Key challenges for cross border real-time payments

THOUGHT LEADERSHIP

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For many years, the challenge of providing efficient, cost effective and scalable across border payment solutions has proved exceedingly difficult to overcome.

Recent innovations in domestic payments, including the emergence of real-time services, has increased the pressure from regulators, governments, businesses and consumers to improve cross border payment services.

In response, several new cross border payment initiatives have been put forward and roadmaps proposing a range of service improvements have been published by international industry bodies.

With the unique combination of skills and expertise that exist within Mastercard, there is also a key role the organisations can play in terms of providing thought leadership and advisory services to clients as they seek to understand the payment solutions that would suit them best and to address the regulatory, business and operational requirements they will face as they navigate their way to cross border.

This paper aims to highlight the key challenges faced by cross-border real-time payments solutions and is part of a wider set of materials looking to highlight the challenges, market initiatives and harmonization activities within the cross border real-time payments arena.

Guiding principles for end user propositions

Speed: Under normal operating conditions, transactions should be completed instantly or as near as near to real time as possible.

Fees: The fees charged to customers should not be a disincentive that prohibits or restricts use of the service, that is, they should be fair and reasonable for both the payer and the service provider(s).

Transparency: There should be no surprises. The payer should know up front how much they will be charged, what currency exchange (FX) rate will be applied and the status of the payment if there is a delay or problem.

Access: The service should be accessible to anyone who can make payments using a domestic real-time payment (RTP) service. Provision should be made to enable non-bank participation, as appropriate.

Confidence and security: The service should comply with all relevant local and international regulation(s) and wherever possible, should include confirmation of payee facilities, to provide certainty that the payment has been addressed correctly.

Usability: It should be possible for the payer to initiate cross border payments via existing payment app, with minimal additional steps and to be clear up front what information is required to make the payment.

A logical cross border payment flow

Debtor

Needs to provide:

- Amount
- Beneficiary details

Debtor agent

Needs to provide/ perform:

- FX rate
- Regulatory data
- Sanctions/Fraud/ AML checks

Cross border entity

- Payment switch
- Cross-border gateway
- Correspondent bank

Needs to perform

- Currency conversion
- Liquidity management
- Format conversion
- Transaction routing

Creditor agent

Needs to perform

- Sanctions/Fraud/ AML checks

Creditor

The challenges

The provision of efficient, automated cross-border payment solutions has proved challenging. The additional requirement to provide solutions that deliver end-to-end payments in real time has added an extra level of difficulty to those challenges. Some of the key challenges that need to be overcome when designing real-time cross border solutions are listed below:

- Regulatory requirements (including AML /sanctions and fraud screening)
- Currency conversion
- Liquidity and settlement
- Harmonization of services (including message standards and scheme rules)
- Reach
- Speed

These challenges, along with some possible mitigations are discussed in more detail in the following pages.

Regulatory requirements

International regulations mean that cross border payments require several specific checks, such as AML checking and sanctions screening that are not usually required for domestic transactions.

Regulatory requirements can vary by geography, and this applies to the reporting requirements that accompany them. Regulations can be applied at global, regional and local levels and the requirements are likely to change from time to time (for example, FATF).

Implications

Additional data needs to be carried with the payment for all parties to fulfil their respective regulatory obligations. This means that a simple domestic format will probably not work for cross border.

There is currently no common standard for where additional data should be placed within the payment message. This creates friction where a multi-country solution is required, as different message formats and reporting protocols may need to be implemented within a single service offering.

For incoming transactions, multiple implementation guides may be required, if payments are received from countries using different implementation approaches.

The Financial Action Task Force (FATF) is the global money laundering and terrorist financing watchdog. It sets international standards that aim to prevent these illegal activities and the harm they cause to society

Currency conversion

Currency conversion for many banks can present a significant challenge. In order to offer a comprehensive cross border payments service to customers, banks will require access to funds in the currency of each target country and will need to be able to advise their customers of the exchange rate at the time of payment initiation.

Implications

For smaller banks, the overhead of keeping currency for all target countries may not be viable. In these cases, the bank would have to subscribe to a service offered by an FX provider (usually a larger bank) or participate in a cross-border payments scheme that provides a generic FX service. Using a scheme or third party can bring additional implications:

- The scheme may be using a competitor to provide the service.
- The solution may require a day rate which may result in less favourable exchange rates. An hourly, or spot rate would be more competitive, but carries a higher overhead and risks if the transaction is delayed.
- Commercial clients of the bank may see wide variances in rates offered.
- Subscribing to a third-party service may impact the commercial viability of the service.

A further consideration for FX when assessing real-time cross border options is the need for transparency. Ideally, the service provider should offer the payer a choice of alternative rates from different providers (with differentiated fees).

Banks who are using a third-party service will need to ensure that they have the technical ability to obtain the FX rate from the provider and then present this to the customer. This has to happen as part of the payment initiation request, before the customer confirms the payment request and any further communication with the customer must reflect the rate offered at the time of payment initiation.

Complications could arise if a spot or short-term fixed exchange rate had been applied and had subsequently expired prior to transaction completion.

Settlement

Managing cross border settlement and ensuring adequate liquidity is available within the correct currency is possibly the biggest challenge for cross border payments. Traditionally, banks would have held foreign currency accounts with correspondent banks and would use funds held in those accounts to settle their transactions.

An alternative option could be for a bank to be nominated as a "reach" bank, who would provide a settlement service for all incoming transactions for a particular country/currency. The reach bank would be a participant in the domestic RTP service and would submit transactions into that service on behalf of the overseas banks that subscribed to its service.

Implications

The traditional correspondent banking model can be quite inefficient and does not lend itself to an RTP service. Similarly, the process and commercial overheads it requires makes it difficult to scale effectively.

The reach bank model is more efficient, but there can be a risk if there is only one bank servicing an entire country. There may also be commercial implications, especially if the reach bank is a competitor. Introducing a second reach provider would mitigate the risk but would increase costs and overheads.

Harmonization

In order for a cross border service to be truly real-time, the various components (technical and operational) within the end-to-end solution will need to be able to interoperate seamlessly.

To achieve this, it is likely that a degree of harmonization will be required for certain key elements of the service, including:

- **Messaging:** message formats, field usage and business rules
- **Regulatory regimes and service rules:** irrevocability, chargebacks and customer error
- **Operational processes and exception handling:** timeouts, cancellations and reversals
- **Security standards and frameworks**

Implications

Each of the aspects outlined above have the potential to create friction within the flows and/or render the service unworkable. To overcome this, banks/payment service providers will either need to undertake a series of bi-lateral assessments with each target country to understand the inconsistencies and to address them, or they will need to incorporate some form of gateway functionality in the services that can provide suitable connectivity and process/message mapping.

Speed

The end-to-end performance of the service is dependent upon the capabilities of multiple parties, each potentially using different technical solutions, different operating standards and different Service Level Agreements (SLAs), while also being located in different countries/time zones. All these variables have a potential impact on the customer experience.

Additionally, the term "real-time" can have different meanings in different countries, which could also impact customers' experience.

Implications

Ideally, service levels and operating standards would be consistent across countries, but recognizing that this is not the case, service providers may need to publish different service levels for end-to-end payment times for payments to different countries/time zones. Caution may be required when publishing committed service levels for percentages of payments completed within certain timeframes. This in turn may present challenges for setting commercial terms, given the potential for differing service levels.

It is also the case that different domestic service levels and time-out parameters may create incompatible processing timelines across the two countries, with may create revocability issues due to incompatible processing timelines across the two countries, with payments being rejected in one country, despite being successfully processed in the other. Existing processes for domestic real-time may not be adequate for cross border and an overhaul may be required, as well as new back-office functions and resources to ensure timely decisions and responses.

Reach

The challenges of reach are twofold. Firstly, there is the question regarding which countries can be reached within the scope of the service and secondly which account holding institutions within a participating country can be reached. There is also a growing need to service underbanked communities, through the provision of connectivity to e-wallet providers and remittance services.

Implications

The value of a service largely depends on the coverage it can provide. Connecting domestic real-time payment switches is the most effective way of achieving reach (possibly through a "reach bank"). But connecting two real-time services in different countries introduces several technical dependencies and harmonization requirements.

Bi-lateral arrangements between countries may be an attractive proposition for specific markets in payment corridors with relatively high transaction volumes, but they are not the most practical way of achieving scale. A global service offering would address that problem but would introduce additional complexity and dependencies as part of initial service launch.

Connectivity to wallets and remittance service providers introduces additional challenges for routing and settlement.

Summary

The challenges facing an organization wishing to offer cross-border real-time services are not insignificant. These challenges increase in line with the scope and the service levels envisaged by the service provider.

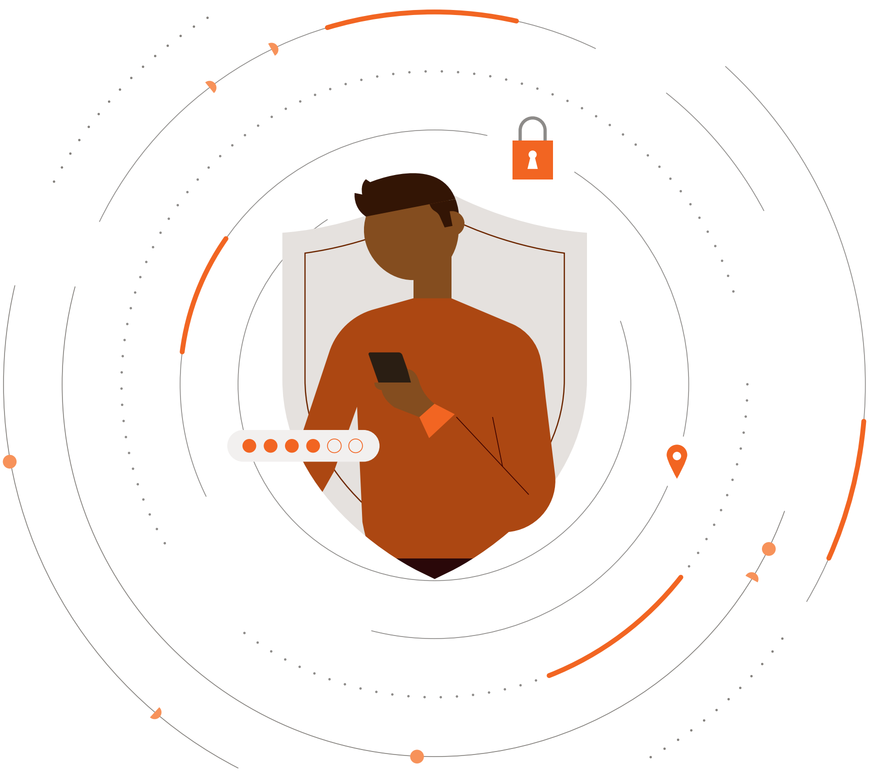
While the challenges are common to all cross-border payment services, the emphasis and significance of the various aspects of the service will differ from country to country. For example, regulation may be more important in some countries than speed, while in others, reach might be the top priority.

Bi-lateral payment corridors with "near" real-time service levels are possibly the simplest services to offer, whereas to offer a global, scalable, fast, cost-effective service will require careful consideration of all the implications outlined in this paper.

These considerations should take into account some of the current initiatives in the market, as well as the ISO 20022 messaging and interoperability activities underway in many of the wholesale real-time gross settlement (RTGS) markets.

Potential commercial models and risk frameworks should be assessed and incorporated early within the decision-making process.

The challenges outlined in this document, along with potential mitigations and solutions will be explored in more detail in a follow up paper later this year.



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