Unlocking frictionless cross-border payments

A targeted analysis and guide to tackling structural frictions in cross-border payments

Swift

Payment Optimisation Playbook

March 2026

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Introduction

Rosemary Stone
Chief Corporate Officer

Foreword

Imagine a world where remittances arrive in an instant, small businesses pay oversees suppliers in seconds, and corporates move value seamlessly across jurisdictions, enabling faster, more efficient global commerce. It's a landscape where cross-border payments feel as intuitive and dependable as domestic transfers – fast, transparent, simple and secure.

This vision is not a distant one; it's a future that's achievable. But for it to become reality, friction that exists in today's payment system must be addressed.

Cross-border payments are the lifeblood of the global economy, underpinning trade, remittances, investment and financial connectivity. As technology has advanced and economies have become increasingly interconnected, customer expectations have evolved too. Recognising the importance of meeting these expectations, the G20 set out clear targets to enhance cross-border payments by 2027.

And progress has been made. On a global level, payments across 80% of markets are quicker than they were in 2023, with a typical transaction moving almost 20% faster. While 75% of payments travelling over Swift reach destination banks within just 10 minutes.

But this last stat only tells part of the story. Data from Swift shows that, on average, in-flight time accounts for less than 20% of the end-to-end cross-border journey. The remaining 80% occurs in the last mile; the time between a payment arriving at the beneficiary financial institution and being credited to the end account or wallet. This is where friction concentrates – and where opportunity lies.

Addressing this friction offers a practical path to improving payment experience without requiring heavy investment in new infrastructure and systems. Emerging technologies, including blockchain, promise a real-time, 24/7 reality. But innovation in cross-border payments will not come from new rails alone. It will emerge from steady progress in resolving structural frictions – improving data quality, harmonising standards, strengthening coordination and enhancing transparency across the full value chain. Without this progress, even the most advanced infrastructure will remain constrained.

Overcoming frictions begins with understanding where they arise, how they interact with one another, and the best ways to tackle them. To establish this, we've undertaken a data-driven assessment of the structural friction affecting cross-border payment speed across a diverse set of markets.

The result is the Payment Optimisation Index – an assessment framework that organises frictions into defined categories, links them to measurable underlying factors, and quantifies their correlation with beneficiary crediting speed, providing industry-wide benchmarks and a common point of reference for action. These insights are brought to life through the Payment Optimisation Playbook, which translates the Index's quantitative evidence into practical priorities and concrete steps for key stakeholder groups.

By aligning on market realities and unifying the industry around the most effective ways to overcome structural friction, we can drive progress towards the G20 goals – unlocking the full potential of today's infrastructure and building a cross-border payment system that works better for everyone.

The industry has made meaningful progress towards driving efficiency in cross-border payments

- Establishing common interoperability foundations for structured and rich cross-border payments data exchange with ISO 20022
- Modernising payment systems and improving operational availability across markets
- Linking payment systems and aligning to a common roadmap of progress under the G20
- Building end-to-end transparency across cross-border payment flows
- A greater diversity of market participants has boosted competition and elevated customer experience
- Exploring the benefits of tokenisation to move new forms of value between digital islands

And yet...

- The industry is falling short of meeting the G20 targets by the end of 2027
- Global policy alignment has not translated into tangible improvements in domestic market implementation
- End users still struggle to get cost transparency and full value delivery
- Geopolitics and technology innovation have led to increased fragmentation of payment systems
- The benefits of adopting structured data and technology modernisation are offset by market frictions
- Divergent regulatory positions create uncertainty

G20 cross-border payment targets aim to make payments faster, cheaper, more transparent and more accessible for end users

Speed

Availability of funds

75% of cross-border payments should be credited to the beneficiary within one hour, with the remainder delivered within one business day.

Cost

End-to-end price paid

Cross-border retail payments to reach a global average cost of 1% or less by end-2027, with no corridor exceeding 3%. Remittances align to the Sustainable Development Goal of reducing the average cost below 3% with no corridors above 5% by 2030.

By end-2027

Transparency

Clarity upfront and tracking

Providers to give users clear, upfront information on the total cost, including foreign exchange rates and all fees across intermediaries, the expected time to receive funds and end-to-end payment status tracking.

Access

Inclusivity and availability

Ensure every corridor offers at least one viable send and receive option for financial institutions and end users, enabling electronic remittances for more than 90% of individuals who wish to use them.

Unlocking a clear path toward faster cross-border payments

75%

of payments on Swift reach the creditor agent within 10 minutes, but delays in the 'last mile' crediting of the beneficiary heavily affect the end-to-end processing time.

In practice, many **structural frictions** surface most visibly in the 'last mile' crediting of a beneficiary making it a natural focal point for improvement.

Fragmented and incomplete data can lead to manual repair, which reduces straight-through processing and transparency across the chain

Complex compliance processes can result in repeat screening, false positives and unpredictable processing times

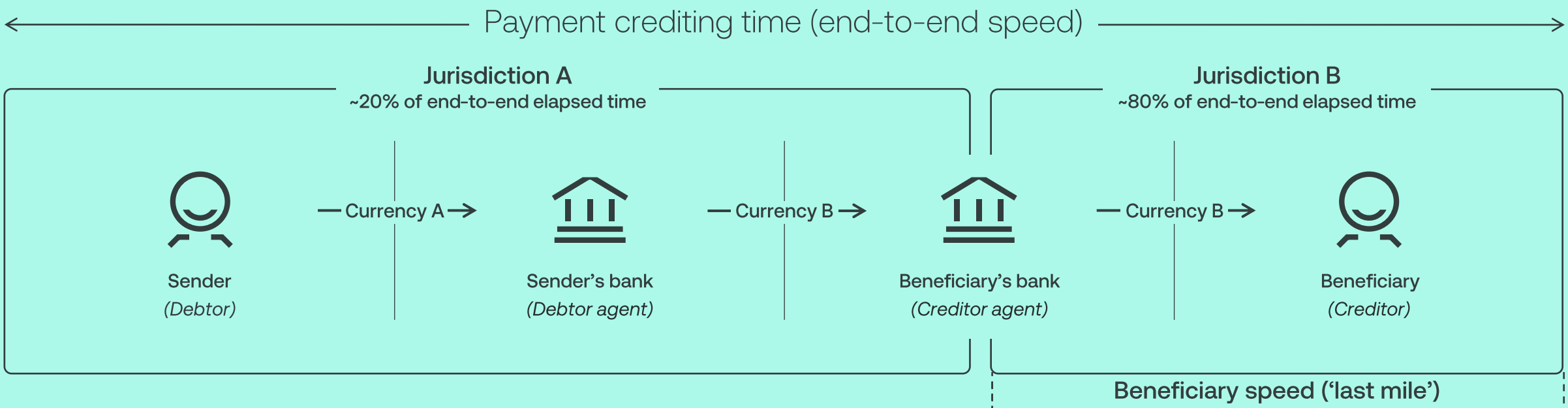
Outdated processes lead to cumulative delays and reduced end-to-end traceability

Limited interoperability between payment systems leads to fragmented routing, slower cross-border flows and limited reach across markets

High funding costs and trapped liquidity drive pre-funding requirements and tie up capital, increasing end-user costs

Structural frictions degrade **speed**, reduce **transparency**, constrain **access** and add **cost**.

Faster cross-border payments start with the ‘last mile’

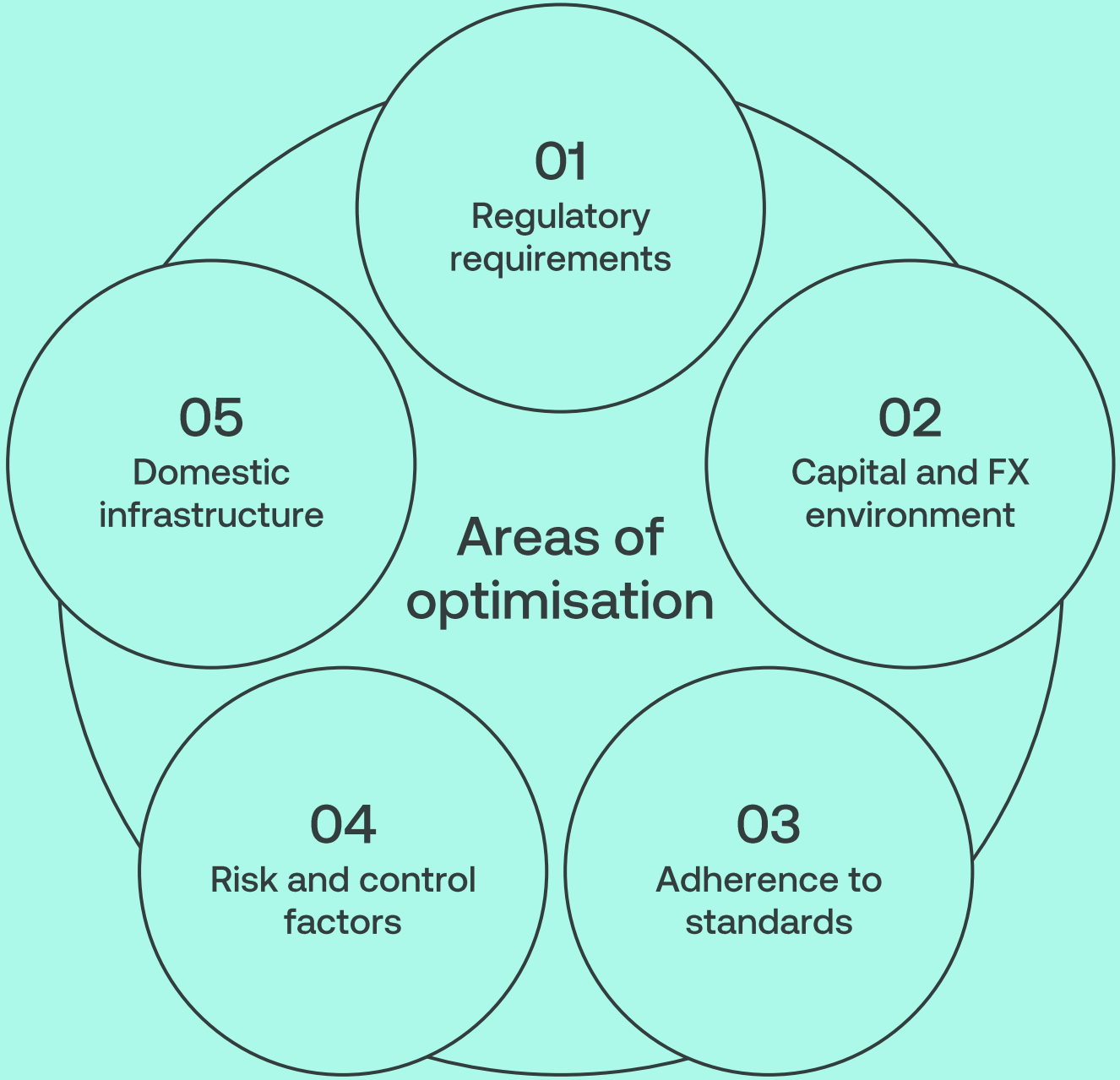


This playbook builds on our paper, Spotlight on Speed 2025, where we explored key frictions impacting the 'last mile' with in-depth qualitative expert interviews.

Download the full report here

The ‘last mile’ refers to the beneficiary-side crediting stage – the period between a cross-border payment reaching the creditor agent and the funds becoming available in the beneficiary's account or wallet.

While the cross-border leg itself is typically completed within minutes, beneficiary-side processing can take several hours before the funds are credited to the beneficiary – this makes the 'last mile' the most critical focus for materially improving overall end-to-end cross-border payment speed.



Five areas to target for optimisation of structural friction

Insights from engagement across 40 markets were consolidated to identify the structural market frictions that have the most significant influence on cross-border payment outcomes, particularly beneficiary crediting speed.

Together they provide a framework that enables consistent benchmarking and prioritisation of the most material improvement levers.

The Payment Optimisation Index provides a global benchmark that quantifies how structural frictions affect cross-border payment speed

A data-driven model for comparing the frictions that impact speed across global markets. It groups observable market conditions into five priority categories and examines how they relate to beneficiary-side crediting time.

The index:

01 Identifies which frictions are linked to faster processing

02 Enables direct comparison of friction profiles across markets

03 Provides the empirical foundation for prioritised actions

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Introducing the Payment Optimisation Index

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The Payment Optimisation Index

Why?

Purpose

The Payment Optimisation Index is a cross-market benchmark that quantifies which structural frictions drive beneficiary-side crediting time and overall end-to-end speed. It highlights where time is typically spent in the ‘last mile’ of a cross-border payment and what slows down or speeds up crediting. Results are anchored on a 2023 baseline, the latest year with complete, consistently available input data across all in-scope markets, ensuring robust, like-for-like comparisons.

The index groups market characteristics into five friction categories: Regulatory requirements, Capital & FX environment, Adherence to standards, Risk & control factors and Domestic infrastructure. Each category is measured using clear, comparable factors.

By linking these conditions to payment speed, the index explains why payments are faster in some markets than others and where targeted changes could have the largest impact on crediting speed.

What?

Scope

5

Prioritised friction categories

8

Measurable contributing factors

39

Markets

Quantitative research
(Regression analysis)

Qualitative research
(Interviews, market research)

How?

Build process

Data gathering

Standardisation

Regression analysis

Insights

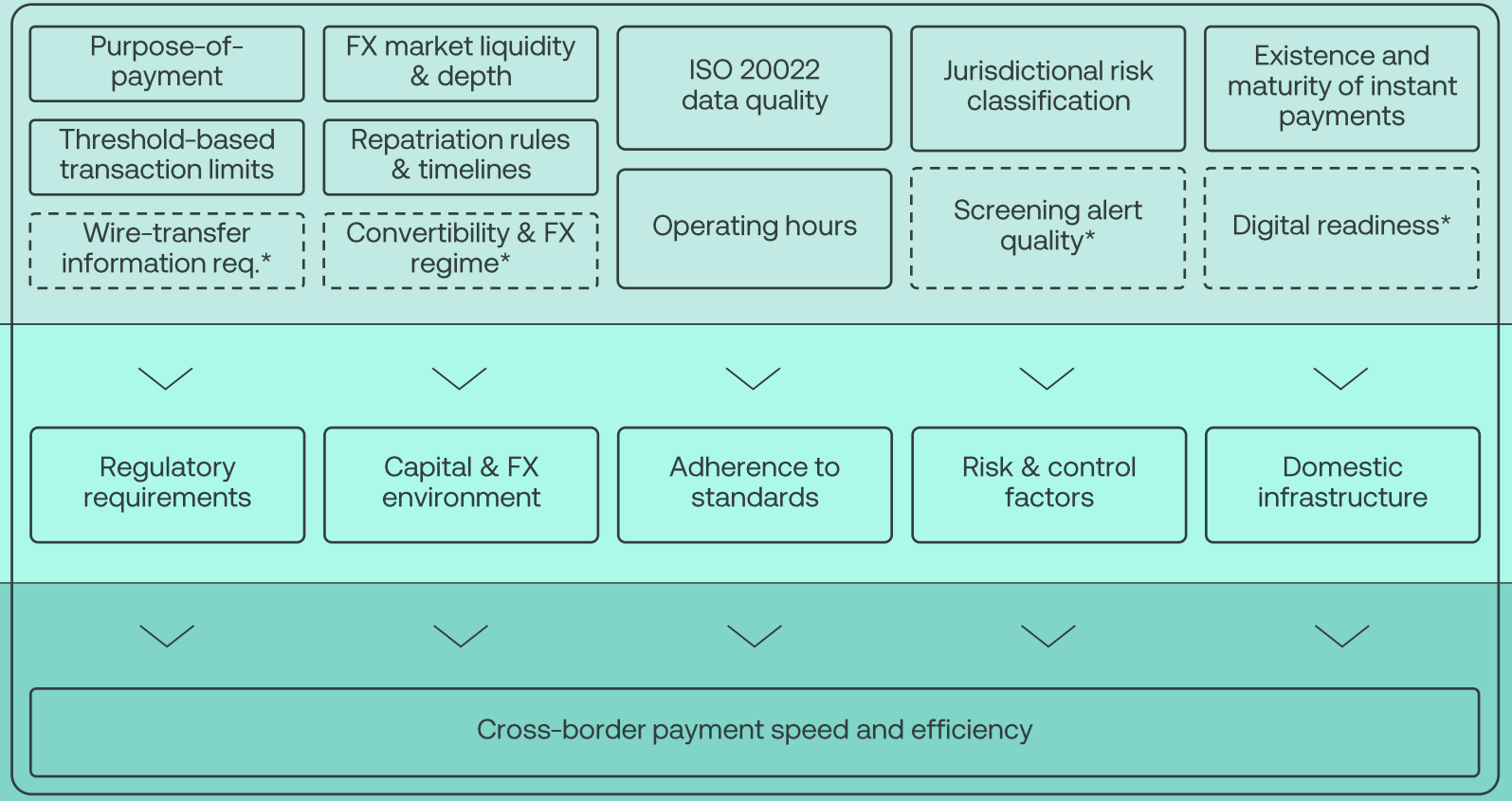
Recommendations

The Payment Optimisation Index quantifies key frictions impacting cross-border speed

Contributing factors of friction categories
These are considered to be the main reasons behind the five key frictions.

They can be quantified by economic and business indices, macroeconomic data and speed statistics.

* No robust data available



The five friction categories
These have demonstrated the greatest impact on cross-border payment speed and efficiency

Payment Optimisation Index
Measures the impact of the key frictions on the speed of cross-border payments

The Payment Optimisation Index reveals that no market excels uniformly across all five friction areas

This underscores the need for targeted strategies rather than a one-size-fits-all approach.

Modern domestic infrastructure creates the foundation for speed, but it is only the starting point.

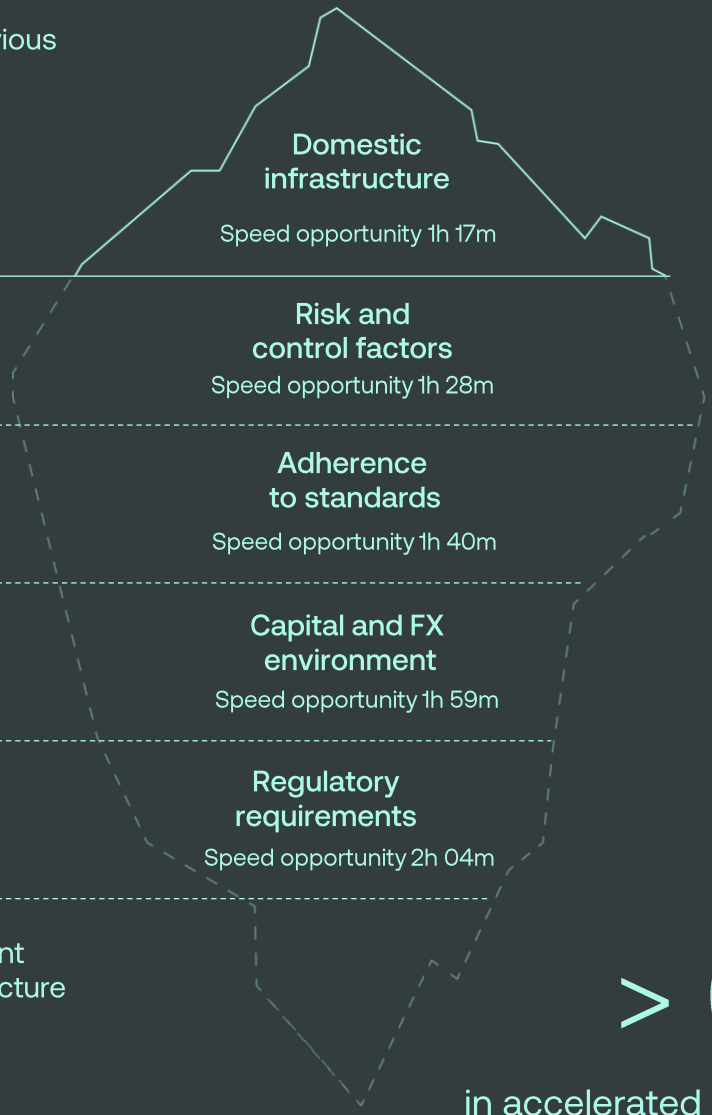
Domestic instant payment systems, digital readiness and core infrastructure provide a basic level of efficiency. However, most improvements in payment speed come from frictions that sit above the rails.

The biggest gains come from tackling regulatory, capital and FX challenges and from stricter adherence to standards. These factors explain most of the differences in beneficiary-side speed.

Real progress requires combining solid technical foundations with targeted action on the structural frictions that have the greatest impact on speed.

The payment optimisation iceberg

Domestic infrastructure is an obvious point of improvement, but other frictions that are less observable have a compounding effect on payment crediting time delays.



Times greater speed improvement potential than domestic infrastructure

Power to unlock

> 6 hours

in accelerated payment crediting time

The impact of friction categories on time to credit varies significantly based on market characteristics

Grouping economy archetypes provides a clearer view of how these frictions play out in practice and how they impact end-to-end payment speeds.

Major advanced and advanced economies achieve faster crediting times but still fall short of the one hour G20 target, even in markets with stable capital and foreign exchange environments, high overlap of settlement windows for major traded currencies, clear regulatory guidance and modern payment rails.

Advanced emerging economies record the slowest crediting speeds, with the **highest frictions concentrated in capital controls**, particularly where restrictive capital and foreign exchange environments and complex regulatory requirements exist, creating bottlenecks that materially slow cross-border transactions.

Overall, the heatmap shows that more predictable, integrated policy environments and mature payment infrastructure correlate with faster crediting, whereas restrictive foreign exchange regimes and complex compliance processes drive the most significant delays.

Friction heatmap

Based on analysis of 39 markets

	Regulatory requirements	Capital & FX environment	Adherence to standards	Risk & control factors	Domestic infrastructure	Improvement required to meet G20 speed target
Major advanced economies (G7)	1.4	1.5	2.9	1.3	0.4	+1hr 53m
Advanced economies (based on IMF categorisation)	0.5	2.3	2.9	1.2	1.0	+3hr 27m
Advanced emerging economies (G20 countries combined with IMF categorisation)	4.6	5.5	3.0	2.5	2.1	+12hr 48m
Emerging economies (based on IMF categorisation)	1.0	4.6	4.1	2.8	3.3	+9hr 23m

Friction score	>5	>4-5	>3-4	>2-3	>1-2	≤ 1
	Very high	High	Elevated	Moderate	Low	Very low

Variation in friction across markets

The Payment Optimisation Index highlights pronounced differences in friction levels across markets and regions, with markets exhibiting materially different structural conditions affecting payment speed.

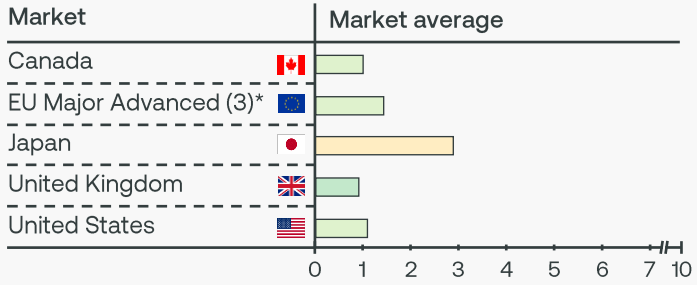
These scores are structural and indicative. They reflect the expected level of friction based on categories captured in the index; market-specific practices, corridor mix and implementation differences can still result in faster or slower performance in practice than the score alone would suggest.

Taken together, this variation provides the context for understanding how friction manifests differently across economy archetypes.

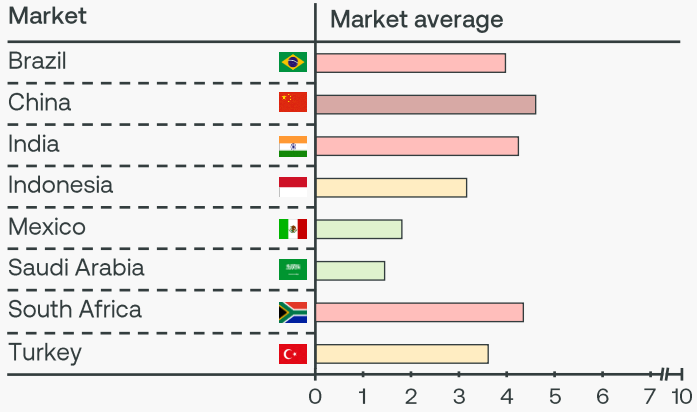
Friction score

>5	>4-5	>3-4	>2-3	>1-2	≤ 1
Very high	High	Elevated	Moderate	Low	Very low

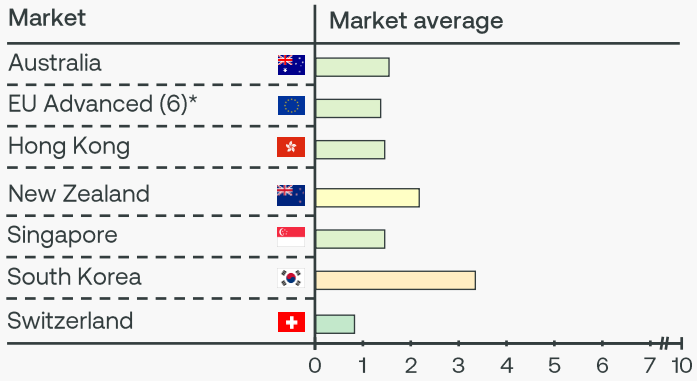
Major advanced economies



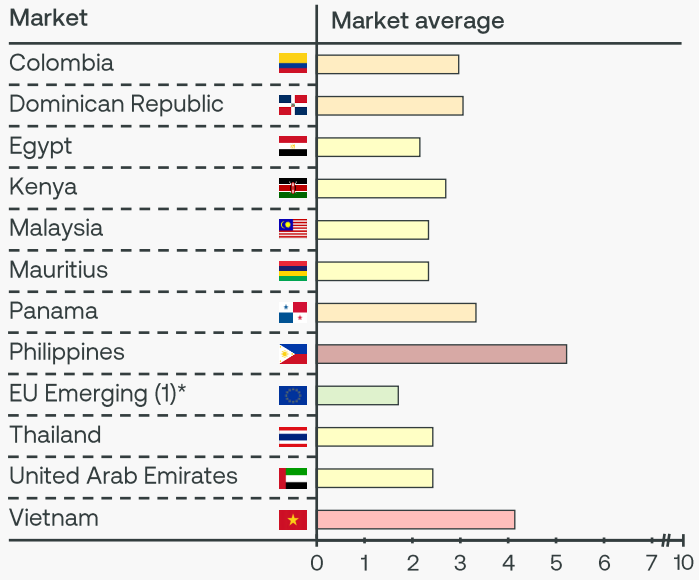
Advanced emerging economies



Advanced economies



Emerging economies



* For the markets within the European Union we have grouped the countries within each category to reflect broad alignment of structural frictions, number indicates the number of grouped countries

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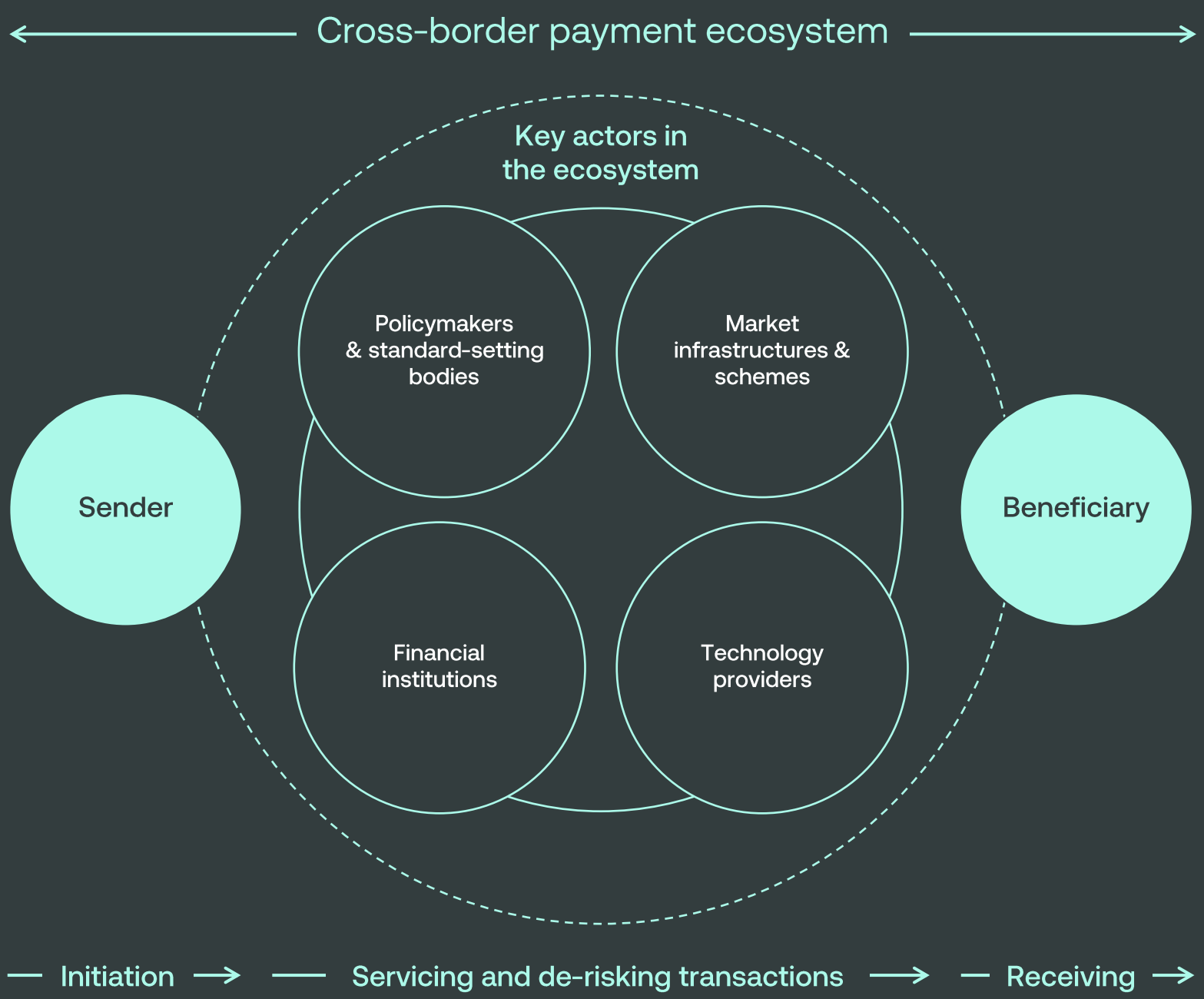
Deep dive into friction categories:

Key insights and improvement measures

Swift



Each actor plays an essential, but sometimes unseen, role in moving a payment from intent to settlement.

While their responsibilities, priorities and contexts differ, they are frequently affected by the same underlying **structural frictions**. Recognising these shared challenges is key to driving collective, systemic change

Across roles and contexts, the industry faces challenges in cross-border payment processing

Policymakers and standard-setting bodies

Operating in a rapidly evolving, systemically important financial ecosystem requires managing complex responsibilities and competing priorities.

Policymakers must balance stability with innovation while navigating fragmented data, lengthy consultations and the need to align regulatory intent with practical realities.

Slow feedback loops and constantly evolving global standards make coordination harder, while rapid innovation can outpace regulatory tools and stretch resources.

Cross-border complexity increases pressure, making timely, evidence-based decisions essential.

Market infrastructure and schemes

Modernising systems and achieving global alignment is complex. Many market infrastructures were built with domestic-first designs, limiting cross-border functionality and scalable interoperability.

Low margins and uncertain benefits can weaken the business case for investment, while legacy technology adds cost, reduces agility and slows upgrades. Fragmented rulebooks, inconsistent operating hours and varied ISO 20022 adoption further impede corridor alignment.

Securing ecosystem-wide buy-in, harmonising data and standards and navigating public and private-sector alternatives all demand clarity, collaboration and sustainable funding.

Financial institutions

Financial institutions face rising compliance burdens, fragmented purpose-of-payment and threshold rules and legacy systems that slow processing and increase manual reviews.

Poor data quality, inconsistent ISO 20022 usage, FX-liquidity constraints and nostro funding delays further impact crediting speed. High false positives, duplicated due-diligence steps and cut-off-driven queues add operational friction.

Meanwhile, customers expect fast, predictable, transparent services, putting pressure on institutions to modernise, streamline controls and defend competitiveness against agile, low-cost entrants.

Technology providers

Technology providers must drive innovation while navigating fragmented standards, inconsistent regulatory requirements and complex multi-jurisdiction compliance.

Scaling solutions is challenging: global players lack local nuance, while smaller providers face resource constraints and long enterprise sales cycles. Interoperability demands – across ISO 20022, APIs, RTGS and instant payment rails – add integration overhead.

Adoption depends on incumbent institutions modernising legacy cores and embracing always-on processing, meaning ROI is uncertain and progress often relies on ecosystem-wide alignment and coordinated change.

Friction 1

Regulatory requirements: Overview

Introduction

Regulatory requirements influence how cross-border payments are documented, checked and reported before crediting.

It is shaped by two elements:

1. Purpose-of-payment information
2. Value thresholds triggering checks or approvals

When rules are clear and embedded in automated flows, payments move seamlessly. When obligations are broad, fragmented, or require manual outreach, delays occur at the last mile.

Cross-border payment speed depends on whether regulatory checks fit seamlessly into automated flows or are slowed by documentation demands, threshold triggers and inconsistent standards.

Friction drivers in this environment

Friction emerges when regulatory goals, such as AML/CFT, balance-of-payments and customer protection, are enforced through controls that require manual checks or rely on incomplete data.

Two main drivers stand out:

Driver 1: Documentation slows the pace

Broad requirements for purpose-of-payment information and supporting documents slow payment crediting, especially when sender-provided data must be revalidated, or when code sets are not standardised. When this happens, straight-through processing breaks down, automation fails and manual outreach becomes the norm.

Driver 2: Thresholds trigger bottlenecks

Low-value limits or pre-approvals create step-changes in speed, often forcing payments above certain amounts out of automated flows for manual checks. Financial institutions will frequently add stricter internal cut-offs than regulation requires, amplifying delays

What does this mean?

Delays usually stem from overlapping rules, not one requirement. Where documentary checks are required for a wide range of transactions, thresholds trigger reviews frequently, and purpose-of-payment data is non-standard or incomplete, payments drop out of straight-through processing and into manual repair.

Clear, consistent, standardised frameworks reduce friction and improve predictability.

Relevant to

- Policymakers & Standard-setting bodies
- Market infrastructures & schemes
- Financial institutions

Regulatory requirements

Advanced economies stand out: Purpose-of-Payment and value-based gates are light-touch, keeping last-mile release predictable

Analysis based on data from 2023 and does not reflect developments that may have occurred in individual markets since then.

Contributing factor	Findings by archetype
Purpose-of-Payment and supporting documents	**Major advanced economies:** Purpose-of-Payment (PoP) is generally light-touch and rarely a consistent last-mile control (e.g., EU, Canada); Japan is a useful contrast where PoP capture can be more embedded in local practice, occasionally triggering manual handling. **Advanced economies:** Consistently low-friction PoP environments (e.g., Australia, Singapore, EU, Switzerland, Hong Kong, South Korea), so follow-ups are typically exception-based rather than a default requirement. **Advanced emerging economies:** Higher frictions reflect more frequent PoP verification and documentary follow-ups (clearest in China and India), with additional controls also visible in Indonesia and Turkey. **Emerging economies:** Outcomes are mixed – several remain relatively PoP-light in practice (e.g., Malaysia, UAE, Egypt), while the Philippines and Vietnam have higher PoP requirements.
Threshold-based transaction limits and pre-approvals	**Major advanced economies:** Explicit value thresholds are generally limited; where value-based requirements exist, they are often reporting-oriented rather than pre-approval "hard stops" (e.g., Germany), so any delay impact depends mainly on whether reporting/screening is automated or manual. **Advanced economies:** Typically, few material value-linked requirements (e.g., Australia, Singapore, EU, Switzerland, Hong Kong, South Korea), so this factor rarely drives last-mile delay. **Advanced emerging economies:** Higher-value flows are more likely to trigger additional checks or documentation (most evident in China and India; also visible in Indonesia, Turkey, South Africa). **Emerging economies:** Formal value thresholds are not always the main mechanism; however, higher-value payments can more often move into enhanced review processes (e.g., information requests, additional compliance checks), increasing manual touchpoints.

Economy archetypes

Major advanced economies	2.1
Advanced economies	0.0
Advanced emerging economies	4.3
Emerging economies	0.8

Major advanced economies	0.7
Advanced economies	1.0
Advanced emerging economies	5.0
Emerging economies	1.3

Friction score

>5	>4-5	>3-4	>2-3	>1-2	≤ 1
Very high	High	Elevated	Moderate	Low	Very low

Friction 1

Regulatory requirements: Insights

Regulatory delays are driven by purpose-of-payment reporting and beneficiary data requirements that trigger manual repair, making upfront data capture and validation critical.

Purpose-of-payment reporting is the dominant regulatory driver of last-mile delays

Purpose-of-payment (PoP) and related balance-of-payments reporting emerge as the most frequently cited regulatory reason for holding inbound payments, as funds are often not credited until the required PoP information has been collected, validated and mapped to local code sets at the beneficiary financial institution.

Threshold-based PoP and documentation rules create step-changes in friction for higher-value payments

Many markets require additional PoP validation and, above specific value bands, invoices, contracts or other supporting documents before crediting, so payments that cross these monetary thresholds move from straight-through processing into manual review queues, extending processing times particularly for larger tickets.

Financial institutions' conservative implementation amplifies regulatory frictions beyond the letter of the rules

Domestic consultations show that, given interpretive uncertainty and varying risk appetites, institutions often set internal PoP and documentation thresholds below regulatory cut-offs and rarely use available exemptions, meaning that a broader share of low- and mid-value payments are subjected to regulatory checks than the rulebook strictly requires.

Regulatory data-quality expectations and name-account matching turn minor data issues into repair cases

Requirements for complete beneficiary and PoP data, combined with name-account matching rules, mean that missing fields, inconsistent identifiers or small spelling differences are frequently flagged for manual investigation and customer outreach, interrupting straight-through processing and introducing unpredictable delays before crediting.

High regulatory data demands make upstream capture and pre-validation critical for maintaining speed

Financial institutions and industry reports highlight that robust front-end capture and pre-validation of PoP, beneficiary and other regulatory fields across channels are essential to prevent regulatory data gaps, since poor-quality inputs disproportionately drive repairs, investigations and slower processing at the beneficiary leg.

Regulatory requirements

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Threshold-based transaction limits In many markets, static value-based thresholds trigger “hold-by-default” manual reviews and evidence requests, even for low-risk payments. With growing cross-border volumes, a higher number of payments are entering manual review queues impacting global speed statistics.	Risk-tiered thresholds can minimise unnecessary payment holds	Risk-tier criteria and low-risk exemptions, including clarity on when “credit first, review later” can be acceptable and on the high-risk triggers that may warrant pre-credit holds	PO, FI
		Publicly available, standardised minimum information requirements by risk tier, enabling overseas remitting institutions to capture required data at payment initiation and reduce avoidable inbound holds	PO
Purpose-of-payment / Threshold-based transaction limits Information requests, including for threshold and regulatory checks, are often handled inconsistently and manually, with limited status visibility, which prolongs holds at the receiving financial institution.	Scheme-level case management for information requests can reduce inbound delays	Centralised scheme case management and transparency for threshold holds, covering standard reason codes, minimum required information, and case status and timelines	PO, MI, FI
		Digitised and automated case handling, enabling structured request and response exchange, routing, and measurable timelines without manual follow-up	FI, TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Regulatory requirements

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Purpose-of-payment Multiple similar fields that identify or categorise the purpose behind a payment cause confusion and lead to manual interventions to review/revise the purpose of a payment. Where field usage is clear, code-sets across market infrastructures are not aligned.	Standardised regulatory reporting of payment purpose codes can reduce avoidable compliance holds	A baseline approach to regulatory reporting of payment purpose, including a small structured code set with clear definitions to reduce free-text and inconsistent interpretation	PO, MI, FI, TP
		Mapping of harmonised code set to international Balance of Payment reporting, with consistent purpose-of-payment code sets across all market infrastructures within a jurisdiction	PO, MI, FI, TP
		Each market publishes and mandates machine readable code sets with practical guidance around usage rules, guidance on scrutiny and reporting pertaining to individual codes within payment schemes	PO, MI, FI, TP
Purpose-of-payment Where regulatory expectations and decision timelines are unclear or interpreted inconsistently across corridors and case types, institutions apply precautionary holds and additional checks to mitigate compliance risk, increasing rework and delaying beneficiary crediting.	Clear regulatory expectations and timelines can reduce precautionary holds and rework	Clarity of regulatory requirements on expectations and timelines, including the minimum required checks and information by corridor and case type, to reduce precautionary “add-ons” by financial institutions	PO, MI, FI, TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Friction 2

Capital and FX environment: Overview

Introduction

The Capital & FX environment describes how easily incoming cross-border payments can be exchanged, released and credited in local currency.

It is shaped by two elements:

1. Depth and accessibility of the FX market throughout the day
2. Prescriptiveness of rules for converting or retaining foreign-currency proceeds

These principles determine whether FX conversion is a seamless part of straight-through processing or a bottleneck at the end of the payment chain.

Cross-border payment speed depends on whether FX conversion can be embedded seamlessly into automated flows or slowed by liquidity constraints, prescriptive rules and internal risk controls.

Friction drivers in this environment

Friction emerges when policy frameworks or market characteristics limit the ability of institutions to execute FX transactions quickly, predictably and at scale.

Two main drivers stand out:

Driver 1: Liquidity defines speed

When FX markets are deep and liquid, transactions clear quickly and align with payment cut-offs. If liquidity is thin or concentrated, this can create timing dependencies and unpredictability, making FX the main bottleneck.

Driver 2: Rules dictate flow

Flexible repatriation frameworks allow for quick crediting and customer choice. Strict, prescriptive rules add checks, deadlines and manual routing, breaking automation and slowing payments

What does this mean?

Delays in FX processing usually happen because several factors combine, not just one rule or market feature.

When markets are shallow and regulations are strict, payments can slow down for hours or even days. Financial institutions often add extra checks in these situations to manage risk.

When rules are clear and markets are deep and liquid, FX conversion can happen quickly and automatically, making the end-to-end cross-border payment process flow smoothly.

Relevant to:

- Policymakers & Standard-setting bodies
- Financial institutions

Capital and FX environment

Major advanced and advanced stand out: deep FX markets and open repatriation regimes keep conversion friction low

Analysis based on data from 2023 and does not reflect developments that may have occurred in individual markets since then.

Contributing factor	Findings by archetype
FX market liquidity and depth	**Major advanced economies:** Deep FX hubs make conversion largely seamless for crediting (e.g., US, UK, Japan), so delays more often relate to operational cut-offs rather than liquidity constraints. **Advanced economies:** Liquidity is generally high (e.g., Australia, Switzerland, EU), supporting fast conversion – while smaller markets can still rely more on partner financial institutions for FX in certain corridors, occasionally adding an extra step for handling. **Advanced emerging economies:** Liquidity is more uneven – some markets are deep (e.g., China), while others face thinner conditions or more managed windows (e.g., India, South Africa, Brazil, Mexico), increasing reliance on defined FX windows and exception handling for certain corridors. **Emerging economies:** Thin FX markets are a recurring driver of delays (e.g., Vietnam, Philippines, Kenya, Mauritius, Panama, Dominican Republic, Egypt), where rate sourcing/acceptance and limited liquidity can create more frequent "wait states" before crediting.
Repatriation rules and timelines	**Major advanced economies:** Repatriation requirements are typically absent (e.g., US, UK, Canada, Japan), so this factor rarely creates last-mile holds. **Advanced economies:** "Open" regimes with no repatriation obligation (e.g., EU, Switzerland), supporting predictable processing without repatriation-driven checks. **Advanced emerging economies:** Rules are more likely to be conditional or time-bound (e.g., China allowing proceeds abroad under SAFE registration with repatriation for services trade; in Indonesia export proceeds are subject to repatriation requirements in parts of the economy, which can add checks before crediting; India with fixed export realization timelines and surrender elements). **Emerging economies:** Approaches vary from targeted requirements (e.g., Malaysia repatriation within set timelines; Vietnam broader current-transaction repatriation expectations) to regimes where timelines and surrender can combine into more manual release (e.g., UAE/Egypt in specific sectors or corridors).

Economy archetypes

Major advanced economies	2.9
Advanced economies	4.6
Advanced emerging economies	6.2
Emerging economies	7.7

Major advanced economies	0.0
Advanced economies	0.0
Advanced emerging economies	4.9
Emerging economies	1.6

Friction score

>5	>4-5	>3-4	>2-3	>1-2	≤ 1
Very high	High	Elevated	Moderate	Low	Very low

Friction 2

Capital and FX environment: Insights

Capital and FX frictions are driven by approval-based controls, manual checks and liquidity constraints that delay execution and crediting, especially for higher-value and less liquid currency corridors.

Currency and FX controls requiring approvals create structural delays, especially above thresholds

In many markets, cross-border payments involving FX are subject to prior approval by authorities or must be executed via authorised local institutions, so funds are routinely held until approvals are granted or documents checked, adding one or more days to processing and particularly affecting higher-value transactions where tighter controls apply.

Manual, non-standardised FX-control processes remain under-automated despite large potential speed gains

Industry research highlights that FX and currency-control checks are often executed through manual workflows and bespoke local processes rather than standardised rules and straight-through automation, even though automating these controls is seen as one of the most powerful levers to improve cross-border payment speed without weakening risk management.

Limited liquidity in Vostro and local currency accounts slows processing in illiquid or restricted currencies

Payments can only be executed up to available local currency balances and topping up Vostro accounts in restricted or thinly traded currencies is slower and more complex, so liquidity constraints in certain currencies can extend processing from same-day execution to the next business day.

FX conversion timing, including daily fixing windows and customer rate choices, can hold payments before crediting

In some markets, incoming payments that require conversion are placed on hold until daily FX fixing rates are set or until customers actively accept a proposed rate, meaning that funds remain unfinalised in the system and crediting times are effectively tied to specific market windows or customer behaviour, whereas allowing receipt in foreign currency can bypass these conversion delays.

Deep, high-volume FX corridors in major currencies achieve faster execution than corridors with limited FX liquidity

Financial institutions report that speed targets are more readily achieved in wholesale flows concentrated in well-established USD and other major-currency corridors, while retail, remittance and less-traded currency routes exhibit slower and more variable performance, underlining that corridor depth and FX market liquidity are key determinants of attainable speed.

Capital & FX environment

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Repatriation rules and timelines Currency repatriation and FX-control processes can create long pauses when approvals and document reviews are open-ended or inconsistently applied. These delays may be addressed by setting clear service expectations for last-mile decisioning.	Clear timelines for repatriation and FX-control decisions can reduce “waiting for approval” delays	Clear decision-time service levels, aiming for same-day outcomes where feasible	PO MI FI TP
		Centralised policy guidance to support consistent application across domestic schemes	PO MI FI TP
		Regulation design that enables automated checks and reporting where feasible	PO MI FI TP
FX market liquidity and depth Beneficiary crediting is often delayed in corridors with a high FX volume, when settlements wait for liquidity because nostro accounts lack funds at the right time, and limited visibility and slow top-ups extend queues.	Active nostro liquidity management can reduce queued or failed settlements	Corridor-level liquidity buffers and top-up trigger points to reduce settlement queuing	PO MI **FI** TP
		Near-real-time monitoring of nostro balances to support intraday rebalancing and automated top-ups	PO MI **FI** TP
		Short-term cash-flow forecasting to identify liquidity gaps and recurring shortfalls	PO MI **FI** TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Friction 3

Adherence to standards: Overview

Introduction

Adherence to standards determines how consistently beneficiary-side institutions apply common data and operating standards that enable automated and uniform cross-border payments.

It is shaped by two elements:

1. Quality and reach of ISO 20022 credit notifications
2. Operating window of domestic RTGS systems and its overlap with operating hours across corridors

When ISO 20022-compliant structured data and aligned operating hours across corridors are in place, payments post quickly. Legacy formats and narrow windows force manual fixes and delays.

Cross-border payment speed depends on the alignment of structured data and operating hours to support automation or are undermined by fragmented standards and misaligned windows.

Friction drivers in this environment

Friction emerges when beneficiary-side institutions receive incomplete, unstructured payment data, or cannot process incoming flows because RTGS systems are closed for long periods of the day, limiting overlap across corridors. Both issues lead to manual work, extra reconciliation, and payments rolling into the next processing window.

Two main drivers stand out:

Driver 1: Data quality defines clarity

Rich ISO 20022 messages enable straight-through posting and reconciliation to be seamless. Fragmented standards, MT-to-proprietary translations and reliance on batch notifications push key details into free text, creating ambiguity and slowing payment crediting

Driver 2: Operating hours set the pace

Long RTGS windows that overlap with global settlement hours help to support same-day processing. Short or misaligned windows combined with practices like closing payment queues outside of operating hours pushes payments into the next cycle, adding 12–48 hours of delay

What does this mean?

When poor data quality and narrow operating windows combine, this forces manual repairs and delays payment crediting.

Extended hours return limited benefits if incoming messages lack structure, and rich ISO data cannot accelerate payment processing when systems are closed. Alignment on both fronts is key to faster crediting.

Relevant to:

- Policymakers & Standard-setting bodies
- Market infrastructures & schemes
- Financial institutions
- Technology providers

Adherence to standards

Advanced economies stand out: better ISO reporting and more aligned settlement windows reduce repairs and rollovers

Analysis based on data from 2023 and does not reflect developments that may have occurred in individual markets since then.

Contributing factor	Findings by archetype
ISO 20022 data quality	**Major advanced economies:** Germany/France/UK sit in a "camt.054-ready" cluster, while the US shows more uneven coverage, where credit notifications are still not consistently machine-readable. **Advanced economies:** Many countries are advanced on beneficiary-side reporting (e.g., Ireland, Belgium, Sweden), supporting cleaner straight-through posting; Netherlands/Luxembourg are solid but not best-in-class, so gains are still available through broader camt.054 enablement. **Advanced emerging economies:** Performance is heterogeneous – China and India illustrate how lower camt.054 availability can translate into patchier reporting and more manual follow-ups; recent guidance of Reserve Bank of India has clarified expectations for notification practices, to support more consistent reporting over time; Mexico/Turkey sit mid-pack with scope to lift consistency. **Emerging economies:** Limited camt.054 support among reporting institutions (e.g., Philippines, Vietnam), reinforcing "notification gaps" that push beneficiaries toward manual reconciliation; recent guidance by the Central Bank of the Philippines seeks to strengthen crediting transparency; UAE and Mauritius are more mid-range, while Saudi Arabia and Panama stand out as contrasts.
Operating hours	**Major advanced economies:** Most are well-aligned with the global settlement window (e.g., US, Canada, EU, UK), keeping cut-off driven rollovers low; Japan is the main contrast with shorter effective overlap, which can still create time-zone friction for certain corridors. **Advanced economies:** EU markets cluster with good overlap, and Switzerland also performs well; Ireland is an outlier with higher friction, reflecting less favourable alignment versus the main European cluster. **Advanced emerging economies:** Extended availability (India and Mexico are "near-24h" anchors; South Africa is effectively 24/7), materially reducing cut-off effects; China and Indonesia are good but not best-in-class, while Brazil tends to be weaker due to lower overlap with the global window. **Emerging economies:** Results are dispersed – some are relatively well-aligned (e.g., Saudi Arabia, Kenya, Mauritius, Turkey), while others face higher friction due to limited overlap (e.g., UAE, Egypt) and the Americas show the clearest challenges (e.g., Colombia, Panama, Dominican Republic), where misalignment can push a meaningful share of flows into the next processing cycle.

Economy archetypes

Major advanced economies	4.0
Advanced economies	4.0
Advanced emerging economies	4.5
Emerging economies	4.3

Major advanced economies	1.8
Advanced economies	1.9
Advanced emerging economies	1.5
Emerging economies	3.9

Friction score

>5	>4-5	>3-4	>2-3	>1-2	≤ 1
Very high	High	Elevated	Moderate	Low	Very low

Friction 3

Adherence to standards: Insights

Inconsistent ISO 20022 adoption and limited structured reporting reduce straight-through processing, while non-overlapping operating hours and queue handling extend beneficiary-side crediting times.

Non-standard messaging and uneven ISO 20022 adoption limit automation and slow straight-through-processing

Fragmented legacy MT and proprietary formats, combined with partial or inconsistent ISO 20022 implementation, leave key data unstructured or truncated, driving beneficiary-side repairs and reducing straight-through-processing rates. Addressing uneven adoption remains an ongoing priority, requiring sustained coordination as global standards and practices evolve, particularly to avoid disadvantaging emerging economies.

Limited use of structured intraday reporting delays reconciliation and practical access to funds

Where beneficiaries rely on end-of-day statements or basic credit notices instead of ISO-style intraday camt. 052/053/054 reporting with rich remittance data, matching payments to invoices and updating ledgers remains manual or sub-optimal, so incoming funds are usable later even if they are technically credited.

Limited and non-overlapping operating hours create systematic beneficiary-leg delays

When financial institutions process cross-border payments only during local business hours and lack 24/7 capabilities, payments that arrive after cut-off times are not picked up until the next operating window, which can add 12–48 hours to end-to-end processing in distant corridors.

Queue closures and batch handling further restrict effective processing windows

In some markets, financial institutions close payment queues outside operating hours or process overnight messages in batches as a cyber-risk and operational control, so payments received during those periods wait in the queue until it reopens, directly extending beneficiary-leg processing times even when settlement systems are technically available.

Adherence to standards

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
ISO 20022 data quality Inconsistent or changing domestic market practice requirements and validation rules across participants drive rejects, repairs and manual intervention, which delays beneficiary crediting and reduces straight-through processing.	Predictable domestic market practice requirements and validation can improve data quality and increase straight-through processing	End-to-end adoption of ISO 20022 as the common standard and alignment on a minimum mandatory ISO 20022 baseline guided by CPMI Data Harmonisation and relevant market practice frameworks (for example HVPS+ for RTGS and IP+ for instant payments)	PO MI FI TP
		Transparent publication of usage guidelines and requirements, including visible change intentions and a regular upgrade cadence aligned to market practice releases	PO MI FI TP
		Consistent validation and conformance checks at key control points, including code-list and mandatory-field checks for inbound and outbound flows	PO MI FI TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Adherence to standards

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Operating hours Payments are queued when they arrive outside processing or settlement windows, and unclear cut-offs, holidays reduce predictability.	Standardised and visible operating calendars can reduce cut-off-driven delays	Machine-readable publication of cut-offs, cycles, holidays and maintenance windows	PO MI FI TP
		Alignment of operating and settlement windows across interconnected rails and settlement partners to reduce handover gaps	PO MI FI ~~TP~~
		Publication of real-time operating window status and delay metrics to improve predictability	PO MI FI TP
Operating hours Delays occur when processing stops after hours, planned downtime pauses processing, or handoffs fail and queues build up.	Always-on processing and after-hours coverage can reduce cut-off-driven backlogs	Engineer for 24/7 availability with minimal planned downtime to support extended-hours interoperability and automated reconciliation	PO MI FI TP
		Extended exception handling and back-office coverage for after-hours processing, including queue management, defined case ownership and escalation paths	PO ~~MI~~ FI TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Friction 4

Risk and control factors: Overview

Introduction

Risk & control factors determines how AML/CFT and broader financial-crime checks affect the way incoming cross-border payments are screened, investigated and credited.

It is shaped by one element:

1. Jurisdictional risk classification of the remitting market

These govern whether cross-border payments can pass through risk-based, largely automated controls or fall into manual review queues, triggering delays and operational strain, slowing crediting speed.

Cross-border payment speed depends on whether controls are targeted and proportionate or generate large volumes of alerts and escalations that slow routine flows.

Friction drivers in this environment

Friction emerges when financial-crime controls generate excessive alerts for routine flows or when remitting jurisdictions are assessed as high risk, triggering extra scrutiny in the payment chain.

One main driver stands out:

Driver 1: Tighter risk controls slow processing

In some markets with a conservative risk appetite, financial institutions have put in place particularly stringent control frameworks, for example more four-eyes checks and limited overnight queues, which reduces straight-through processing at the margin and can modestly slow average payment speeds.

What does this mean?

Friction does not stem from the existence of AML/CFT controls, but from how those controls are implemented.

When alerts are poorly calibrated and low quality, or jurisdictions are treated as uniformly high risk, routine payments fall into manual review queues, slowing payment crediting and consuming operational capacity.

Proportionate, risk-based frameworks reduce delays and improve predictability.

Relevant to:

- Market infrastructures & schemes
- Financial institutions

Risk and control factors

Major advanced and Advanced economies stand out: low jurisdictional risk supports faster crediting

Analysis based on data from 2023 and does not reflect developments that may have occurred in individual markets since then.

Contributing factor	Findings by archetype
Jurisdictional risk classification	**Major advanced economies:** Jurisdictional risk is typically low and rarely a binding last-mile constraint (e.g., US/UK/EU/Canada), with checks driven more by institution-level risk appetite than by market flags. **Advanced economies:** Most remain low-friction on country risk (e.g., Australia, Singapore, Switzerland, Hong Kong), so enhanced due diligence is mainly transaction- or counterparty-triggered rather than jurisdiction-triggered. **Advanced emerging economies:** Risk profiles are mixed but generally moderate (e.g., China, India, Indonesia, Brazil, Mexico, Saudi Arabia), meaning extra scrutiny tends to be more targeted (by sector/counterparty) rather than broad-based. **Emerging economies:** Where jurisdictions are FATF-listed or perceived higher-risk, banks often apply more enhanced checks and information requests before release (e.g., Philippines, Vietnam, UAE, Panama); others are closer to baseline controls (e.g., Egypt, Malaysia, Colombia, Dominican Republic, Kenya, Mauritius, Thailand).

Economy archetypes

Major advanced economies	1.3
Advanced economies	1.2
Advanced emerging economies	2.5
Emerging economies	2.8

Friction score

>5	>4-5	>3-4	>2-3	>1-2	≤ 1
Very high	High	Elevated	Moderate	Low	Very low

Friction 4

Risk and control factors: Insights

Risk and control delays stem from high-volume screening alerts and manual review, amplified by conservative internal policies and limited automation, especially in higher-risk corridors.

Manual risk reviews are a core driver of beneficiary-leg delays

When incoming payments trigger sanctions, AML, invalid-detail or market-specific risk rules they are routed into manual review queues, where human intervention and case investigation can extend processing from hours to several days depending on staffing, workload and internal policies.

High screening alert volumes and false positives create operational bottlenecks

Fuzzy sanctions screening and expanding designation lists generate large numbers of potential matches with very low true-hit rates, so operations teams spend significant time clearing benign alerts, which slows the release of some payments and reduces capacity to handle genuinely risky cases quickly.

Flows involving higher-risk jurisdictions systematically face slower processing

Payments originating from, routed via, or destined to jurisdictions perceived as higher risk are more frequently flagged for enhanced due diligence or escalation, and because sanctions and AML rules are enforced on a strict-liability basis without de minimis thresholds, even low-value transactions can be delayed while financial institutions prioritise compliance over speed.

Conservative internal risk policies and uneven automation amplify frictions beyond regulatory minimums

Institutions often add internal controls on top of formal requirements and have not yet fully deployed advanced analytics to target truly high-risk flows, so a wider set of transactions is subject to manual review and variable handling times than strictly required, leading to slower crediting in some financial institutions and markets than in others.

Risk & control factors

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Jurisdictional risk classification In higher-risk or restricted corridors, screening often generates repeated false positives that push low-risk payments into manual review queues, delaying beneficiary crediting.	Better screening precision can reduce false-positive holds in higher-risk corridors	Improved payment preparation and pre-validation using structured data, like ISO 20022 and cross-border confirmation of payee, together with aligned name and identifier fields, to improve screening match quality and reduce false positives (including transliteration and alias handling)	PO, MI, FI, TP
		Clear routing for screening exceptions, with defined queues, timelines and escalation so low-risk items clear quickly and genuine cases are prioritised	PO, MI, FI, TP
		Regular tracking of false-positive rates and time-in-hold by corridor and alert type, with periodic recalibration of rules and workflows	PO, MI, FI, TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Friction 5

Domestic infrastructure: Overview

Introduction

Domestic infrastructure determines how well a market's digital infrastructure and payment rails support fast, always-on processing once a cross-border payment reaches the local leg.

It is shaped by one element:

1. Existence and maturity of domestic instant-payment infrastructure

These determine whether incoming credits can move in real time or fall back on slower batch processes. Markets with mature instant-payment rails achieve faster crediting.

Cross-border payment speed depends on whether instant-payment rails interoperate to enable real-time credits or are undermined by legacy systems. While multiple payment rails interlink bilaterally or multilaterally, impact at scale is yet to be achieved.

Friction drivers in this environment

Friction emerges when customers lack access to digital channels or when domestic payment infrastructures cannot move funds in real-time.

When payment rails do not carry multiple currencies , they are often limited to relay cross border transactions.

One main driver stands out:

Driver 1: Rails restrict the last mile

Markets without mature instant-payment schemes, or with narrow coverage and low transaction caps, fall back on batch processes or legacy credit transfers. Even high digital adoption cannot offset delays when real-time rails are absent or restricted.

What does this mean?

Real-time rails deliver little benefit if customers still rely on offline channels, while high digital adoption cannot accelerate payment crediting speed when systems run on batch cycles.

Aligning on both dimensions is essential for speed.

Relevant to:

- Policymakers & Standard-setting bodies
- Market infrastructures & schemes
- Financial institutions
- Technology providers

Domestic infrastructure

Major advanced and Advanced economies stand out: mature domestic rails support faster crediting

Analysis based on data from 2023 and does not reflect developments that may have occurred in individual markets since then.

Contributing factor	Findings by archetype
Existence and maturity of instant payments	**Major advanced economies:** Domestic rails are mature and instant payments are widely enabled (broad use-case coverage, high limits, high availability), so the local leg is rarely the limiting factor, with only modest residual frictions. **Advanced economies:** Many combine established RTGS with well-enabled instant-payment schemes (broad functional coverage) supporting fast beneficiary crediting once funds arrive. **Advanced emerging economies:** Instant payments exist but practical use can be shaped by caps and coverage – e.g., India, Indonesia and China illustrate very different maximum limits; this creates a clear opportunity to expand enabled use cases and raise caps where needed for broader adoption. Brazil stands out as a strong example with a highly enabled scheme (Pix) supporting broad instant usage. **Emerging economies:** Dispersion is widest – some have scalable rails but with tighter caps or narrower use (e.g., UAE, Egypt, Turkey, Philippines), while others show maturity gaps, making the domestic leg a more frequent contributor to delays (e.g., Vietnam, Dominican Republic, Panama).

Economy archetypes

Major advanced economies	0.4
Advanced economies	1.0
Advanced emerging economies	2.1
Emerging economies	3.3

Friction score

>5	>4-5	>3-4	>2-3	>1-2	≤ 1
Very high	High	Elevated	Moderate	Low	Very low

Friction 5

Domestic infrastructure: Insights

Domestic instant payment infrastructure enables faster last mile crediting, but benefits depend on financial institutions having modern, standards-compliant systems to route cross-border credits into it.

Domestic 24/7 instant-payment infrastructures shape last-mile crediting times

Markets with mature real-time domestic rails and clear rules for using them for incoming cross-border flows can route credits over instant systems instead of using batch cycles, materially shortening beneficiary crediting times.

Cross-border enabled fast-payment systems and real-time liquidity compress cross-border settlement times

When domestic fast-payment systems are interconnected across jurisdictions and financial institutions manage liquidity in real time, many cross-border transactions can ride instant rails end to end and complete in seconds or minutes rather than hours or days.

Uneven technology investment leaves some markets behind on speed and access

Jurisdictions with less developed digital infrastructure, connectivity and back-office tools cannot scale modern cross-border payment services broadly, so customers in these markets experience slower processing and more limited access than those in digitally advanced economies.

Modern, API-enabled cores are needed to translate network and scheme improvements into speed

Without ISO-compliant and API-enabled payment applications, financial institutions struggle to integrate instant payment schemes and value-added network services into straight-through processing, so infrastructure-level speed gains are not fully visible to end users.

Digital channels and self-service front-ends determine access to faster processing and payment visibility

Where customers can initiate and track cross-border payments via online and mobile channels, they are more likely to be routed to faster options and receive real-time status updates, while reliance on branch-based or legacy interfaces limits both adoption and transparency.

Institution readiness determines whether rail upgrades translate into faster crediting

Even where domestic instant payment rails exist, outdated core systems, limited integration and weak digital channels at financial institutions can stop cross-border credits from being routed through instant rails, so crediting times remain closer to legacy batch cycles.

Domestic infrastructure

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Existence and maturity of instant payments Beneficiary crediting slows when instant-payment schemes cannot process cross-border flows or when rule and data requirements are misaligned to international standards.	Cross-border enablement of domestic instant payment rails can reduce beneficiary crediting delays	Adopt a one-leg-out (OLO) model, allowing one scheme to initiate cross-border instant payments even if the receiving side is not yet fully enabled	PO MI FI TP
		Open and accessible scheme rulebooks and requirements, including proactive sharing of updates to support consistent implementation across participants	PO MI FI TP
		Mandated UETR usage end-to-end across cross-border instant flows, including leg-out and leg-in, and regular tracker status updates to support end-to-end visibility	PO MI FI TP
		Pre-validation capabilities that work across schemes, including compatibility between domestic confirmation-of-payee and cross-border pre-validation services	PO MI FI TP
		High encouragement for participants to be ready for cross-border instant payments	PO MI FI TP
		Credit confirmation to the beneficiary, using a consistent status message or tracker update to confirm posting	PO MI FI TP
		Corridor performance transparency, including availability, speed distribution and fail reasons, to support prioritised remediation and drive straight-through-processing	PO MI FI TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

Domestic infrastructure

Improvement measures and considerations

Challenge	Improvement measure	Possible actions to consider	Relevant stakeholder groups
Existence and maturity of instant payments Cross-border flows often fall back to slower routes because connectivity is fragmented and technical requirements differ across instant infrastructures.	Interoperability for instant payments can reduce fragmentation and increase instant-rail usage	Standard connectors and common interfaces across multiple instant infrastructures, with consistent ISO 20022-aligned message handling	PO MI FI TP
		Routing across available rails so eligible payments are directed to instant-capable paths rather than defaulting to slower routes	PO MI FI TP
		Reusable onboarding and conformance patterns, including test packs and implementation guidance, to support consistent cross-market connectivity	PO MI FI TP

Stakeholder group key

PO: Policymakers & Standard-setting bodies

MI: Market infrastructures & schemes

FI: Financial institutions

TP: Technology providers

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The industry has shared responsibilities to overcome structural challenges in cross-border payment processing

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02

Longer term investment planning beyond 2027 to maintain an aligned cross-border roadmap and continued harmonising of industry standards

03

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04

Repeatable models that scale proven corridor interoperability solutions from pilot to production in an open and inclusive manner

05

Evidence-based, data-driven use cases and ROI to ground decisions under scrutiny and justify modernisation investment

06

Practical, actionable guidance to streamline compliance processes and reduce unnecessary operational effort

Where Swift continues to play a unique role

As a neutral, globally inclusive cooperative, we're trusted to move the world's GDP across our network roughly every three days. Between over 11,500 institutions, more than 220 countries and territories, and four billion accounts.

A global public good, our mission is to ensure value moves safely and efficiently through trusted standards, resilient infrastructure and industry collaboration.

For over 50 years, we've maintained the highest levels of operational excellence, enabling our community to move value with confidence every day.

Working with our members, we're modernising the end-to-end transaction lifecycle – driving automation, strengthening interoperability and simplifying processes. We also provide a trusted forum for the financial community to address shared challenges, align on standards and shape the future of payment connectivity.

As we continue to enhance our network through real-time capabilities, improved interoperability and emerging technologies, progress depends on collective action. Standardisation gaps, policy divergence and inconsistent data cannot be solved by any single organisation.

By partnering with institutions across both public and private sectors, we can remove these barriers and accelerate meaningful progress.

The future of payments will be multi-model, multi-choice, everywhere, all at once.

The winners will deliver the best experience, while taking advantage of optimised liquidity.

Multiple chains and rails

Existing fiat networks will interact with new blockchains and payment networks, seamlessly.

Coexistence of fiat and digital money

Stablecoins, tokenised deposits, CBDCs – new digitised forms of value will coexist with traditional money, each performing its own purpose

Unlocking liquidity

Tokenisation has the potential to free up billions in capital by enabling T+0 settlement, increasing the velocity of money and efficiency of capital

User experience as a differentiator

End-customers want their payments to move quickly, safely and transparently, 24/7, 365 days a year – the winners will be the ones that deliver the best experience, regardless of rail, chain or asset

We’re elevating the customer experience on Swift as we lay the foundations for the next generation of payments on our trusted infrastructure

Delivering a future built on trust:

We’re delivering the future of payments on a global scale, improving how fiat cross-border payments work today, while building the foundations for how digital assets move tomorrow.

01 Optimising today’s trusted rails

02 Building the rails of the future

03 Designed to be interoperable

Underpinned by the scale, reliability and resilience that the world’s global financial community trusts and depends on

Setting a new standard for experience on today's trusted rails

We're optimising existing rails to deliver best-in-class cross-border payments at scale

01

Front end

Enabling institutions to offer a compelling digital experience

Making cross-border payments simpler and more intuitive for end users, reducing friction at initiation

Delivering transparency end-to-end, with greater clarity on cost, timing and status

Providing a consistent, seamless customer journey across markets, financial institutions and channels

Inter-bank

Setting new rules for existing rails

Defining a stronger economic framework, aligning incentives across participating institutions

Agreeing to a common rulebook & multilateral SLAs to strengthen accountability and consistency

Reinforcing operational excellence and resilience across the network

Last-mile

Working with key players to reduce frictions

Strengthening alignment with domestic PMIs to ensure consistent outcomes

Optimising routing to domestic rails for faster credits & confirmations

Partnering across the public and private sectors to remove last-mile barriers

The result

A step-change in the cross-border experience – aligned with customer expectations and the G20 targets. All delivered on Swift's trusted infrastructure.

Building the rails of the future

Extending Swift's infrastructure, standards and expertise to unlock a tokenised future and enable real-time, 24/7 digital payments

Connectivity

Enabling seamless access to digital assets

Enabling institutions to seamlessly access digital assets, using trusted Swift connectivity

Orchestrating transactions across assets and networks, through one consistent access layer

Extending trusted Swift connectivity into new digital ecosystems, avoiding fragmentation

Ledger

Enabling seamless 24/7 digital settlement leveraging blockchain

Powering bank-issued digital money, on a Swift-grade shared ledger

Unlocking secure, 24/7 interbank transactions, across borders and systems

Coordinating settlement and liquidity, across financial institutions, currencies and asset types

Standards

Making digital transactions consistent and compliant

Defining common data and compliance models, aligned to ISO standards

Embedding market rules and control logic, across digital payment flows

Enabling interoperable execution across institutions, without bespoke integrations

02

The result

Cross-border payments redefined – interoperable, compliant and built for the digital era.

Designed to be interoperable

Built to be integrated into current technology stacks, so existing Swift connections can provide seamless access to the existing and tokenised worlds

Built on trusted foundations

Building on resilient and dependable infrastructure, trusted by the world's most important institutions

Leveraging ISO 20022, BIC, and GPI as common foundations.

Minimising change and risk by integrating into current technology stacks.

Preserving reach, resilience and legal certainty

Multiple rails, one network

A common orchestration layer to align identity, compliance, timing and rules across account-based and tokenised systems

End-to-end tracking and confirmation, regardless of settlement path

Avoiding liquidity traps and operational reworking caused by fragmented models

Turning interoperability from aspiration into execution

Future-ready by design

Connecting tokenised value into the existing global ecosystem

Scaling safely with rulebooks, standards and regulatory engagement

Supporting new forms of money without digital islands

Making the future additive, not disruptive

03

The result

Seamless access to today's rails and tomorrow's tokenised future – grounded in compliance, trust and global scale.

Contents

Unlocking frictionless cross-border payments

A targeted analysis and guide to tackling structural frictions in cross-border payments

Swift

Appendix

Glossary of terms

Every playbook has its own language.

This glossary is your shortcut to understanding ours - a simple guide to the words that shape the story we're telling and the journey we're taking together.

Friction category
A group of related structural factors that influence how quickly cross-border payments are processed. Each category represents a specific dimension of the payment environment.

Contributing factor
A specific, measurable element within a friction category that directly affects payment speed. These factors provide the granular detail that feeds into the overall category score.

Economy archetype
A simplified model or classification that represents the typical structural and behavioural characteristics of an economy. It groups economies into broad types based on shared features.

Payment crediting time
The time it takes for funds from a cross-border payment to be posted to the beneficiary's account after the payment is initiated. End-to-end speed (in-flight speed + beneficiary speed).

In-flight Speed
Time for the cross-border leg. A transaction enters the network until credited to the creditor agent.

Beneficiary Speed
Time taken for the Creditor Agent to make the funds available for the Creditor.

Major advanced economies
Classified by the IMF as advanced economies that are G7 members.

Advanced economies
Classified by the IMF as advanced economies excluding the G7.

Advanced emerging economies
Classified by the IMF as emerging market that are G20 members.

Emerging economies
Classified by the IMF as emerging economies or low-income developing economies excluding G20.

Each friction category is built on measurable, comparable structural drivers

Note: Due to data limitations, some contributing factors did not meet the statistical threshold to be carried forward in the quantitative analysis, but they remain material sources of friction and are therefore assessed qualitatively.

Friction categories	Contributing factors	Contributing factor descriptions
Regulatory requirements	Purpose-of-payment and supporting documents	Broad purpose-of-payment and document requirements push more cross-border flows into manual review, increasing regulatory frictions.
	Threshold-based transaction limits and pre-approvals	Low reporting or approval thresholds mean typical ticket sizes trigger extra steps, raising regulatory frictions on cross-border payments.
	Wire-transfer information requirements	Missing or inconsistent originator and beneficiary data triggers repairs and manual interventions, reducing STP rates.
Capital and FX environment	FX market liquidity and depth	Shallow FX markets force financial institutions to batch conversions, increasing capital and FX frictions through more missed cut-offs.
	Repatriation rules and timelines	Repatriation or surrender rules add extra checks before funds can move or be used, raising capital and FX frictions.
	Currency convertibility and FX regime	Fewer convertible currencies and more administratively managed FX regimes, for example hard pegs, add approvals and constrain conversion execution.
Adherence to standards	ISO 20022 data quality	Limited ISO 20022 usage leaves data unstructured, reducing STP rates and increasing standards frictions for cross-border credits.
	RTGS operating hours and global-window alignment	Short or poorly aligned RTGS hours restrict settlement windows, increasing standards frictions through more delayed or next-day postings.
Risk and control factors	Jurisdictional risk classification	Jurisdictions perceived as high risk attract enhanced due diligence, increasing risk and control frictions on cross-border flows.
	Screening alert quality	High false-positive rates generate more screening holds and manual case handling, increasing risk and control frictions by delaying release and posting of payments.
Domestic infrastructure	Existence and maturity of instant payments	Absent or immature instant payment schemes force reliance on batch rails, increasing technical frictions in the last mile of cross-border credits.
	Digital readiness	Lower digital maturity limits automation, customer interaction and exception handling, increasing technical frictions through more manual processing.

Payment Optimisation Index methodology

Data sources

Note: Across the index, a lower score consistently reflects fewer structural frictions, while a higher score reflects greater constraints

Friction category	Contributing factor	Data sources	Years used	Notes
Regulatory requirements	Purpose-of-payment and supporting documents	IMF AREAER	2023	Seven-category documentation matrix converted to 0-7 scoring (lower = fewer documentation requirements).
	Threshold-based transaction limits and pre-approvals	IMF AREAER	2023	Qualitative limits mapped to standard 0-4 scale based on restrictiveness; local-currency thresholds converted to USD.
	Wire-transfer information requirements	FATF MER/FUR (Rec. 16 sub-criteria)	Latest available MER/FUR	NC/PC/LC/C mapped to 0-3; weighted aggregation of Rec 16.1(b), 16.13, 16.14 and 16.15. Narrative used where criteria are not explicitly rated.
Capital and FX environment	FX market liquidity and depth	BIS Triennial Survey; World Bank GDP	2023 proxy (from 2022 & 2025)	2023 turnover derived using 2022-25 CAGR; missing markets proxied using FX-turnover-to-GDP ratios from GDP-per-capita peers.
	Repatriation rules and timelines	IMF AREAER	2023	Qualitative repatriation and surrender rules converted into harmonised 0-3 scoring reflecting degree of restrictiveness.
	Currency convertibility and FX regime	IMF AREAER	2023	Narrative descriptions converted to harmonised 0-10 scoring reflecting de jure convertibility and regime flexibility.
Adherence to standards	ISO 20022 data quality	Swift Bank Readiness Portal	Latest snapshot	Institution-level camt.054 readiness aggregated to market-level shares; Dominican Republic proxied using regional-peers average.
	RTGS operating hours and global-window alignment	BIS Red Book; central banks	2023	RTGS opening/closing times normalised to GMT; overlap with BIS 06:00-11:00 settlement window calculated; combined into weighted 0-1 score.
Risk and control factors	Jurisdictional risk classification	Basel AML Index; FATF lists	2023 (Basel), latest FATF	AML Index inverted and combined with FATF grey/black-list status using weighted aggregation; 2024 Basel used as proxy where needed.
	Screening alert quality	FATF MER/FUR (Immediate Outcomes)	Latest MER/FUR	IO3-IO4 mapped to 0-4; weighted composite score based on relevance to preventive controls.
Domestic infrastructure	Existence and maturity of instant payments	FASTT/FPS Tracker; BIS CPMI; central banks	2023	RTGS/FPS existence and functionality mapped to 0-9 maturity score; missing functionality scored conservatively.
	Digital readiness	World Bank/ITU; IMD Digital Competitiveness	2023 (2022 for India)	Internet-usage and IMD scores scaled to 0-1; missing IMD values proxied using two GDP-per-capita peers.

Jurisdictions are grouped into four economy archetypes to observe friction patterns

Major advanced economies

The G7 economies, which the IMF classifies as “major advanced economies”.

- Canada*
- Japan*
- United Kingdom*
- United States*
- EU Major Advanced (3)

Advanced economies

All other economies that the IMF classifies as “advanced economies”.

- Australia*
- Hong Kong
- New Zealand
- Singapore
- South Korea*
- Switzerland
- EU Advanced (6)

Advanced emerging economies

G20 members that are also classified by the IMF as "emerging market and developing economies".

- Brazil*
- China*
- India*
- Indonesia*
- Mexico*
- Saudi Arabia*
- South Africa*
- Turkey*

Emerging economies

All remaining economies that the IMF classifies as “emerging market and developing economies” or “low-income developing countries”.

- Colombia
- Dominican Republic
- Egypt
- Kenya
- Malaysia
- Mauritius
- Panama
- Philippines
- Thailand
- United Arab Emirates
- Vietnam
- EU Emerging (1)

* G20 member

Methodology and Scope

Purpose of the index

The Payment Optimisation Index provides a descriptive, cross-market benchmark of the structural frictions that influence payment crediting time. It groups market characteristics into five friction categories — Regulatory requirements, Capital & FX environment, Adherence to standards, Risk & control factors and Domestic infrastructure — each represented by measurable contributing factors.

By linking these structured conditions to payment speed, the index offers a clear, data-driven lens to understand why some markets achieve faster beneficiary-side processing and where targeted improvements can have the greatest impact.

Scope and data sources

The first edition covers 39 markets across the Americas, EMEA and Asia-Pacific, selected for broad geographic coverage and robust data availability. Each contributing factor is quantified using internationally recognised datasets, complemented by Swift data where required. All inputs refer to the 2023 reference year, reflecting the most recent period for which comparable, publicly available datasets exist across all factors.

While the data year is constrained by publication cycles, this does not diminish the relevance of the results: the purpose of the index is to quantify the structural relationships between frictions and payment speed, not to provide a point-in-time snapshot of current market performance.

What is measured

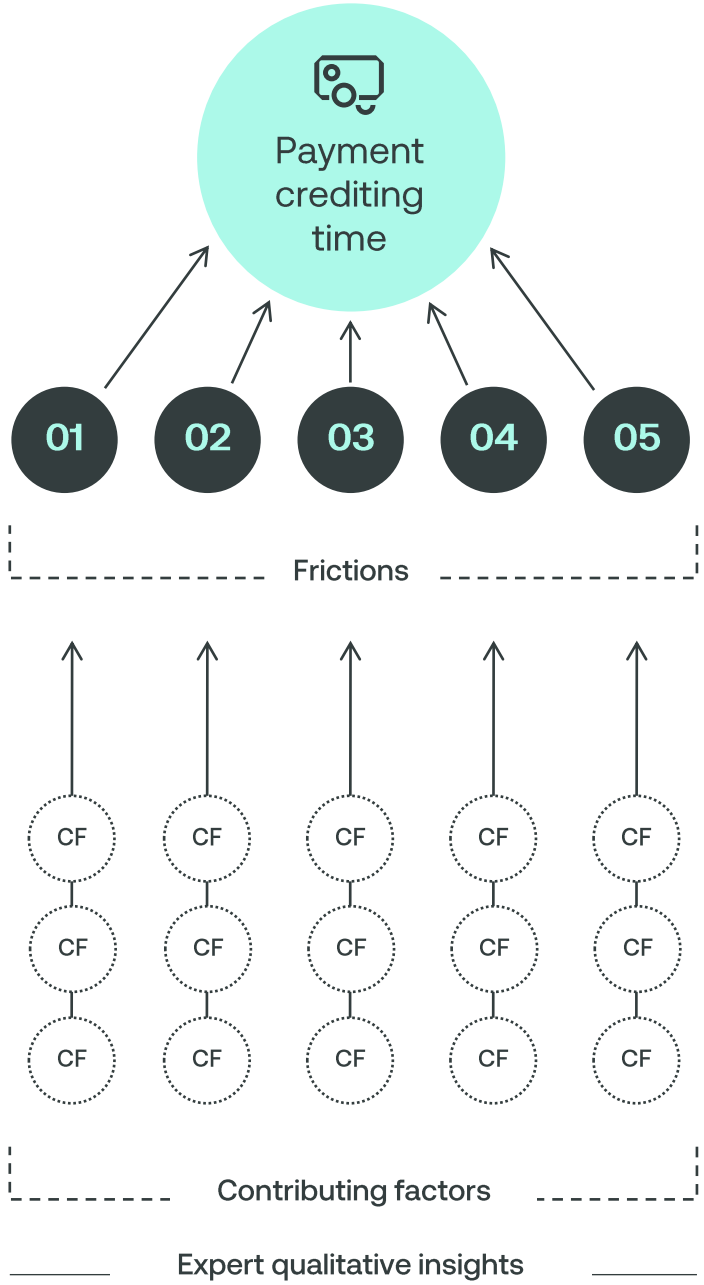
The analytical framework focuses on one outcome variable: the average payment crediting time for inbound cross-border payments.

By mapping contributing factors to this outcome through a structured modelling approach, the index:

01 Enables direct comparison of friction profiles across markets

02 Identifies which frictions are linked to faster processing

03 Provides the empirical foundation for the prioritised actions presented in the playbook



Analytical framework

Data gathering

Raw indicators for each contributing factor are collected from trusted external datasets and proprietary Swift inputs. These are converted into harmonised market-level factor scores. Directional alignment ensures that lower values always represent more favourable, lower-friction conditions – such as clearer regulatory rules, deeper FX liquidity, or more mature instant-payment infrastructure.

Standardisation

All factor scores and the outcome variable undergo standardisation to a common scale (mean 0, standard deviation 1). This removes unit differences across datasets and enables a like-for-like comparison of effects in the regression. A one-unit change therefore corresponds to a one-standard-deviation improvement in a structural condition.

Regression analysis

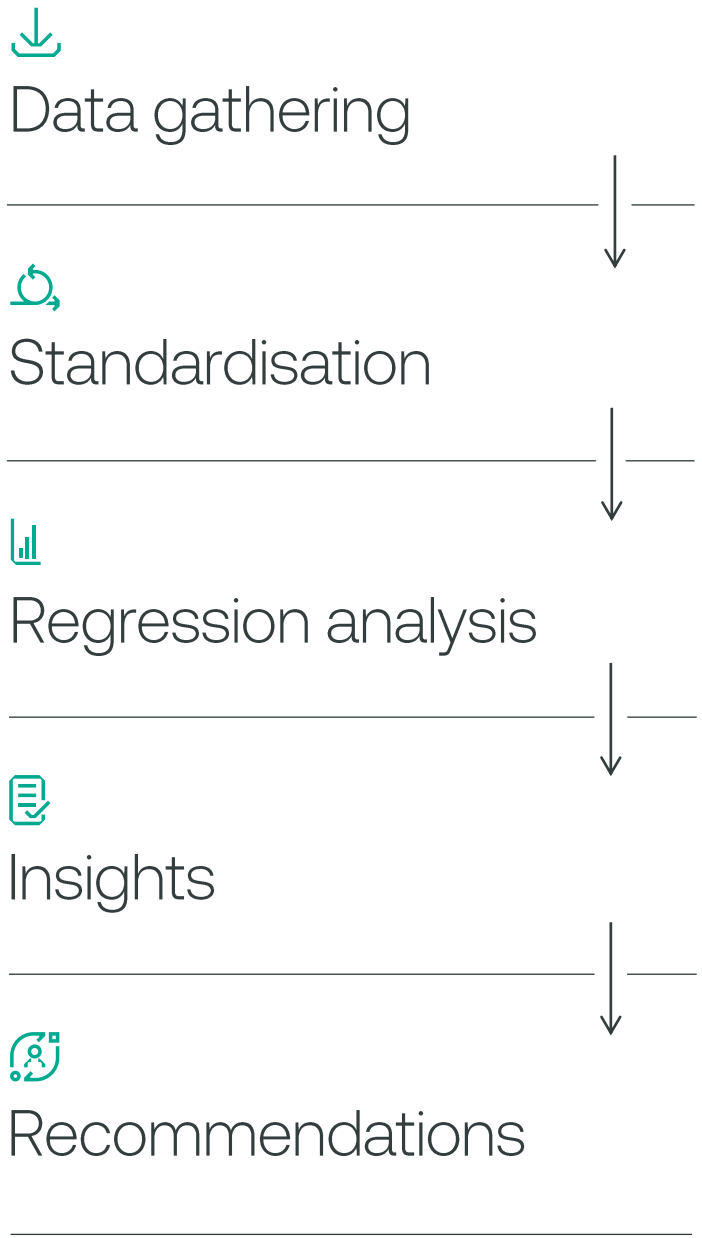
Multiple ordinary least squares regressions estimate how each contributing factor is associated with payment crediting time, while holding all other factors constant.

Instead of reporting raw β-coefficients, the analysis translates results into expected changes in crediting time (in hours):

- A one-unit improvement in a factor corresponds to the expected change in average crediting time when all else is held constant.
- Positive values indicate faster processing; negative values indicate slower processing.
- The magnitude of the effect shows how that structural friction shapes payment speed relative to others.

From model outputs to insights

By quantifying which structural conditions matter most for payment speed, the framework provides a rigorous foundation for prioritising industry action. When combined with qualitative evidence and market profiles, these insights shape the stakeholder-specific recommendations outlined later in the playbook.



Payment Optimisation Index Results

Multiple OLS-regression table

Friction category	Regulatory requirements			Capital & FX environment			Adherence to standards		Domestic infrastructure		Risk & control factors	
Contributing factor	Purpose-of payment	Threshold-based transaction limits and pre-approvals	Wire-transfer information requirements	Currency convertibility & FX regime	FX market liquidity & depth	Repatriation rules & timelines	ISO 20022 data quality	Operating hours	Digital readiness	Existence and maturity of instant payments	Screening alert quality	Jurisdictional risk classification
β-Coefficient	0.22	0.44	0.01	0.11	0.28	0.32	0.29	0.24	-0.06	0.20	-0.15	-0.25
p-value	0.09*	0.00***	0.90	0.31	0.07*	0.01***	0.02**	0.03**	0.69	0.09*	0.18	0.05*
Standard error	0.12	0.12	0.10	0.11	0.15	0.11	0.12	0.11	0.15	0.11	0.11	0.12
t-value	1.76	3.60	0.12	1.05	1.89	2. 80	2.41	2.30	-0.41	1.78	-1.38	-2.10

β Coefficient: Shows how much the expected payment crediting time improve when the score of a contributing factor increases by one unit, holding all other factors constant

p-value: Shows how high the statistical evidence is that the beta is different from zero; in our work we treat a factor as statistically significant if its p-value is below 0.1

R2	0.80
Adjusted R2	0.79
root MSE	0.55
F-statistic	8.47
Degree of freedom	26
p-value of F-statistic	0,000**

Symbol	Significance level	Interpretation
*	p < 0.10	Statistically significant at the 10 % level
**	p < 0.05	Statistically significant at the 5 % level
***	p < 0.01	Highly significant at the 1 % level
(no symbol)	p ≥ 0.10	Not statistically significant

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