

Real-Time Payments: The Next Stage of Evolution of the International Financial Railroads

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White Paper

Introduction

As the global economy grows increasingly digital, most players that form the backbone of today's financial ecosystem are seeing the reducing share of cash and paper-based transactions, especially beyond the retail and P2P transactions. However, the B2B, B2C, G2C and C2B payments landscape is exhibiting a rapid shift too. While the pandemic highlighted the need for moving money faster and digitally, other factors such as new inter-entity interactions and business relationships are also fuelling the need for faster financial railroads.

Estimates suggest that small and mid-sized businesses in the UK alone spend 56 million hours each year chasing late payments. In the US, most categories of consumers and service providers desire instant disbursements of funds. While decades-old paradigms like ACH enable faster movement of money across accounts, more than 38% of transactions take more than three days to settle in the US.

Add to this, the increasing complexity of money movement across borders in an increasingly globalizing economy, and it becomes easy to spot the need for a new paradigm in the way we experience finance in the business context. The need for upgrading the railroads that move money across the globe is clear - is the Real-Time Payments framework an adequate answer to this need? How exactly is ISO 20022 transforming the digital payments game for financial institutions? And more importantly, what implications will this shift entail for businesses?



Transacting in today's financial landscape

Today, businesses not only deal with redundant complexity while interacting with their merchants, partners, and customers globally, but also spend an extraordinary amount of time managing the following problems:

Lack of visibility: Financial management, in most businesses that construct or provide services that help parties move money today, is subject to a deficit of visibility - in fact, the actuals always lag behind until the synchronization cycles are made to chase real-time positions of funds.

Resource intensive payment disbursement mechanisms: In 2017, B2B payments accounted for \$25 trillion in volume, out of which 50% were check-based. Checks are the most expensive transactions to process and even electronic payments scatter the cash-flow metadata across the enterprise, thereby calling for manual intervention to synchronize this footprint with the real-time status of accounts and funds.

Cost: Mastercard reports that checks are subject to the highest levels of fraud, thereby adding to the cost of transacting through paper for FIs. On the other hand, while ACH provides a low-cost alternative for businesses, the appetite for instant fund disbursement can cost business for companies at all points of the value chain - from

sourcing to delivery. Moreover, it costs \$22 to process an invoice manually for businesses today - these costs indicate a pressing need to reform the financial railroads from the inside-out.

Cross border payments: While cross-border payments were limited to B2B players and FIs until now, digitization is truly globalizing previously regional marketplaces, thereby bringing C2B vectors into the equation. Wire transfers were popular, yet expensive means for B2B settlements, but cross-border transactions are yet to see reduced friction in terms of usability, simplicity, and costs.

Requesting for payments via phone/emails: In addition to unnecessary delays, manual payment initiation methods introduce room for greater fraud - during COVID, account managers at a number of companies received fraudulent requests where the identity of the person requesting for funds was not verifiable.

The RTP system not only solves these problems for businesses but also eliminates the guesswork from payment settlement between businesses and people. To achieve this, the RTP system blurs the line between transactional and non-transactional messaging by using the ISO 20022 standard.

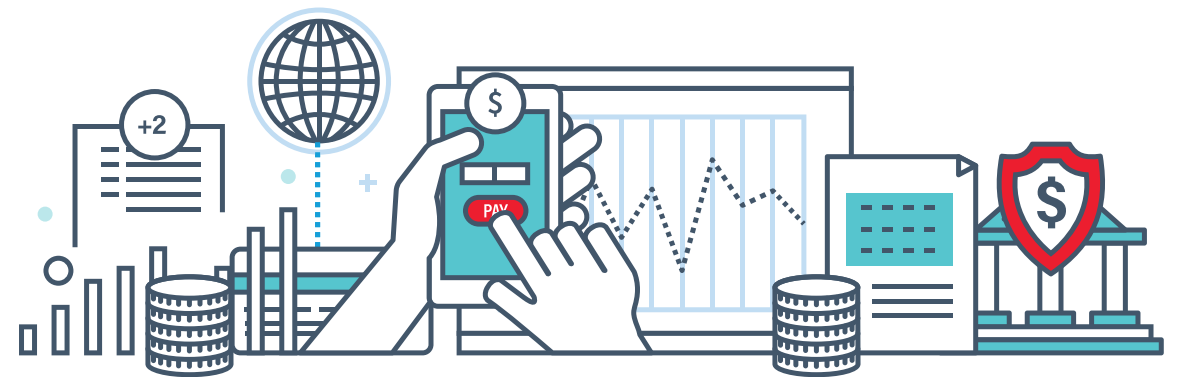
The move to Real-Time Payments

Over 130 financial institutions in the US have implemented the RTP system, marking a five-fold increase since 2019. While integrated digital services and soaring customer expectations are a definite enabler of this shift, the pandemic has accelerated this shift too. Here are some of the drivers of this shift:

- Businesses are not only interacting with their suppliers and producers digitally, but also their customers. New business relationships are being formed, and digital payments between businesses are enabling the move away from checks.
- New business relationships can be forged by building trust. RTP can help businesses bring greater transparency into B2B interactions.
- Advance payments for kickstarting production and sourcing from new suppliers. Delayed payments can impede such relationships and have hurt companies along crucial times of recovery post-COVID.
- The international cross-border payments industry's need for high traceability, speed and transparency is also driving the adoption of RTP. SWIFT gpi is one such product, which is rewriting the cross-border payments experience by partnering

with the global banking community and bringing rapid transformation through resource-light and intuitive digital tools.

- Customer expectations are on the rise and the boundary between social, finance and commerce is getting blurred. Therefore, it is becoming crucial for businesses to adopt instant payment disbursement capabilities to catch up with the competition.
- Technology is also a positive determinant of this shift. Increased smartphone adoption in various spheres of work, biometrics, digital currencies, AI, and API design is also ushering a rethinking of old processes.



Laying the foundations: ISO 20022

ISO 20022 is at the core of the shift towards the RTP framework. Developed by The Clearing House (TCH) based on the 36 criteria identified by the Fast Payments Task Force (FPTF) for building an RTP network in the US, ISO 20022 describes a universal messaging scheme for financial institutions. The ISO 20022 specification essentially standardizes payment-related information across three layers, where the top layer defines relationships between business functions, and the syntax is modeled to describe the payments-related information pertaining based on these relationships. Following TCH, Federal Reserve Bank's Service FedNOW's FedACH service is also leading the infrastructure shift towards real-time payments.

As a result, RTP brings the following functionalities to the payment system for institutions that become the participants of the RTP network:

- **Receive Money:** This functionality represents the least degree of participation in an RTP network, where the customers of a financial institution can receive real-time payments but cannot send funds. For example, a taxi service that pays the funds earned to a driver at the end of their workday can differentiate themselves based on real-time fund disbursement.
- **Send Money:** In order to send payments to institutions within the RTP network, the participant must be able to send and receive core transaction-related messages but should also be able to request and respond to notifications and acknowledgements.
- **Request for funds:** RTP also enables participants to request funds from accounts that are connected to the RTP network. This will eliminate the need to call, email, and text along long chains of commands to unlock organizationally interlocked funds.
- **Synchronous messaging:** Since ISO 20022 helps consolidate the messaging to extend the financial railroads to extra-transactional information, RTP participants can deploy APIs that leverage rich messaging alongside payments to build new features along the new-age financial information highway.

Understanding the technological shift

The shift to RTP entails a shift in the core technology of the participating financial institutions. Here are a few steps that institutions must undergo in the shift to the RTP system:

- **Understand the deterrents of the shift:** Legacy solutions that are timed to support operations on weekdays during the working hours. Moreover, these systems are not designed to handle transactions end-to-end at an individual level at high speed.
- **The data barrier:** The shift to RTP entails the adoption of the ISO 20022 standard, and institutions must not attempt to re-invent and redefine, as standardization is at the heart of the RTP system.
- **Channel-agnostic systems:** The shift to digital payments is also located within the larger shift to omnichannel interactions with businesses, institutions, and financial functions. Therefore a channel-agnostic approach is crucial to a successful implementation.
- **Process reinvention:** Most back-office processes currently score low for RTP-readiness. Before the true operational value and impact of RTP can be realized,

financial institutions must focus on process-adaptation and reinvention.

- **Fraud management:** In the RTP network, transactions are executed at light-speed. This is an opportunity to introduce better fraud prevention measures with unsupervised learning and predictive modeling, that can help reduce costs and improve systemic safety. Biometric identification, location detection, and data footprint analysis are a few examples of innovations resulting from the use of AI in this area.
- **Sustain at scale:** RTP solutions might be built to address a national gap in the financial system, but implementations across the globe have exceeded the expected adoption, and therefore called for an architecture that sustains at scale. Building systems that are not tested beforehand for performance and scalability can become ticking time-bombs.
- **Unlock the value of financial data:** RTP will help integrate disparate systems that deal with fragmented financial data, which will streamline intelligence and financial management functions. Analytical capabilities will take hit-or-miss processes like liquidity optimization and cash flow management to a new level.

Use Cases of RTP

Real-time payments are fast, more secure, and bring visibility into the system. The benefits of participation in the RTP network make space for new use cases that affect *all* the stakeholders of the payments and finance ecosystem. Here are three use cases that demonstrate this:

- **User experience in B2B payments:** Currently, the payment and accounting process in the B2B space is multi-step, slow, and fragmented across multiple software suites, documents, and people. With RTP, transactions occur with greater certainty within a time span of ~15 seconds. Manual verification of fund-reception and staying in the dark about the whereabouts of your enterprise's funds disappears with RTP, which creates room for standardizing and automation based on information availability.
- **Financial management:** With RTP, financial management at both business and governmental institutions will see drastic improvements. The capability to build APIs that integrate the movement of money and data will open up new ways of thinking about treasury efficiency and cash-flow and liquidity optimization. While some of these are a result of the visibility of cash positions, other capabilities will result from the application of technologies like AI on top of the RTP data layer.

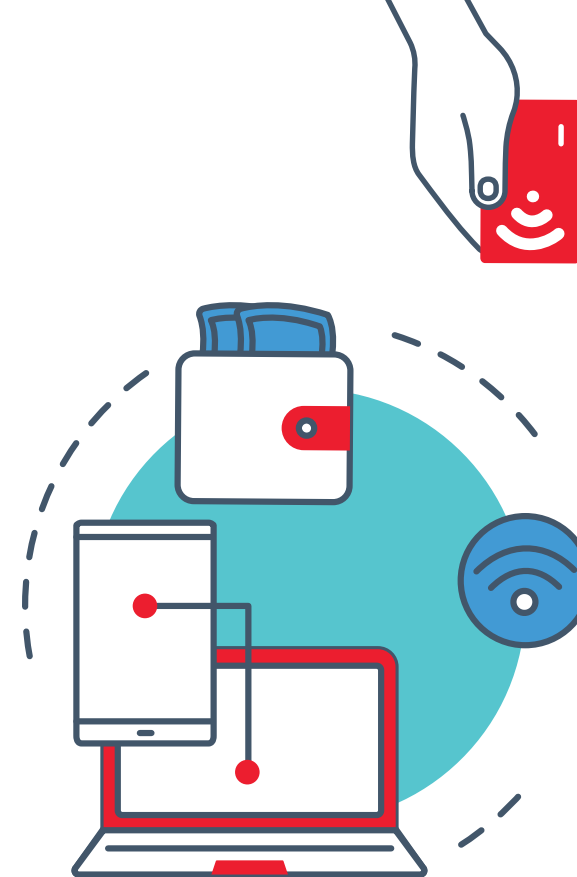
- **Economic impact:** RTP will not only increase the velocity of money in the larger national and international economy, but also open opportunities for a real-time economy where the money is put to use for a greater portion of the time. In addition, RTP will minimize the volume of the shadow economy, improve tax collection mechanisms, and bring new services to consumers like automated budget tracking. Moreover, reduced transaction costs will bring greater inclusivity and accessibility to financial services, thereby incentivizing its adoption for both the government and businesses alike.

Beyond these impacts, RTP can also boost the responsiveness and speed of digital products supply chain, where real-time settlements and product delivery stand inextricably linked. Other early adopters have deployed RTP to support new spending habits, like facilitating primary and secondary checking accounts to support today's spending habits of retail customers. Companies like JP Morgan, that played a significant part in the development of RTP through ACH have already launched their RTP products that support over millions of transactions a day - RTP has demonstrated use cases for both high-value low volume, and high-volume low-value transaction checkpoints.

Conclusion

RTP adoption will result in the convergence of the overall payments infrastructure, which will reduce costs associated with constructing and managing distributed systems like ATM and card networks, paper-based transactions, and EFT-based solutions. While early adopters are capturing and converting demand at high speed, the early-mover advantage will undeniably stir competition and user expectations to a point where participating in the RTP network will become quintessential to staying ahead in the game.

Yet, building the core infrastructure that leverages the RTP framework and bringing disruptive applications to life calls for thorough technological expertise, digital infrastructure maturity, and visionary leadership that can see through time and comes up with use cases that bring unique value propositions for customers. Fintech startups and big tech companies have and will remain the biggest source of disruption in the sector over the coming years. Financial institutions need to partner with these players to stay up-to-speed with innovations happening in the digital payments space. RTP presents an unparalleled opportunity for FIs to inch closer to the Finance 4.0 paradigm and unlock new equations of growth.



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