly into corporate e-commerce applications or mobile payment schemes (including QR codes) for seamless and integrated digital collections.

ii) **Open APIs**[vii] allow banks and their clients to connect and integrate payment and collection services dynamically and in real-time. This includes dynamic updates of TMS and ERP systems, but also, embedding payment and collection services directly into their business systems, such as procurement, credit and front-end customer solutions, a major factor in enhancing the customer experience by creating a seamless in-app experience.

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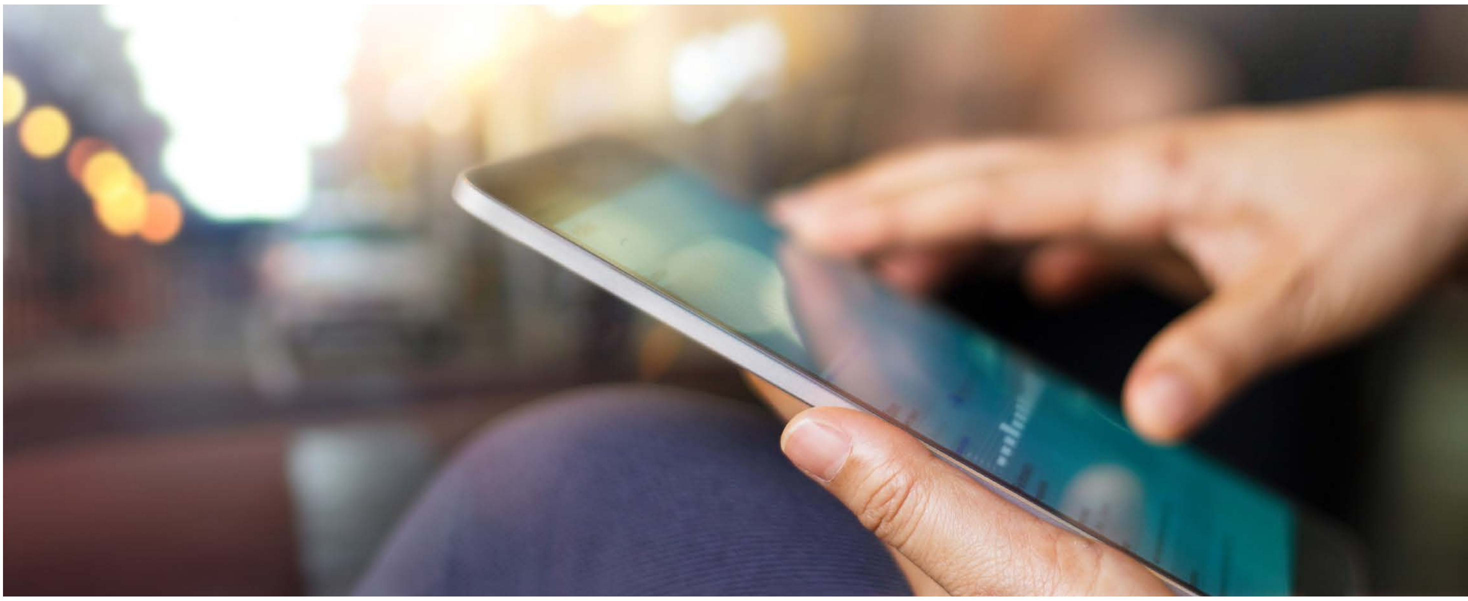


The implications of real-time

Real-time and instant payments are not a phenomenon restricted to certain economies or digital-native industries. In a growing number of economies around the world, embracing real-time payments is not a choice but a necessity. Although the pace differs worldwide, real-time will become not the exception, but the rule, both in the C2B/B2C space, but also in B2B. This in turn will have significant implications for accelerating supply chains and connecting industry ecosystems more dynamically. For the 1.7 billion unbanked adults globally, real-time payments through wallets and digital banking solutions could have a transformational impact on their ability to access financial services and reduce economic vulnerability. For commercial enterprises, increasing financial inclusion allows them to reach a much larger, often untapped, client base.

Real-time, 24x7 settlement will change the way that treasurers manage working capital and liquidity, with a move towards 'just in time' liquidity management, and the potential to reduce working capital buffers. No longer will daily bank account statement updates be sufficient, but intraday or even dynamic updates of bank account activities (e.g. via APIs) will be in growing demand, together with automatic reconciliation and account posting.

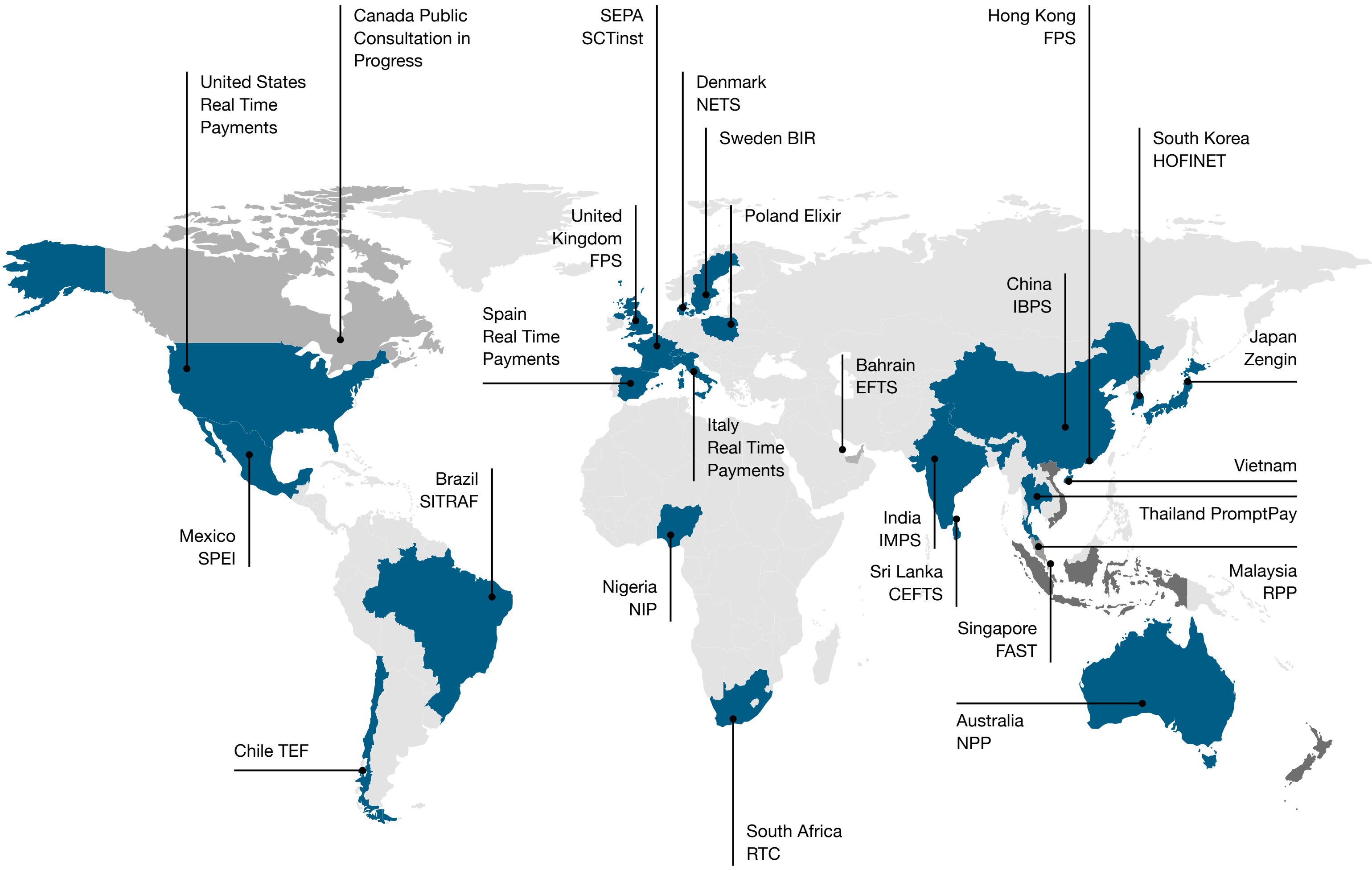
While the move not just to real-time payments and collections, but ultimately real-time treasury and dynamic supply chains, involves new ways of looking at cash, trade and remittance flows. By doing so, there is the potential to reduce friction, delay and cost, ultimately optimising cash management processes, improving the customer experience, and strengthening ecosystems.

Checking the benefits

Do the payment/collection methods...

- make it easier to do business with you by improving the client experience?
- encourage your clients to do more business with you? even those without a bank account?
- prove cost-effective compared with traditional alternatives?
- give you comfort over the security of payments and data?
- allow you to establish or leverage a client loyalty programmes to incentivize lower cost payment options

Map 1. Real-time payments (RTP) schemes are being launched and adopted across 51 countries



Scheme is live   Scheme under implementation   Scheme is under discussion plan

Source: Oracle

Tarek El-Yafi
Managing Director, Americas Cash Management Head of Sales

Tarek El-Yafi, Managing Director, joined Standard Chartered in 2009. Tarek's team is responsible for helping Americas clients grow their business and operate efficient and market-leading cash management processes an in Asia, Africa and the Middle East.

Prior to this role, Tarek was Transaction Banking head for Oil and Gas and Development Organization clients based in Houston. Before his role in Houston Tarek was serving as Global Head for Liquidity Management, Account Services and Cash Management Transformation in Singapore. Tarek's responsibilities included driving innovation, development, deployment and commercialization for Liquidity Management and Account Services products globally along with delivering new capabilities across payments, collections, billing / pricing, structural deposits and liquidity management. Prior to this, Tarek was Global head for Cash Payments where he was responsible for banks cross-border & domestic payment capabilities along with driving new FX solutions across Transaction Banking.

Before joining Standard Chartered, Tarek spent thirteen years with Citibank in New York and Texas in product management, sales and relationship management roles. Tarek earned an MBA with honors, and a Bachelor of Science in Electrical Engineering, from the University of Texas at Austin.

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Shantanu Vijaykumar Bhosale, based in New York, is the Americas Head of Cash Management Product and Structured Solutions Development at Standard Chartered. His role includes overseeing the cash management product offering for corporate clients in the Americas and developing bespoke and marketable solutions for US MNC subsidiaries across Asia, Africa, and the Middle East through client co-creation. Growing through various roles at Standard Chartered for over 12 years, Shantanu has held product development, transactional FX, and liquidity management positions in India, Singapore, and the US with both regional and global responsibilities. Prior to his tenure at Standard Chartered, Shantanu also held roles with HSBC and Axis Bank in India and has more than 15 years' experience in cash management and corporate banking.

References

1. 2017. Global Findex database
2. https://www.npci.org.in/product-statistics/upi-product-statistics
3. Statement, Ambarish Kenghe, Director, Product Management, Google Pay, September 2019, quoted in https://www.news18.com/news/tech/google-pay-reaches-67-million-active-users-in-india-within-two-years-2315297.html
4. https://kr-asia.com/chinese-mobile-payments-hit-new-record-with-61-growth-in-2018
5. https://www.ihlservices.com/product/costofcash/
6. https://acom.com/DS_V_Cost_of_Issuing_Checks_1_17.pdf
7. https://www.sec.gov/Archives/edgar/data/1543151/000119312519103850/d647752ds1.htm

Glossary

i. SME – small and medium-sized enterprises

ii. PSP – payment services provider

iii. ACH – automated clearing house

iv. P2P – peer-to-peer

v. C2B – consumer-to-business

vi. B2C – business-to-consumer

vii. API – application programming interface