



Modernizing cross-border payments

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Key takeaways



Globalization has rapidly accelerated the demand for cross-border payments. According to the Bank of England, the value of cross-border payments is forecast to increase to over \$250 trillion by 2027.



Historical pain points such as speed, high costs, limited options and lack of fee transparency are gradually dissipating through innovative solutions.



Key trends such as interlinking real-time payment platforms across borders, employing central bank digital currencies, ISO 20022 standardization and a friendly regulatory landscape are fostering a stronger and more efficient cross-border payments ecosystem.



Mastercard is playing a key role in empowering this shift through Mastercard Move and their cross-border services solutions.

What are cross-border payments and why do we need to talk about them?

Today's highly demanding consumer landscape is driving an ever-increasing need for instant, transparent and low-cost cross-border payment experiences. With global volumes expected to reach US\$250 trillion by 2027, incumbents face a tremendous opportunity to co-create a seamless customer experience.

TRANSACTION TYPES MATRIX

		TO		
		Consumers	Business	Government
FROM	Consumers	Family support Personal savings E-Commerce payments	Travel expenses Tuition Medical fees E-Commerce payments Bills Investments	Taxes and utility services
	Business	Payroll (e.g., gig economy) International supplier payments Insurance claims Marketplace disbursements Lending	Global trade Supplier payments Corporate investments Bulk bill payments	Tariffs
	Government	Pensions	Imported goods	Humanitarian aid Development aid

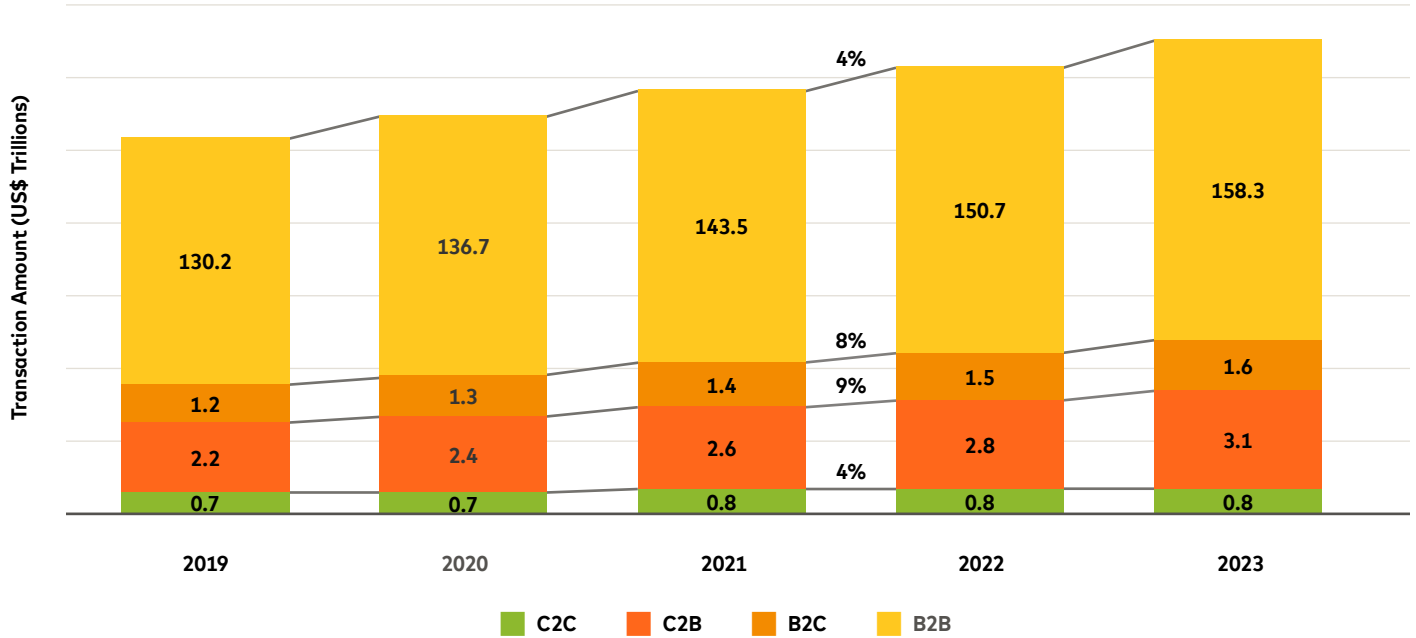
Trade finance, gig economies, immigration and global cross-border payments — particularly in emerging economies like India, Mexico and China — are all on the rise. At the same time, Canada's immigration target of 450,000 newcomers annually could drive additional, exponential growth in the domestic demand for global money transfers.

Global cross-border payments have already been growing at approximately 5% per year since 2019. That market is expected to increase to over \$250 trillion by 2027. At US\$159 trillion, business-to-business transactions represent the largest addressable opportunity.

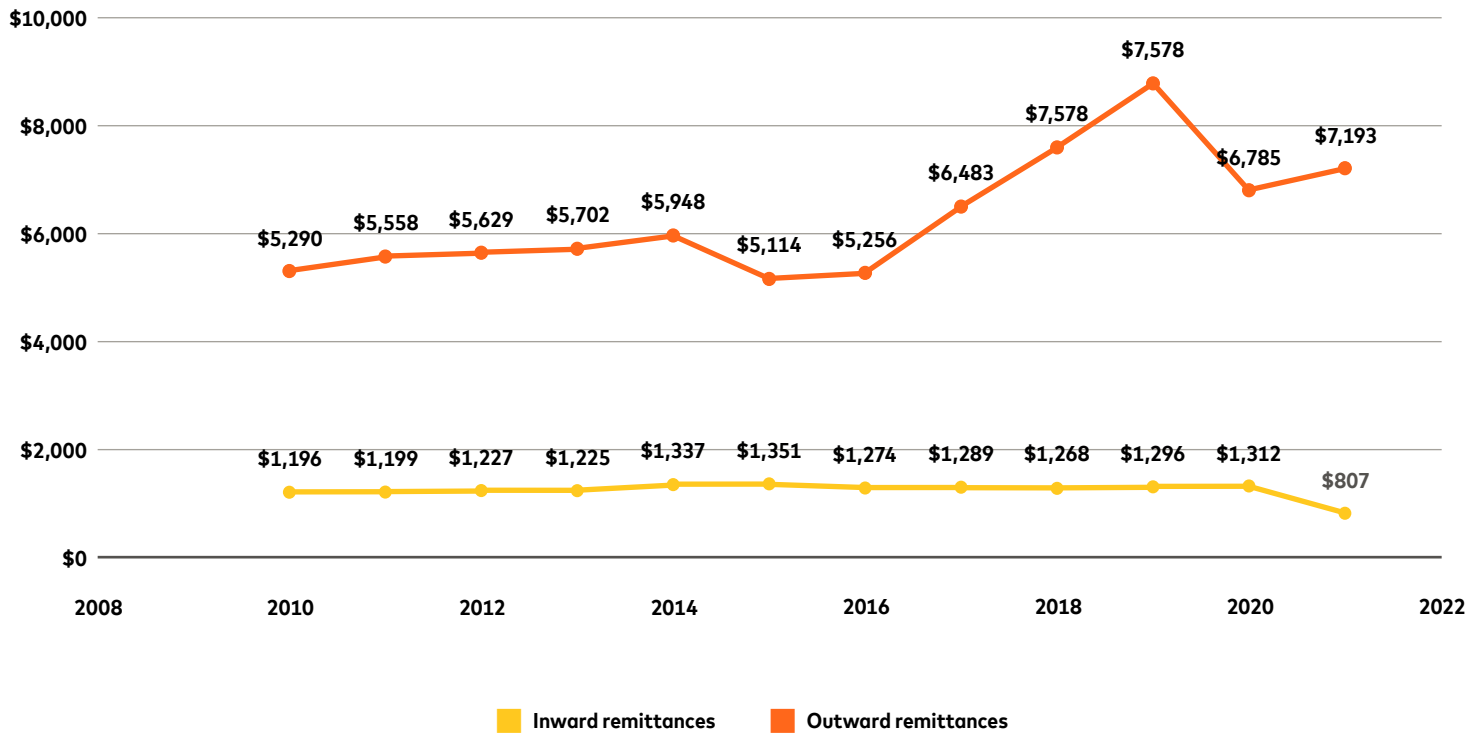
We're also seeing similar growth trends around outward remittances in the Canadian market. Outside of pandemic-fuelled decreases to inflow and outflow in 2020, this particular market tranche has been growing steadily over the last 12 years.

What does all this mean? Faster, cheaper and more secure cross-border payment methods are increasingly important. And therein lies a wealth of opportunity. The key to unleashing that potential lies in an organization's ability to build on that momentum and meet the demand by embracing innovative cross-border payment solutions.

GLOBAL CROSS-BORDER PAYMENT GROWTH BY USE CASE



CANADIAN REMITTANCES (US\$ MILLION)

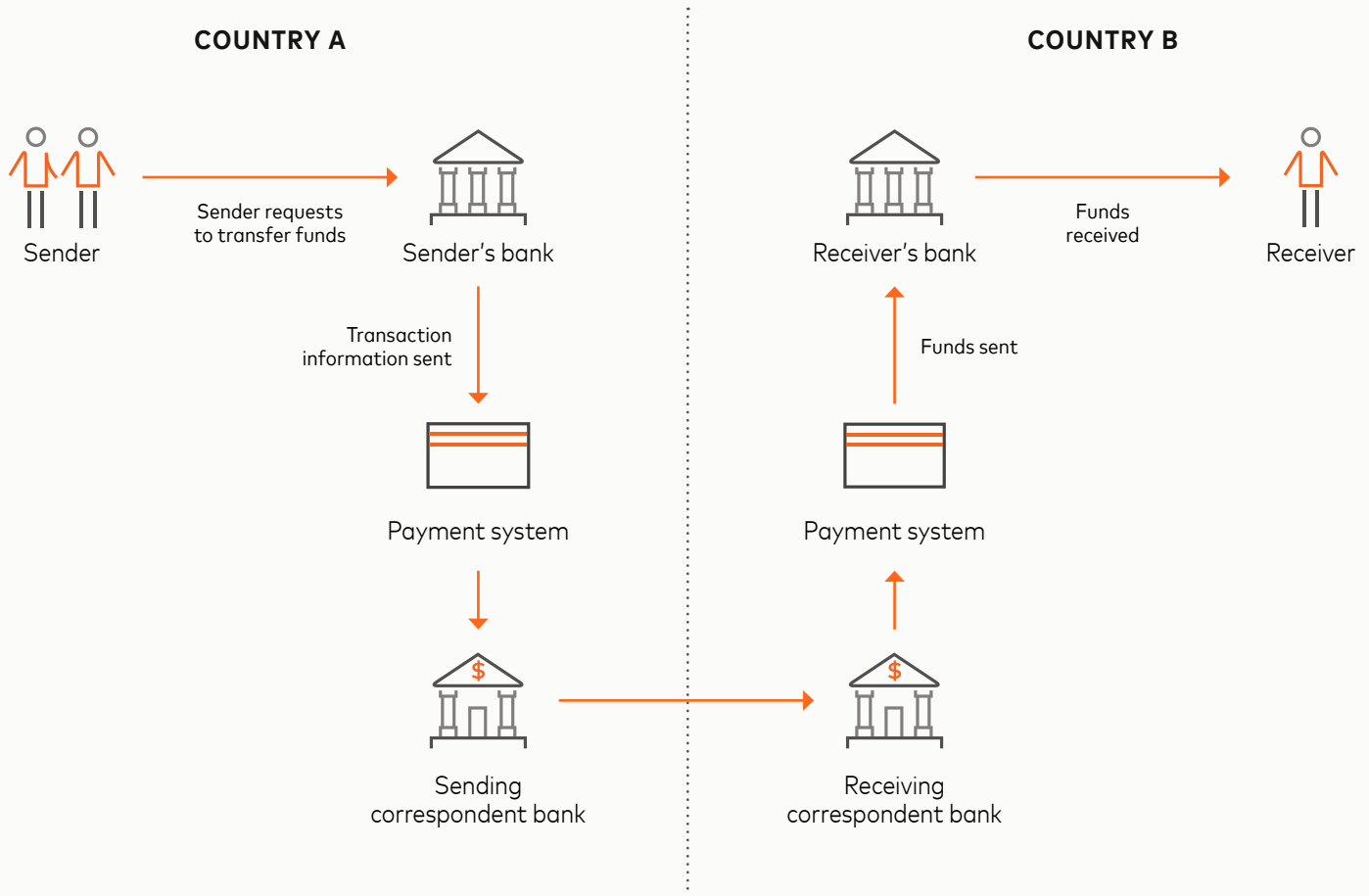


Why rethink traditional cross-border payment methods now?

Until recently, the most common international fund transfer methods were:

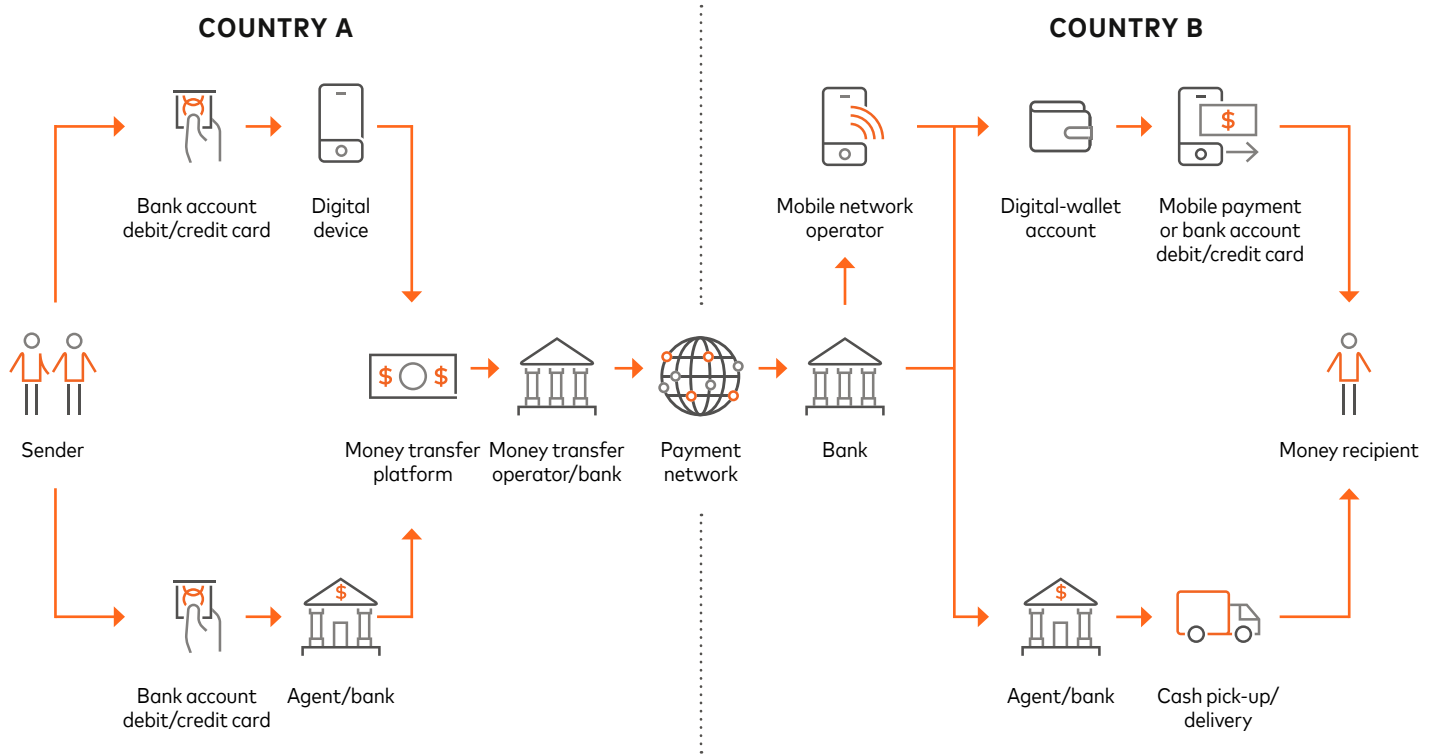
- **Bank/wire transfers**

Money is transferred from account to account. If the sender and receiver banks don't have a direct relationship, intermediaries or correspondent banks often facilitate payments on their behalf. International bank/wire transfers use the Society for Worldwide Interbank Financial Telecommunication (SWIFT) network to transmit payment information.



• Money transfer operates (MTOs)/remittances

Funds are sent physically or digitally through a transfer agent, who redirects money to the recipient on the sender's behalf. This method is quick and doesn't require the sender to have a bank account. But these payments tend to incur higher associated fees and are more vulnerable to fraud. Although declining, cash as a remittance payout method continues to be an important channel for cross-border remittance markets, where banking infrastructure is limited.



However, these existing cross-border payment options reflect a broad range of pain points.

Speed

Money moves slowly when travelling during limited operating hours and requires anti-money laundering (AML)/ fraud screening at each intermediary network.

Transparency

Payment visibility and traceability is more challenging when cross-border payments must go through several multinational intermediaries.

High costs

Intermediary – and sometimes receiving – banks each charge fees. Foreign exchange, compliance and taxation fees may also apply on cross-border payments.

Security

Intercepting cross-border transactions can potentially result in costly security breaches, causing significant financial and reputational damage.

Availability

Small and medium-sized businesses (SMBs) and individuals may encounter regulatory and financial integrity challenges since each country has different legal requirements for payments.

While these obstacles may have held businesses back in the past, they are exacerbated in the current high-growth environment. The old ways are too slow, expensive, vulnerable and complex to keep businesses processing payments efficiently, effectively and securely in the increasingly interconnected global marketplace. But there are opportunities for improvement.

Innovative solutions such as Mastercard Cross-Border Services and SWIFT global payment innovation (gpi) are addressing these pain points. These services have dramatically improved cross-border payments across correspondent banking networks by providing real-time visibility into payment status, transparency around fees and FX costs, and they include enhanced remittance information. In 2021, almost 90% of all cross-border payments, in approximately 150 different currencies, were sent via SWIFT gpi. On average, 41% of cross-border payments made via gpi are credited to the beneficiary within five minutes of the transaction being initiated and nearly 100% are completed within 24 hours.



What new developments stand out in the cross-border payments industry?

Around the world, industry leaders are already disrupting the cross-border payments scene for the better. Although some key challenges undoubtedly persist, there's no doubt these major advancements will continue to help optimize the payments landscape well into the future. What stands out?

1

Interlinking real-time payment options

India and Singapore linked their national, real-time payment platforms in early 2023. What does this mean? Customers of participating financial institutions can now send and receive funds instantaneously across the two countries. The project will scale by adding more participants. This allows residents of both countries to make cross-border payments instantly, safely and cost effectively. In April 2021, Singapore's PayNow established a real-time payments connection with Thailand's PromptPay. Similar initiatives are taking shape elsewhere in the world.

The Immediate Cross-Border Payments (IXB) project aims to connect the European instant payments platform (EBA Clearing RT1) with the U.S. platform The Clearing House (TCH), a real-time payment solution in collaboration with SWIFT. TCH is an evolution of Mastercard's Vocalink — a highly reliable system developed for the United Kingdom, Singapore and Thailand.



With ownership and integration of Vocalink and NETs, Mastercard has its real-time payments technology and systems deployed in 13 of the world's largest domestic real-time payment markets. This includes countries like the United Kingdom, United States, Thailand, Philippines, Singapore, Peru and more. With this national, critical, financial infrastructure running at scale domestically, Mastercard is now working on developing an advanced system that will enable these domestic real-time systems to be globally interoperable for data-rich, real-time, cross-border money movement.

2

Central bank digital currency (CBDC)

Using CBDCs, central banks from different countries can instantly convert fiat to digital currencies, as well as facilitate instant exchange of digital cross-border currencies. This generates a host of upsides, including instant processing, greater transparency, stronger security and ease of use.

Project Icebreaker is a collaboration between the central banks of Israel, Norway and Sweden with the Bank for International Settlements (BIS). This initiative employs retail CBDCs to enable instant cross-border payments for international retail and remittances. The pilot could bolster instant processing, transparency, security and ease of use.

There are several other initiatives underway, such as Jura (Euro / Swiss Franc), Dunbar (Australian Dollar / Malaysian Ringgit / Singapore Dollar / South African Rand) and mBridge (Hong Kong Dollar / Chinese Yuan / Thai Baht / Emirati Dirham), which are exploring wholesale cross-border payments using CBDCs.

Here, the Bank of Canada has moved beyond the R&D stage for CBDCs to assess economic, functional and design choices. Working with the federal government, the Bank is aiming to develop robust legislation and customer acceptance next.

3

Converging standards (ISO 20022)

Payment systems around the world are adopting ISO 20022 to standardize financial messaging formats. ISO 20022 messages' capabilities will enable financial messages to carry structured remittance information critical to reconciliation, traceability, transparency in cross-border payments, AML automation and know-your-customer (KYC) activities.

SWIFT has played a leading role in driving industry-wide ISO 20022 adoption for cross-border payments. In March 2023, banks began migrating to become ISO 20022 compatible as part of SWIFT's cross-border payments and reporting (CBPR+) program. Lynx launched a second release, Canada's high-value payment system, with ISO 20022 messaging. It's estimated that by 2025, 90% of cross-border payments will be compliant with ISO 20022 across the world.

Virtually all major domestic real-time payment systems that are live or undergoing Phase 2 modernization are adopting the ISO 20022 messaging standard. This makes the proposition for linking domestic real-time payment systems even more compelling.



4

G20 global prioritization of cross-border payments

In October 2022, the G20 multination association developed three focus themes to accelerate innovation within the cross-border landscape:

- **Payment system interoperability and extension** to foster fast payment system interlinkage across central banks
- **Legal, regulatory and supervisory frameworks** to improve regulatory consistency across banks/non-banks
- **Cross-border data exchange and message standards** to strengthen global interoperability and data/API standards harmonization

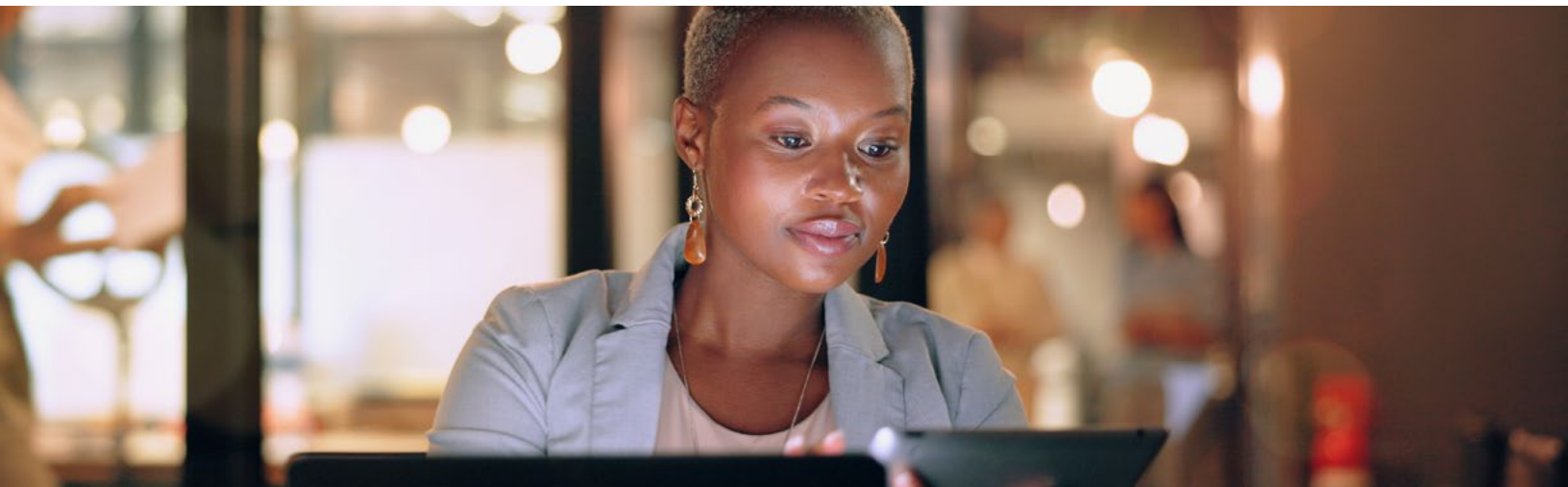
Through innovative solutions, payment technology (PayTech) companies have remodelled cross-border payments and remittances. This is putting cross-border fees under pressure, while improving speed and transparency of payment transactions.

They combine emerging technologies like blockchain, artificial intelligence (AI) and machine learning (ML) to create a seamless payment experience for the end users. Now those end users can send and receive funds around the world using their preferred platform or medium.

Each of these transformational forces is helping progressively change the cross-border payments landscape for the better. Other stakeholders can build on that momentum by embracing the trends and aligning with providers that understand how innovative solutions can deliver better outcomes for businesses, financial institutions and end users.

Regulatory Liability Network (RLN)

Among various innovations that are being looked at in the cross-border space is the Regulated Liability Network. RLN states that there is an intersection of the beneficial features of shared ledger technology and the positive attributes of the regulated financial system. This could support a regulated Financial Market Infrastructure (FMI) that could be a game changer for cross-border payments, with the possibility of supporting the next generation of financial market infrastructure that is "always on," "programmable" and "multi-asset." As with such initiatives, all areas include regulatory, legal, governance, oversight, operational and commercial.



Use cases and solutions

As the payments industry continues to evolve, financial institutions are increasingly looking to revolutionize their cross-border services to keep up with technological advancements and meet consumer demands. From family remittances to payrolls, the use cases below illustrate how banks and business are consistently seeking modern payment solutions.

	P2P USE CASE: Tuition fee payments for international university student	B2B USE CASE: Near real-time cross-border business payment transactions	B2C + C2C USE CASE: Digital payroll solution for the payroll industry
USE CASE EXAMPLE	Misha is a Canadian citizen studying in the U.K. Although Misha's parents are excited about her studying abroad, they are also concerned about how they can send her money frequently for tuition fees, rent and other living expenses. While there is a variety of options to send money to the U.K., they all come with certain difficulties.	A steel manufacturing company located in Toronto, Canada, sources tools used in their factory from a supplier in Warsaw, Poland. The supplier has indicated that the more quickly the funds arrive, the better the rates they will offer on tools in the future. To achieve the better rates, the steel manufacturer needs a faster and reliable payment solution.	David is a crew member on the world's largest cruise ship. To ensure that his family can afford basic living expenses, David needs to remit money to them regularly. However, David may not be able to leave the ship at port, and he wants to avoid relying on others to send money on his behalf, so he needs a secure and convenient way to transfer funds himself.
CHALLENGE(S)	Misha's parents would typically transfer money through a wire, which comes at a high cost with limited transparency.	The company is currently using wire transfers to pay its suppliers across the globe, which doesn't offer the company any flexibility in terms of speed.	With the cruise ship paying cash, David is limited to visiting an exchange house on shore to remit money. This process is slow, unpredictable and difficult to track.
MASTERCARD-ENABLED SOLUTION	By integrating Mastercard Cross-Border Services' capabilities, leading financial institutions have enabled international funds transfer services. These financial institutions have been able to successfully provide a fast and transparent payments method to support with education and living expenses internationally. The scalable solution powered by Mastercard is accessible by millions of users, like Misha's parents, in over 100+ global markets, 40+ of which allow for real-time funds delivery.	Leading financial institutions continue to implement Mastercard Cross-Border Services to deliver fast, cost-effective and transparent international payment services to their Canadian-based business. With Mastercard's solution, they continue to modernize their cross-border services and deliver a better experience for their clients and future-proof their cross-border payment services. Such successful partnerships allow businesses like the steel manufacturer to achieve business benefits such as favourable rates, more rapid fulfilment times, and greater enablement of international trade.	With the simple integration of Mastercard Cross-Border Services with a digital native payroll disburser, employees of a foreign corporation are enabled to send money home in their own currency. Additionally, this integration provides the ability to disperse the payments from gig workers to a direct bank deposit or prepaid card. This digital payroll solution saved the gig workers time and they are now able to remit their income to their home country using an electronic device instead of having to exchange their physical cash in person, alleviating pain points.

With so many shifts — and so many potential use cases — in modern, cross-border payment tools, it's time for financial institutions to seek solutions with payment service providers that offer a diverse range of cross-border options.

A strong application programming interface (API) supports software development kits available in multiple programming languages. Taken together, all of this generates a Mastercard solution grounded in:

Security and accessibility

The service is backed by Mastercard, which features robust capabilities and enhanced security through a single connection. API connectivity is supported in several programming languages, and streamlined onboarding leverages existing Mastercard agreements.

Transparency and speed

Fees, FX rates and delivery timing, as well as visibility into payment status at any point are transparent upfront. Delivery can vary from same day to near real-time for most end points.

Stability and resilience

A maintained network of local delivery partners will deliver payments on your behalf, reducing management and liquidity burdens.

Streamlined procurement and legal

This process is simplified through a single contractual relationship with Mastercard, avoiding contracts with multiple entities around the globe, saving time and costs.

In Canada, Mastercard Cross-Border Services is also partnered with Interac (an organization that provides payment and value exchange services across Canada to over 300 financial institutions) as a technology enabler, allowing Mastercard to make its service easily available to all Interac participants.

What's next? Mastercard is working on a service that will enable participating financial institutions to use Mastercard's extension to its cross-border service offering, which will enable financial institutions to move high value payments on behalf of their customers in near real-time with finality and predictability – while minimizing settlement risk. This is being done in partnership with Mastercard's trusted technology partners, bringing together financial institutions and Mastercard's years of experience in running large programs and franchises. Mastercard is finalizing its list of early pilot participants for the second phase of this initiative.

What's the bottom line?

Exciting trends such as interlinking instant payment platforms, employing CBDC and engaging innovative PayTech initiatives hold a lot of promise. These shifts can disrupt the cross-border payments market in the coming years to benefit stakeholders right across the value chain. Mastercard Cross-Border Services is well positioned to support these trends and address key challenges, thereby empowering individuals worldwide.

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