

Ex	ecuti	ve summary	3	
1.	Mark	et overview and trends reshaping the industry	2	
	1.1.	Cross-border payments – a golden opportunity	4	
	1.2.	Today's payments model – primed for change		
	1.3.	Evolving the cross-border payment ecosystem	8	
2.	Strategic imperatives for cross-border payments			
	2.1.	Capitalize on the emergence of real-time cross-border payments to enhance speed and efficiency in global transactions	11	
	2.2.	Spearhead the shift toward an ISO 20022 native ecosystem, unlocking the value of rich and enhanced data	12	
	2.3.	Intensify efforts in regulatory compliance and standardization to improve know your customer (KYC)/anti-money laundering (AML) safeguards, and implement robust controls	13	
	2.4.	Innovate with digital currencies and central bank digital currencies (CBDCs), utilizing tokenization to transform the landscape of cross-border payments	14	
	2.5.	Forge strategic partnerships across the cross-border payments ecosystem, including collaboration with FinTechs, banks, central banks and regulatory bodies	16	
	2.6.	Harness the potential of embedded payments to facilitate seamless cross-border e-commerce transactions, boosting customer experience and market reach	17	
3.	Navigating new frontiers: opportunities in the cross-border payments ecosystem			
	3.1.	Banks to build a competitive edge by embracing service innovation and strategic partnerships	18	
	3.2.	FinTechs to tap into the open data economy, delivering faster and more personalized cross-border payment solutions	18	
	3.3.	Money transfer operators (MTOs) to enhance cost efficiency and customer experience through comprehensive digitalization	19	
	3.4.	Infrastructure providers to lead the charge in innovation with blockchain, APIs and interoperability across platforms	19	
	3.5.	Regulators and policymakers to advance compliance, market harmonization and innovation in cross-border payments	19	
4.	Conc	clusion and future outlook	20	
5.	Refe	rences	utlook 20	
6.	Cont	acts	22	

Executive summary

The cross-border payments landscape is ripe for disruption. The opportunity is vast - the industry is projected to reach US\$290t by 2030 - but competition to secure a stake within this evolving market is fierce.

Cross-border payments traditionally have been more complex than domestic transactions due to multiple intermediaries. But great strides have been made in recent years, and the pace of change is rapidly accelerating, fueled by the growing demand for e-commerce, expanding global trade and the speed of technological transformation. This evolution isn't being driven by a singular stakeholder. It is a collective push with regulators, large corporates and banks embracing change, and new entrants continuing to introduce innovative solutions to address traditional pain points. There is now a global focus on enhancing the cross-border payments ecosystem, centered on the G20 roadmap, and propelled by unprecedented collaboration between the public and private sector.

This seismic shift brings with it a new set of business imperatives. To harness the value unlocked by these new market dynamics, banks and other stakeholders - be they FinTechs, MTOs or infrastructure providers - must rethink their strategies. In this report, developed through forensic analysis of the cross-border payments landscape and in dialogue with industry leaders, we have identified six urgent priorities for the sector:

 Capitalize on the emergence of real-time payments. As businesses look to enhance cash flow and liquidity, and minimize uncertainty around transaction time, delivering instant cross-border payments is critical. Initiatives, such as the European Union's (EU's) SEPA Instant Credit Transfer (SCT Inst) and Project Nexus, are leveraging real-time domestic rails across markets to boost interoperability and speed up global transactions. The industry must acknowledge that in the very near future, instant payments will no longer be considered "nice-to-have."

 Accelerate the shift to enhanced messages, supported by ISO 20022. Richer, more structured data promises a host of operational benefits, from automated reconciliation and real-time cash flow insights to enhanced regulatory reporting and sanctions screening. The competitive gap will widen between the banks which are using ISO 20022 natively and strategically and those following minimal compliance.

- Ramp up AML efforts and controls. Financial institutions must strengthen their sanctions compliance strategies, systems, and controls to keep pace with the increasing complexity of international sanctions requirements and the diverse expectations of regulators worldwide. As transaction volumes continue to grow, firms must invest in and optimize their screening systems and processes to ensure ongoing compliance.
- Innovate with digital currencies and Central Bank Digital Currencies (CBDCs).
 Digital currencies' defining features programmability and tokenization open new frontiers for cross-border payments.
 Smart contracts, for example, enable complex, conditional transactions that reduce counterparty risk. Major banks and FinTechs have embraced such opportunities, with proprietary platforms that leverage distributed ledger technology (DLT) to reduce costs and drive efficiency.
- Forge strategic partnerships. The collaboration between commercial banks, central banks, FinTechs and regulators is

proving a major catalyst. Banks are enhancing their offering with agile, innovative FinTech solutions, while regulators are working with industry stakeholders to develop frameworks that facilitate compliance and minimize friction in transactions. Project Agorá is the vanguard of the next wave of collaboration: an initiative that brings together central banks, commercial banks and FinTech companies to explore the potential of a programmable financial platform.

Harness the potential of embedded payments. E-commerce, accelerated by mobile commerce (m-commerce), is a powerful driver of change in the cross-border payments landscape, with customers and merchants in digital marketplaces demanding instant payouts. This presents banks and payment service providers with a substantial opportunity to embed alternative payment methods in platforms and apps, making transactions seamless and more secure.

These strategic priorities unlock significant potential across the payment value chain. By leveraging the transformative capabilities of real-time and embedded payments, adopting new data standards, utilizing digital assets, and implementing advanced screening technologies, banks can strengthen their role in the cross-border payments ecosystem and meet the increasingly complex needs of the global economy.

Market overview and trends reshaping the industry

1.1. Cross-border payments – a golden opportunity

Cross-border payments are the backbone of global commerce and international trade. In recent years, the landscape has become increasingly fragmented and competitive, with various players focusing on different regions, transaction sizes and payment segments. Nevertheless, the market's size and potential offer a wealth of opportunities to incumbent players and new entrants, with the total global cross-border payment flows growing at around 9% (CAGR) annually, reaching US\$190.1t in 2023 and expected to hit US\$290t by 2030.1

The market comprises:

Business-to-business (B2B) transactions make up the largest share by far, accounting for U\$\$183.5t. The majority of this comes from banks and investors, amounting to U\$\$91.1t. During COVID-19, B2B cross-border payments contracted due to changing demand but rebounded in 2021 driven by the economic recovery, an increase in global trade and rise in international investment activities.¹

- Consumer-to-business (C2B) transactions, such as cross-border e-commerce and offline tourism spend account for US\$3.1t.¹
- Business-to-consumer (B2C) transactions, which include wages, salaries or interest payments, amount to US\$1.7t in 2023.¹
- Consumer-to-consumer (C2C), or remittance payments, account for US\$1.8t in 2023.¹

Exhibit 1 provides a detailed five-year overview of the market size for cross-border payments.

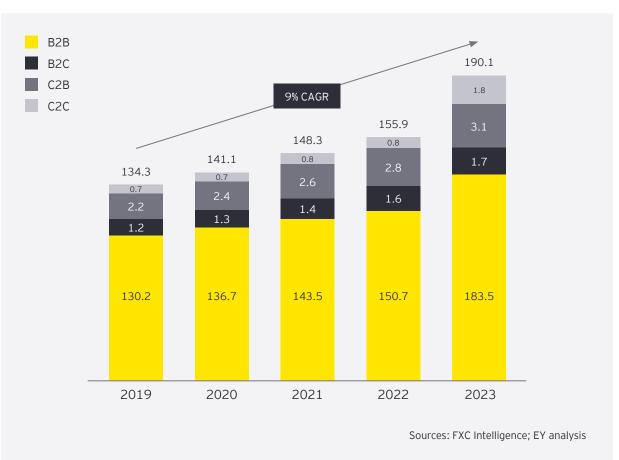
Many emerging players typically focus on targeting low-value transactions in the C2C, B2C and B2B segments, areas which are currently underserved by banks and traditional payment providers.

Projections suggest that the cross-border payments will see growth across all sectors:

- Although the C2C cross-border payments market is significantly smaller, at US\$1.8t in 2023, it is expected to see rapid growth over the next seven years, increasing by 80% to US\$3.3t.1
- B2B e-commerce is the fastest-growing segment in wholesale cross-border payments, with an expected market size of US\$10 trillion, and is set to grow by 120% by 2030.1

The non-wholesale market (C2B and B2C flows) is expected to expand from US\$44.1t in 2023 to US\$65t by 2030, a 47% increase.¹

Exhibit 1: Market size and growth by segment in cross-border payments (in US\$t)



1.2. Today's payments model - primed for change

The current paradigm, dominated by traditional correspondent banking networks, is ripe for innovation. Despite the promise of FinTechs to streamline this antiquated system – through faster transactions, lower costs and greater transparency – significant shifts in the market have been slow to materialize.

The increasing interconnectedness of the global economy underscores the urgency for advancements in cross-border payments to facilitate more cost-effective remittances, support small-and-midsized enterprises' (SMEs') international growth and foster banking innovation. The G20 has launched a roadmap to enhance payment systems worldwide, aiming to reduce costs and increase speed, access and transparency in the financial ecosystem.

Challenge of traditional banking networks:

While most cross-border payments are processed within an hour, there are corridors where payments might be slow and lack transparency. This lack of visibility is a concern for the senders and recipients who value predictability to run their business effectively. Exhibit 2 shows the traditional correspondent banking model, highlighting the intricate relationships and processes involved.

Emergence of FinTech and nonbank alternatives:

New tech-enabled entrants are crafting solutions that streamline banking routes, with fewer intermediaries and more direct transfers. The result is a significant reduction in transfer times and fees, coupled with an unprecedented level of transparency that reveals the entire transaction process. Recent research by Citigroup indicates that banks risk losing 5% to 10% of their business to these agile players within a few years.²

66

The future of cross-border payments is extremely exciting. We expect to see continued growth in this area, driven by expanding international trade, new business models such as marketplaces, and the rising influence of social media platforms, contributors, and influencers. Additionally, blockchain-enabled innovations, such as CBDCs and tokenized deposits, have the potential to improve settlement speed and finality — two pain points currently plaguing cross-border payments. Further, many banks, including ours, are investing heavily, in developing capabilities, including Swift GPI the ISO 20022 standard and pre-validation services. Commitment to this type of innovation and client service is what will define the next era of cross-border payments, making them more efficient, accessible and reliable than ever before.

Manoj Dugar

Regional Co-Head of Global Payments Solutions Asia Pacific HSBC

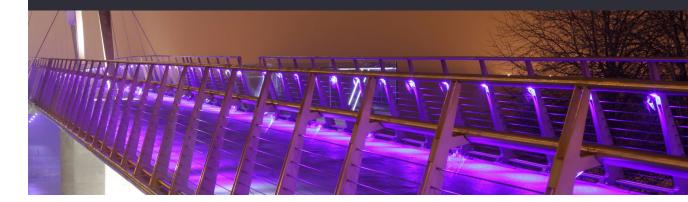
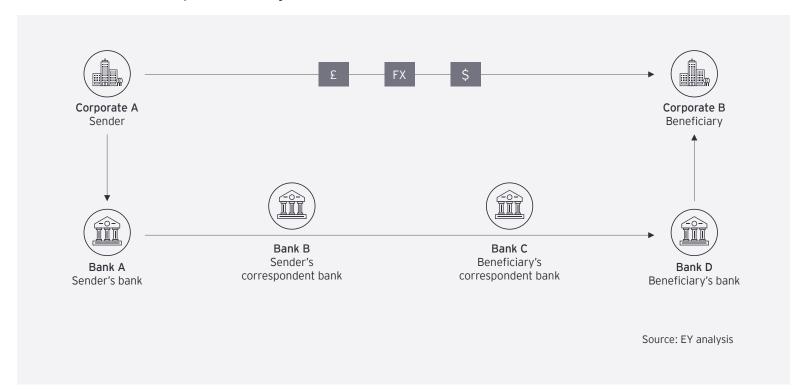


Exhibit 2: Traditional correspondent banking model





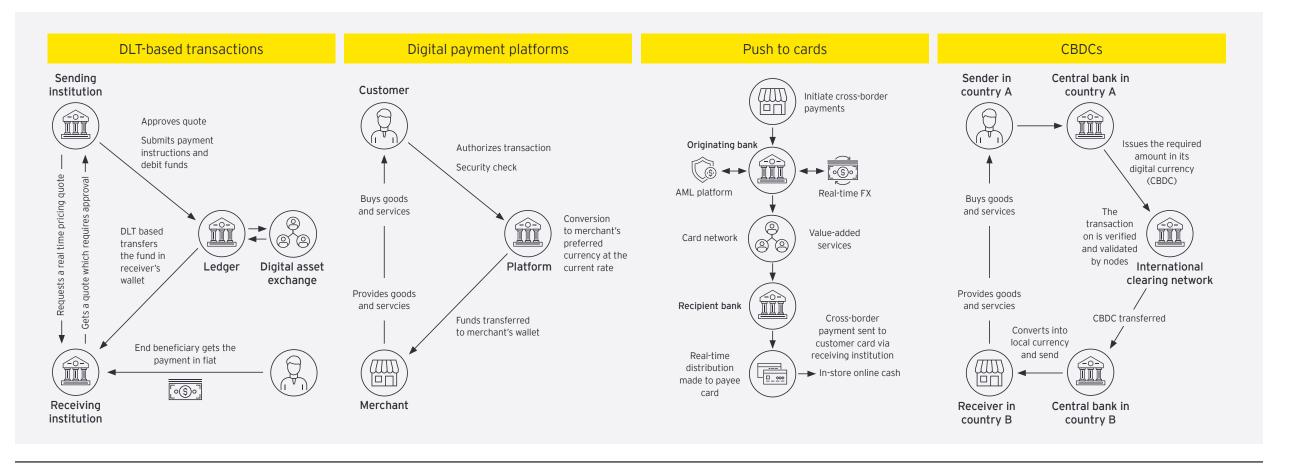


Global cross-border payments are poised for a transformative leap with aligned standards like ISO 20022, multiple payment mechanisms, real-time processing capabilities and fast-evolving customer needs. Various essential pieces are coming together to enable greater efficiency and transparency, as well as inclusivity, especially with G20 targets. However, challenges also abound due to evolving regulations, growing fraud and security concerns and rising compliance risks. In short, this continues to be an area ripe for disruption.

Sriram Muthukrishnan

MD and Group Head of Transaction Banking Product Management, and Head of Enterprise Payments DBS

Exhibit 3: Emerging alternative models poised to revolutionize cross-border payments



Cost

- DLT based transactions: 0.1% to 0.2% of transaction value on average
- Digital payment platforms: currency conversion fees 3% to 4% plus markup on exchange rate
- ► Push to cards: 0.6% to 1.4% (MasterCard, Visa)
- ► CBDCs: 0.1% to 1% per transaction

Speed

- DLT based transactions: Within three to five seconds
- ► Digital payment platforms: Instant to a few hours
- ► Push to cards: Within minutes to a few hours
- ► CBDCs: Within seconds

Risk

- DLT based transactions: Low to medium (inherent security of blockchain)
- Digital payment platforms: Medium (platform security concerns)
- Push to cards: High (due to regulatory complexity, fraud potential)
- ► CBDCs: Low (involvement of central banks)

Interoperability

- ► DLT based transactions: High (ensured by DLT based integration)
- Digital payment platforms: Medium (ensured by platform-specific integration)
- Push to cards: Medium (ensured by widespread acceptance)
- ► CBDCs: High (centralized coordination)

Source: EY analysis

1.3. Evolving the cross-border payment ecosystem

Despite the market's remarkable expansion, cross-border payments continue to be costly, slow, lacking in transparency and hard to access. Corporate fees for international payments average around 1.5%, while remittances can incur fees as high as 6.3%, with the time it takes for these payments to reach their recipients extending to several days.³

The need to enhance the cross-border payments ecosystem is now high on the agenda for policymakers and financial institutions globally, with a raft of transformative initiatives on the horizon.

The G20 roadmap

In 2020, G20 leaders endorsed the roadmap for enhancing cross-border payments globally. This initiative aims to address the four key challenges related to cost, speed, access, and transparency, paving the way for a more efficient and inclusive financial ecosystem. The roadmap's execution involves collaboration among member countries to foster innovation and implement strategic reforms in the international payments landscape.⁴

Beyond the focus of the G20 roadmap, there are further challenges around standardization, data residency and protection and financial crime prevention that need to be addressed.

Exhibit 4: G20 targets for enhancing cross-border payments

		Payment sector			
Focus areas	Wholesale	Retail*	Remittances		
Cost	No target set.	The global average cost of payments should not exceed 1%, with no payment corridors having costs above 3%.	The global average cost of sending a US\$200 remittance should be capped at 3% by 2030, with no payment corridors exceeding 5%.		
Speed	75% within one hour, remaining within one business day; payments to be reconciled by end of the day on which they are credited.	75% within one hour, remaining within one business day.			
Access	Minimum one option per payment corridor.	All end users to have at least one option.	90% to have access to electronic remittances.		
Transparency		All payment providers must disclose total transaction costs, delivery time, payment tracking, FX charges and service terms for cross-border payments to payers and payees.			

Targets are set to be implemented by the end of 2027, unless specified *E.g., B2B, P2B/ B2P, other P2P Source: The Financial Stability Board (FSB)⁵

Industrywide efforts to enhance cross-border payments

In line with the G20 targets, the financial industry has embarked on a journey of implanting very specific initiatives, with the ISO 20022 messaging standard playing a crucial role. These enhancements, while not entirely eradicating the challenges, have made notable strides in improving the user experience in these key areas:

 Payment system interoperability and extension: Modernizing infrastructure with ISO 20022 streamlines processes and supports diverse financial activities with minimal friction. Application programming interfaces (APIs) are a critical component, enabling real-time data exchange and faster transaction processing. Data exchange and message standards: Adopting ISO 20022 ensures detailed and structured information transmission. Universal message standards facilitate clearer communication across international payment systems and enable greater automation. Incorporating value-added services, such as pre-validation and compliance checks, enhance security and transparency. Legal, regulatory and supervisory framework: Public-private partnerships help adapt regulations to new technologies and foster innovative payment models. Strategic partnerships between banks and FinTech firms improve cross-border payment speed and affordability, creating a robust and interconnected financial landscape.

These incremental changes are refining the landscape, but the financial industry recognizes that these alone are not enough to overcome the more profound challenges. As the global economy calls for faster, more cost-effective and transparent payment methods, disruptive innovations are emerging as the catalysts for substantive change.

The next wave of disruption: a new era of cross-border payments

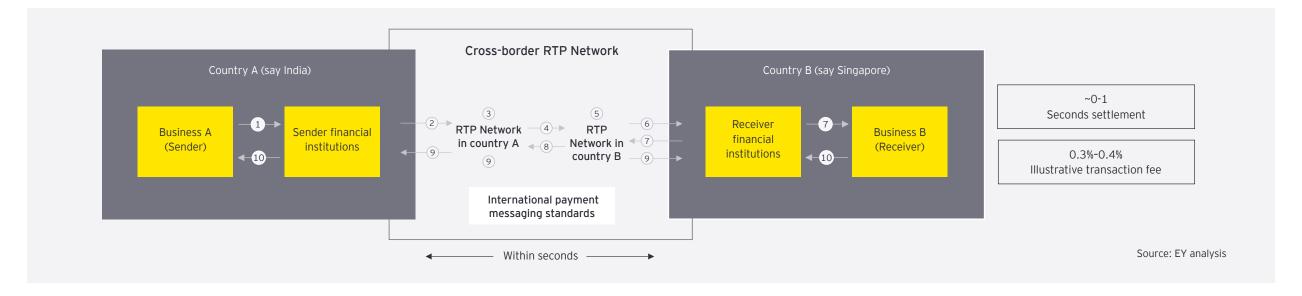
A wave of innovation is redefining crossborder payments. It is interlinking real-time domestic payment systems across the globe for seamless transfers, integrating digital assets for instant direct transactions, and reimagining the correspondent banking model to improve transparency and access.

Interlinking of domestic payment rails: This area of innovation focuses on interconnecting domestic payment rails to facilitate seamless cross-border payments. Exhibit 5 shows the interlinking of the domestic cross-border real-time payment network process flow:

- Led by the BIS Innovation Hub, Project Nexus aims to standardize cross-border transactions by connecting domestic real-time payment systems across different countries.
- Similar initiatives are taking shape regionally, such as the ASEAN Cross-Border Payments Interoperability Network (XBPI), which seeks to enhance financial integration and inclusivity.



Exhibit 5: Conceptual cross-border RTP network process flow



CBDCs and digital assets: These initiatives are exploring the potential of digital currencies to transform the way value is transferred internationally:

- Central banks around the world are exploring or piloting CBDCs, which could offer a direct, sovereign-backed means of cross-border settlement.
- The rise of digital assets, including tokenized deposits, presents new opportunities for crossborder payments, potentially enabling faster and more transparent transactions.

Next-generation correspondent banking model: Technologies, such as tokenization, smart contracts and DLT, promise a future where crossborder payments are faster, more cost-effective and secure.

In May 2024 the BIS announced Project Agorá, which brings together seven central banks from the Eurosystem, Japan, South Korea, Mexico, Switzerland, UK and US, as well as a large group of private financial firms. Project Agorá seeks to enhance cross-border payments via a new type of financial market infrastructure (FMI), a unified ledger. A unified ledger FMI integrates tokenized versions of central bank money, commercial bank money and other digital assets on a common programmable platform, catering to a wide range of user requirements and needs.

Project Agorá aims to develop the unified ledger concept to reduce transaction times, improve transparency and enhance payment authentication, validation and screening processes. Project Agorá and the unified ledger focus on using new technology to build on the current correspondent banking business model, maintaining the current responsibilities for cross border payments between commercial banks and central banks.⁶

Public-private partnerships form the cornerstone of this reimagined banking model, where collaboration between the public and private sectors is crucial. Such cooperation enables central banks and commercial banks to innovate in tandem, leveraging privacypreserving techniques for data sharing. Together, stakeholders can utilize machine learning and artificial intelligence (AI) to enhance financial crime compliance and adeptly navigate the intricate terrain of data sovereignty.

The successful integration of these strategies requires a concerted effort among financial institutions, technology providers, regulators and international organizations. Together, they must ensure that the emerging systems are not only secure and compliant with regulations but also inclusive, offering equitable access to all participants in the global economy.

66

The 2023 BIS Annual Economic Report outlines a vision for a future monetary system that harnesses the potential benefits of tokenization for payments, clearing and settlement. Central to this vision is a new type of FMI, a unified ledger. Project Agorá applies the unified ledger vision to wholesale cross-border payments. It aims to demonstrate how a unified ledger via new technology can enhance the efficiency of business and regulatory processes in correspondent banking payment chains, thereby reducing transaction times and costs. Importantly, it also enhances payment transparency, providing a secure and visible record of transactions and mitigating risks for banks involved in cross-border payments.

Morten Linnemann Bech

Centre Head - Switzerland BIS Innovation Hub



Strategic imperatives for cross-border payments

60

As digital commerce and international trade continues to rise, consumers are seeking a seamless, transparent, 24/7 real-time payments experience, both domestically and across borders. This is fundamentally changing the way our clients do business, with corporates and financial institutions shifting to new business models, such as direct-to-consumer offerings, marketplaces, and shared economy models - emphasizing the need for cross-border solutions that offer speed, cost efficiency and transparency. This has spurred innovation across our industry, with newer solutions, like instant payments, pay by bank, 24/7 USD clearing and digital wallets, driving growth, as well as new players, like FinTechs, expanding the payments ecosystem. We are working alongside our clients, including FinTechs, payment intermediaries and e-commerce companies, to co-create solutions while deepening our expertise in new technologies, such as digital assets, helping them to benefit from these innovations.

Sanjeev Jain

Head of Payments, Japan, Asia North and Australia Citi The global cross-border payments landscape is on the cusp of a historic transformation, driven by the convergence of new technologies and the entrance of innovative players. The rise of real-time cross-border payments is enhancing speed and efficiency, setting a new standard for immediacy in financial transactions. Banks are accelerating their transition toward an ISO 20022 native ecosystem, which promises to streamline communication and interoperability across global financial systems. In parallel, there is a growing emphasis on enhancing sanction screening and controls to ensure compliance and security in an increasingly complex regulatory environment. Moreover, the exploration of digital currencies powered by DLT and tokenization is opening up new possibilities for value transfer. Finally, banks are actively innovating through partnerships and collaborations with FinTech companies, leveraging their agility and technological prowess to redefine the payments landscape. These are strategic imperatives banks must prioritize as they navigate and shape the future of cross-border payments:

2.1. Capitalize on the emergence of real-time cross-border payments to enhance speed and efficiency in global transactions

Instant cross-border payments have become a critical demand, as businesses seek to improve cash flow and reduce the uncertainty associated with transaction times. Customers now expect their international payments to be as seamless and fast as domestic transactions. However,

when multiple banks are involved, and the final leg requires clearing within the recipient country, domestic payments could get delayed due to the limited operating hours of local clearing systems.

Numerous initiatives are now concentrating on leveraging real-time domestic rails across various markets to ensure interoperability and expedite transactions. SCT Inst has been launched in November 2017 and it now accounts for more than 20% of total credit transfers in the Euro Area. In February 2024, the EU has voted the Instant Payments Regulation to make instant payments available across 36 EU markets by January 2025. The Instant Payment Regulation is a pivotal development that is set to drive the adoption of instant payments through the SEPA region.⁷ The new regulation became effective in April 2024 and is expected to be operational by January 2025, with the rollout extending to 2027. The SCT Inst scheme is designed to ensure that instant payments are processed within 10 seconds, can be made 24/7 and are as affordable as standard euro credit transfers, with no additional fees.8

Furthermore, SCT Inst requirements include:

- 10 sec rule: send and receive IPs, within 10 seconds, and ensure they are available to all customers at any time (24/7/365) across channels
- Unify instant payments: across the SEPA regions and enhance cross border payments efficiency

66

We are proud to have launched in November 2023 the OCT Inst scheme, the first EPC payment scheme supporting transactions where only one of the payment service providers (PSPs) - either the payer's or the payee's - is located in the geographical scope of the EPC's single euro payments area (SEPA) schemes. This innovative payment scheme aligns with market needs and policy objectives and has the potential to revolutionize the processing of international instant payments by making a multilateral scheme-based approach available to a multilateral world.

Giorgio Andreoli

Director General
European Payments Council (EPC)

- No additional fees: Ensure IPs in euros are not more expensive than standard euro credit transfers
- Verification of Payee: to protect consumers and businesses, checking the payee's name against their international bank account number (IBAN) before executing transactions and alert customers to any discrepancies
- Sanction screening compliance: conduct daily sanctions screening of customer accounts

This initiative represents a major step toward a seamless and integrated European payments system, where cross-border transactions are as straightforward and efficient as domestic ones.

In a complementary move, the European Payments Council's (EPC) One-Leg Out Instant Credit Transfer (OCT Inst) scheme is set to further enhance the speed and transparency of international transactions. Introduced in November 2023, the OCT Inst scheme facilitates instant cross-border payments from Europe to any part of the world in any currency, and vice versa, representing a significant leap toward real-time, frictionless cross-border payments. OCT Inst not only promises faster execution but also brings enhanced transparency in costs and improved traceability of payment status.

Full information about the charges applied by the relevant actors for an incoming or outgoing OCT Inst transaction, are included in the OCT Inst transaction message to provide the payer and the payee with transparency on charges, in line with the original charging option chosen by the payer. The scheme allows all types of charging options (DEBT, CRED, SHAR) - with the recommendation for SHAR so that the payer and the payee are charged separately and individually. However, the OCT Inst scheme does not set any pricing model at all. Pricing lies outside the remit of the EPC payment schemes.

This innovation is set to revolutionize payment transactions by connecting individuals and businesses across borders within seconds, reducing the need for cash reserves and fostering greater economic stability and prosperity.

The scheme operates by leveraging the realtime processing capabilities of existing SEPA infrastructure, allowing for instant transfers up to €100,000.9 The initiative was driven by industry demand, regulatory momentum and the shift toward the ISO 20022¹¹ standard, which facilitates faster and more cost-effective transactions.

These advancements are laying the groundwork for a future where cross-border payments are indistinguishable from domestic ones in terms of speed, cost and efficiency. As these systems become more interconnected and interoperable, the vision of a seamless global payment network is becoming a reality, providing customers with a frictionless payment experience across borders.

2.2. Spearhead the shift toward an ISO 20022 native ecosystem, unlocking the value of rich and enhanced data

As the global economy grows more interconnected, the need for standardized, data-rich communication becomes more urgent. ISO 20022 addresses the limitations of legacy systems by introducing a universal language that enhances the quality and richness of payment data.

The industry voted to adopt ISO 20022 in 2019. The migration to the ISO 20022 standard for cross-border payments and reporting (CBPR+) successfully began on 20 March 2023. Both Swift MT and ISO 20022 messages will be supported through November 2025. As of August 2024, 26% of payment instruction traffic has shifted to ISO 20022 messages and adoption is accelerating globally. 10 Over 70 countries have adopted the standard, and by the end of 2025, 80% of highvalue settlements are expected to operate on ISO 20022.11 Key infrastructures like Target, Bank of England CHAPs and MEPS in Singapore have already migrated to ISO 20022 and will be mandating the use of certain enhanced data fields in the future.

The benefits of ISO 20022 extend beyond faster processing times and cost savings. A key advantage is its ability to carry richer, more structured data, allowing financial institutions to offer enhanced digital services, improve

compliance and achieve greater automation.

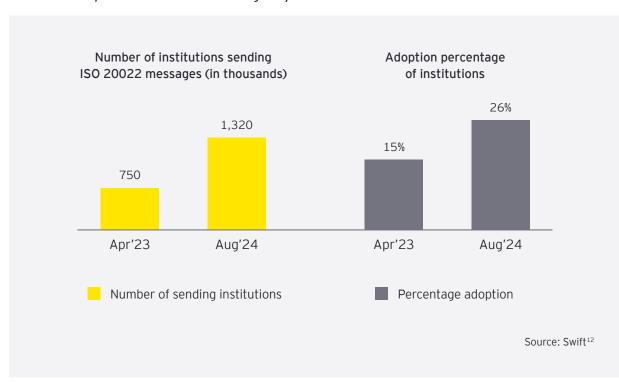
This structured data significantly reduces
manual effort, decreases friction and minimizes
high levels of investigations and false positives.

Additionally, it addresses delayed customer
payments by improving straight-through
processing (STP) rates, leading to fewer
exceptions and errors. The increased granularity
of payment data also enhances risk management
and strengthens screening processes for financial
crime and regulatory compliance.

Several use cases illustrate the transformative potential of ISO 20022. Its universal language streamlines cross-border payments by reducing data transmission errors, improving processing speed and enhancing accuracy. It boosts compliance by providing structured data for sanctions screening and regulatory reporting. The clearer payment information minimizes time spent on exceptions, cutting operational costs and improving service level agreements (SLAs). Additionally, ISO 20022 enables data-driven innovations, such as real-time cash flow insights, automated reconciliation and better corporate treasury management, benefiting both banks and businesses with enhanced liquidity and working capital management across borders.

Also, ISO 20022's richer data sets drive product innovation in the areas of enhanced reporting, automated reconciliation and real-time cash flow forecasting. This increased transparency not only improves customer satisfaction but also

Exhibit 6: Adoption of ISO 20022 messages by Swift financial institutions



empowers institutions to tailor services using data insights. By adopting ISO 20022, banks can streamline operations and remain competitive in an increasingly crowded market.

The coexistence period started in March 2023 and steady progress has been made to the current 26% adoption rate. However, the transition for many institutions requires alignment of multiple stakeholders and delivery of complex change, which means many institutions' adoption plans

land toward the back end of the co-existence period. With not long to go to the end of coexistence, Swift, at the request of the community and the with support of its Board: re-confirmed the community's commitment to November 2025 as the end of the MT/ISO 20022 cross-border coexistence period. This emphasizes that priority should be given to instruction messages to ensure operational continuity and ongoing interoperability between financial institutions and payments market infrastructures (PMIs).

Banks and payment firms must view ISO 20022 not merely as a technical upgrade, but as a strategic imperative to thrive in the evolving global payments landscape. And, the time to act is now.

2.3. Intensify efforts in regulatory compliance and standardization to improve financial crime safeguards and implement robust controls in an ever-evolving regulatory environment, banks are intensifying their sanctions screening and controls.

EY's recent UK market sanctions and survey provided an industry-wide view of the technology, people and processes used in name and payment screening. The survey highlighted that the majority of firms are satisfied with their engines' ability to identify true positives, but there is a consistent desire to improve efficiency and reduce false positives, in addition to addressing challenges caused by data quality issues.

To combat sanctions evasion, firms are employing additional approaches including; targeted KYC, adverse media screening, transaction monitoring scenarios and leveraging network analytics to uncover risks through associations, such as shared addresses and links to designated persons. Innovations in post-transaction analytics and Al-driven technologies are increasingly acknowledged for their capacity to enhance the effectiveness and efficiency of financial crime prevention mechanisms within both AML and sanctions frameworks.

There are efforts underway to explore harmonization of regulations, including:

- Project Mandala,¹³ an initiative driven by the BIS, aims to design a global architecture with more efficient cross-border payment systems, with a particular focus on ensuring efficient compliance of AML norms and combating the financing of terrorism (CFT) regulations.
- Leading players and networks are providing value-added solutions, such as a pre-validation (confirmation of payee in the UK) alias directory. They are also enabling solutions that help fight payment fraud, such as account verification, invoice fraud, payment limits, velocity controls and approvals.
- ► The financial industry is also embracing RegTech solutions to efficiently navigate the complex web of international regulations, with features like pre-validation of payee details and account verification.¹⁴

2.4. Innovate with digital currencies and CBDCs, utilizing tokenization to transform the landscape of cross-border payments

The evolution of cross-border payment systems, fueled by tokenization and DLT, heralds a new era of financial innovation. CBDCs and programmability are converging to form a unified force for change. Digital currencies' key features – programmability and tokenization – are not just driving smart contract development, but are also enabling a range of use cases that enhance cross-border payment processes. These improvements promise significant advancements in commerce and trade finance.

Tokenization streamlines three fundamental areas of cross-border payments:

1. Messaging

By embedding transactional data within digital tokens, tokenization simplifies the communication process for cross-border exchanges, reducing reliance on complex international messaging protocols.

2. Settlement

The direct transfer of ownership, mirrored by token transfers, shortens the settlement times traditionally seen in crossborder payments.

3. Reconciliation

The transparency and immutability of DLT offer a consistent and unalterable transaction ledger, aiding the complex reconciliation processes across multiple parties and jurisdictions.

With market projections estimating the value of real-world tokenized assets to reach as much as US\$30t by 2034, the potential for growth is immense. 15 However, this burgeoning innovation could lead to a landscape of fragmented "digital islands," introducing costs and complexities for market participants to navigate. The programmability inherent in digital currencies especially through smart contracts – is addressing this concern and unlocking new possibilities in wholesale cross-border payments. These self-executing contracts with predefined rules are setting the stage for intricate, conditional transactions that can be automatically settled, thus reducing counterparty risk and enhancing efficiency.

Major banks and FinTechs are responding to these opportunities with zeal. Proprietary platforms, such as J.P. Morgan's Onyx and Santander's One Pay FX, reflect a growing commitment to using DLT for improved efficiency, reduced costs and faster processing. FinTechs, like Partior, are at the forefront of revolutionizing global financial settlements by leveraging shared ledger technology to enable real-time cross-border payments, improve settlement efficiency, enhance transparency and reduce risks.

66

Shared ledgers are a game changer in global finance. By creating a shared platform that builds on the core attributes of blockchain - programmability, immutability and traceability, these systems facilitate the integration of digital currencies, enable real-time data sharing and streamline the settlement of financial transactions, among other benefits. In the long run, their increased adoption will pave the way for a more inclusive and innovative financial ecosystem.

Stella Lim

Chief Commercial Officer Partior Amid the advancements by banks and FinTechs, we also are seeing impactful public-private collaborations that are emerging as pivotal contributors to the transformation of the payments ecosystem:

- ► The Regulated Liability Network (RLN) aims to enhance commercial bank money through tokenized deposits, driving innovation and transforming financial services. Initiated in the UK, the RLN has evolved over two years, with EY collaborating with industry players in 2022 to explore technical feasibility and develop a strategic roadmap. A 2023 discovery phase confirmed RLN's potential, including cross-border payments. By December 2023, 11 institutions launched an experimentation phase, demonstrating the RLN's new functionalities, such as programmable payments and fund locking/unlocking, promising to transform customer journeys and business processes.
- The Regulated Settlement Network (RSN) is an evolution of the RLN concept. The RSN envisions an interoperable network for multi-asset transactions that aims to operate on a 24/7, programmable shared ledger. Members of the regulated US financial sector are developing a RSN PoC to explore the feasibility of shared ledger technology to settle tokenized commercial bank money, wholesale central bank money, US Treasury securities and other tokenized assets. The RSN PoC

will be conducted in a test environment and will simulate multi-asset transactions in US dollars. The PoC aims to highlight opportunities to improve the operation of multi-asset settlements for domestic users of financial instruments denominated in US dollars.

As these technologies advance, their potential to reduce costs and accelerate payment settlement is becoming evident.

Discussing tokenization's rising trend with Swift

Swift is embracing the future of finance by actively engaging with digital assets and currencies, aiming to bridge the gap between traditional financial systems and emerging tokenized ecosystems.





Interest in digital assets and currencies continues to grow, with wide-ranging forecasts for the growth of digital assets. One of the most potentially transformative innovations on the horizon is the creation of a unified or shared ledger for digital assets.

This has the potential to introduce greater levels of programmability and settlement efficiency, reduce friction, reconciliation and cost of transactions. It also promises a single, shared view of financial states.

However, implementing shared ledgers is a complex task that requires platforms to be both scalable and resilient. Moreover, the future will likely see multiple shared ledgers coexisting, making Swift's secure infrastructure essential for achieving interoperability between various ledger implementations and established networks

As the trend toward tokenization accelerates, it has renewed interest in the role of digital money for settlement, particularly in the form of CBDCs. In one of the largest global collaborations on CBDCs to date, 38 institutions—including central and commercial banks and market infrastructures—participated in Phase 2 of our industry-wide sandbox testing. The results successfully demonstrated the application of CBDCs and Swift's experimental network interlinking solution across more complex, market-relevant use cases such as trade payments, foreign exchange, and delivery-versus-payment for tokenized securities.

Interoperability is hard - but necessary. Moving forward, we will continue to work closely with the financial community to advance use cases across CBDCs and tokenized assets so that value can move across borders instantly and frictionless in whatever form it takes.

Nick Kerigan

Managing Director and Head of Innovation Swift

2.5. Forge strategic partnerships across the cross-border payments ecosystem, including collaboration with FinTechs, banks, central banks and regulatory bodies

The transformation of cross-border payments is catalyzed by strategic collaborations among FinTech companies, traditional banks, central banks and regulatory bodies.

FinTechs are at the forefront of this change, utilizing technologies like APIs to forge seamless connections between payment systems, thereby boosting efficiency and broadening service offerings.

Banks are increasingly recognizing the benefits of partnering with FinTechs, leveraging their large customer bases and established trust to integrate the agility and innovative capabilities of FinTech solutions. These collaborations are redefining cross-border payments by streamlining processes, offering competitive foreign exchange rates, providing transparent pricing, and enhancing service delivery in specific corridors. Banks are adopting FinTech APIs to grant customers instant access to cost-effective payment options, along with additional features that enhance liquidity management and user experiences.

FinTechs are disrupting traditional models by introducing digital-first solutions that eliminate intermediaries, offer alternative payment methods, and leverage real-time data to empower both businesses and consumers.

The synergy between banks and FinTechs is a strategic necessity that is opening up unparalleled opportunities within the cross-border payments value chain. By forging these alliances, banks can offer more competitive, transparent, and efficient services.

Regulators are also joining forces with industry stakeholders to develop standardized frameworks and ensure cross-border compliance, which builds trust and minimizes transactional friction. Money transfer operators (MTOs), with their specialized knowledge of niche markets, are collaborating to extend services to underserved regions, offering better foreign exchange rates and quicker settlements. Infrastructure providers, including central banks and global payment networks, are instrumental in facilitating smooth system integrations, enhancing interoperability, and delivering scalable solutions.

Initiatives, such as Project Agorá, could exemplify the next wave of collaboration in the cross-border payment ecosystem by bringing together central banks, commercial banks, and FinTech companies to harness digital assets for more efficient transactions. Envision a platform arising from this partnership that allows a European enterprise to instantly pay its Asian suppliers using a digital currency, with the transaction guaranteed by a smart contract. This payment would bypass traditional banking channels, utilize a unified ledger for real-time verification, and automatically adhere to international compliance

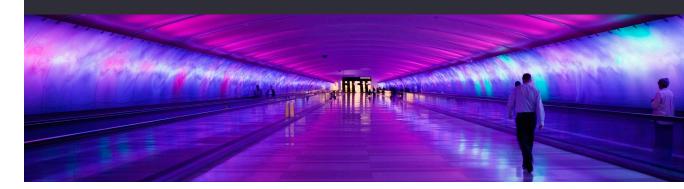
standards. Such a scenario would not only streamline global trade but also position digital assets as the cornerstone of a new, inclusive financial architecture, fostering innovation and economic growth across borders.

66

Consumer expectations have evolved. They now demand fast, low-cost cross-border transactions with complete price transparency, guaranteed delivery amounts and real-time traceability at lightning-fast speeds. This presents a unique opportunity for banks and FinTechs to collaborate. By integrating advanced cross-currency payment solutions directly into their platforms, financial institutions can meet these demands, staying competitive in an increasingly digital world while delivering the efficiency and certainty consumers expect.

Steve Naudé

Managing Director Wise Platform Business



2.6. Harness the potential of embedded payments to facilitate seamless cross-border e-commerce transactions, boosting customer experience and market reach

E-commerce is reshaping the cross-border payments landscape through digital platforms and marketplaces serving customers and merchants expecting instant pay outs. As the global marketplace evolves, the cross-border e-commerce sector is set to experience significant growth, expanding from U\$\$1.92t in 2024 to U\$\$3.37t by 2028, with a robust CAGR of 15.1%. This is fueled by globalization, digitalization, improved logistics, and a rising demand for international products. ¹⁶

Innovations simplifying cross-border payments are central to this growth. E-commerce platforms now integrate diverse payment methods – credit cards, debit cards, e-wallets, account-to-account (A2A) and bank transfers – making international transactions more accessible. Automatic currency conversion at checkout allows customers to view prices and make payments in their local currencies, reducing confusion and enhancing the shopping experience.

M-commerce further accelerates this transformation by enabling cross-border purchases via smartphones, offering convenience and boosting international online shopping. E-commerce platforms are also improving regulatory compliance, navigating international tax and legal requirements more effectively. These advancements have made

cross-border payments faster, more secure and compliant with global regulations.

Embedded payments represent a significant opportunity. By integrating payment solutions directly into e-commerce platforms, businesses can offer frictionless transactions. For example, a UK customer buying handcrafted furniture from an Indonesian seller can experience automatic currency conversion and secure payment within the same platform, bypassing third-party processors and reducing conversion fees. This integration ensures regulatory compliance, provides valuable data insights for marketing optimization and supports global e-commerce growth.

Banks and payment service providers have substantial opportunities to embed alternative payment methods (APMs), such as wallets, buynow-pay-later (BNPL) and pay-by-bank options, into e-commerce platforms and mobile apps, enhancing customer experience and creating a more efficient cross-border payment ecosystem. Also, e-commerce platforms can leverage embedded payments to offer localized payment options to cater to regional preferences, which can significantly increase conversion rates and customer satisfaction.

These shifts are set to revolutionize cross-border e-commerce, making transactions faster, easier, and more secure.

66

Cross-border payments have become increasingly important for people, businesses and governments in our globally connected world.

Consumer expectations have driven the payments agenda in recent years with FinTech's, networks, and banks all focused on enhancing speed, transparency, and security to deliver a better user experience.

Now we are also seeing the 'consumerization' of institutional payments: the industry is working to enhance the underlying settlement and infrastructure capabilities to enable higher-value corporate payments to be as fast and secure as consumer payments.

The industry is in a critical moment of transition, and the trends highlighted in this paper are unequivocally essential for all organizations that participate in, use or provide cross-border payment solutions.

Tim Moncrieff

Global Head of Strategic Initiatives, Visa Direct Visa

In summary, the strategic imperatives reshaping the cross-border payments landscape present banks with a wealth of opportunities to enhance their offerings across the cross-border payments value chain. The adoption of real-time payments, ISO 20022 standards, and advanced sanction screening protocols offers banks the chance to streamline operations, improve compliance, and elevate customer trust. The exploration of digital currencies and partnerships with FinTech innovators opens new avenues for product development and market expansion. By capitalizing on these transformative trends, banks can strengthen their position in the financial ecosystem, delivering faster, more secure, and innovative payment solutions that align with the evolving demands of the global economy.

Navigating new frontiers: opportunities in the cross-border payments ecosystem

The dynamic evolution of cross-border payment systems is revealing a spectrum of opportunities for stakeholders. This transformation is a pivotal moment for a variety of players, including financial institutions, FinTech innovators, regulatory bodies, and end users engaged in global commerce. Each stakeholder stands to benefit from the technological advancements and collaborative efforts that are redefining the landscape of international transactions. We will explore the opportunities that these developments present, highlighting the potential for growth, efficiency, and innovation across the cross-border payments ecosystem.



3.1. Banks to build a competitive edge by embracing service innovation and strategic partnerships

Banks can enhance their offerings and reduce costs by providing a variety of payment options. Multicurrency wallets and pay-by-bank services are examples that can significantly lower transactional and foreign exchange expenses.

- New payment methods, such as digital wallets, can help banks innovate their revenue models by enabling them to expand their service offerings. For example, some banks are introducing a flat fee pricing package which exemplifies a transparent and predictable cost structure that appeals to customers. Banks can further personalize the banking experience by considering subscription-based models or tiered pricing strategies that cater to the diverse needs of their customer segments.
- Improving the user experience at various payment touch points is also crucial. This includes digital documentation, tokenization, and mobile app interfaces. Banks can create a frictionless experience by ensuring a consistent look and feel across platforms, enabling easy tracking of funds, simplifying payee setup, and providing timely alerts and notifications.
- Differentiation in value-added services (VAS)
 is another key area of focus. Features like realtime payment tracking, fraud management,
 request-to-pay services, and alias directories

- can set a bank apart. Additionally, offering non-core functionalities, such as loyalty programs and transparent pricing, can further enhance the value proposition.
- Strategic partnerships with FinTech companies and technology providers help banks accelerate the development of innovative cross-border payment solutions. For example, Barclays' partnership with TransferMate to offer UK businesses an international receivables solution featuring automatic reconciliation, reducing transaction costs and saving time, demonstrates how banks can leverage external expertise to enhance payment platforms and expand service offerings.¹⁷

3.2. FinTechs to tap into the open data economy, delivering faster and more personalized cross-border payment solutions.

The biggest opportunities for FinTechs lie in embracing a fully open data economy to deliver richer and more personalized experiences for consumers and businesses alike. Reducing the barriers to entry for new players through an open data economy is a huge growth opportunity. Key areas of focus include:

Faster time to market for banks: By specializing in specific customer challenges, FinTechs can quickly develop high-quality solutions. Building robust APIs allows banks to test and trial new payment flows, accelerating innovation and time-to-market. Leveraging ISO

- 20022 data ensures compliance with evolving regulations while simplifying regulatory reporting.
- Verticalization: The booming social media industry is a big focus area. As social media firms enter e-commerce, they enable influencers to sell products and users to make purchases, often involving cross-border micropayments with high costs. FinTechs can address these challenges by reducing transaction costs through innovative payment solutions.
- SME payments always have a layer of intricacy owing to the nature of the industry or market they operate in. A simple example of this is a cross-border accounts receivable e-invoice sent by a supplier to their buyer that needs to be accompanied by tax and customs documentation, which tend to be corridor specific. FinTech can easily build capabilities to facilitate SME transactions within wellestablished corridors, particularly in Western European and US regions where streamlined document exchange systems are already in place.

3.3. MTOs to enhance cost efficiency and customer experience through comprehensive digitalization

The most fertile territory for MTOs lies in operational cost reduction and customer experience enhancement. By embracing

automation, such as straight through processing (STP) and robotic process automation (RPA), MTOs can improve transaction speed and accuracy while reducing manual intervention. Migrating to cloud-based solutions and rationalizing physical footprints further streamline operations.

Enhanced AML and KYC processes through compliance-driven automation bolster risk management and regulatory adherence, contributing to a secure transaction environment. These improvements in efficiency and security can simultaneously lower cross-border transaction costs, directly benefiting customers.

In focusing on cost efficiency, MTOs also position themselves to offer faster, more affordable services, improving the overall customer experience and strengthening their competitive edge in the global remittance market.

3.4. Infrastructure providers to lead the charge in innovation with blockchain, APIs and interoperability across platforms

Infrastructure providers play a pivotal role in the global payments ecosystem, with the potential to drive innovation and efficiency in the financial services industry. Here are some opportunities for these entities:

- Innovation in payment protocols: Infrastructure providers can lead the charge in developing new payment protocols that leverage blockchain and DTL, enabling faster and more secure cross-border transactions.
- API-driven services: By offering robust APIs, infrastructure providers can facilitate seamless integration with their systems, allowing banks and FinTechs to quickly innovate and bring new financial products to market.
- Interoperability and standardization:
 Promoting the standardization of payment systems and ensuring interoperability can reduce transaction friction, making it easier for financial institutions to conduct business across different platforms and regions.

3.5. Regulators and policymakers to advance compliance, market harmonization and innovation in cross-border payments

By capitalizing on emerging opportunities, regulators and policymakers can create the architecture to support a more secure, efficient and inclusive financial ecosystem. These opportunities include:

- Strengthening compliance frameworks: By enforcing rigorous AML and KYC regulations consistently across jurisdictions, regulators can encourage financial institutions to invest in robust compliance systems, enhancing the overall security of the financial system and building greater trust among consumers.
- Promoting fair pricing: Policymakers can foster a competitive environment that incentivizes financial institutions to develop innovative, customer-centric pricing strategies, ensuring that consumers receive fair value for financial services without compromising on quality or profitability.
- Facilitating cross-border payment innovation: Regulators can play a critical role in supporting the adoption of advanced technologies for cross-border payments, which can drive financial inclusion, improve security measures and offer superior customer experiences, leading to a globally connected and efficient economy.

66

The future of cross-border payments lies in real-time transactions that are as seamless and efficient as domestic payments. By leveraging advanced technologies and interconnected payment rails, we can significantly enhance global cash flow and reduce the uncertainties associated with international transactions. However, for this vision to become a reality, it is crucial that the public sector support these advancements alongside the private sector. For example, evolving local laws and regulations will help facilitate and enable real-time cross-border payments.

Katja Lehr

Managing Director EMEA Payments Solutions J.P. Morgan Payments

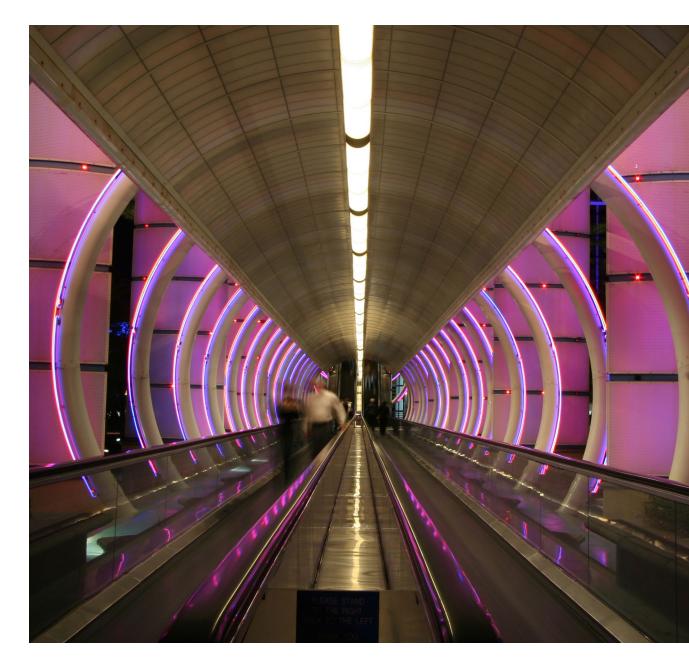
Conclusion and future outlook

The cross-border payments sector is undergoing a profound metamorphosis. The digital revolution, underpinned by collaborative industry efforts and regulatory endorsement, is ushering in a new era of financial transactions and better outcomes for consumers, merchants and corporates.

Disruptive technologies are spearheading this transformation, with digital assets and CBDCs at the forefront. Initiatives like the BIS Innovation Hub's Project Nexus and regional efforts such as the ASEAN XBPI Network are redefining interoperability by linking domestic payment systems to facilitate seamless cross-border flows. Simultaneously, the traditional correspondent banking model is being reimagined through the adoption of DLT, smart contracts, and tokenization, as demonstrated by initiatives such as Project Agorá. These innovations promise a future where payments are not just faster and more cost-effective, but also more secure, challenging the need for traditional intermediaries.

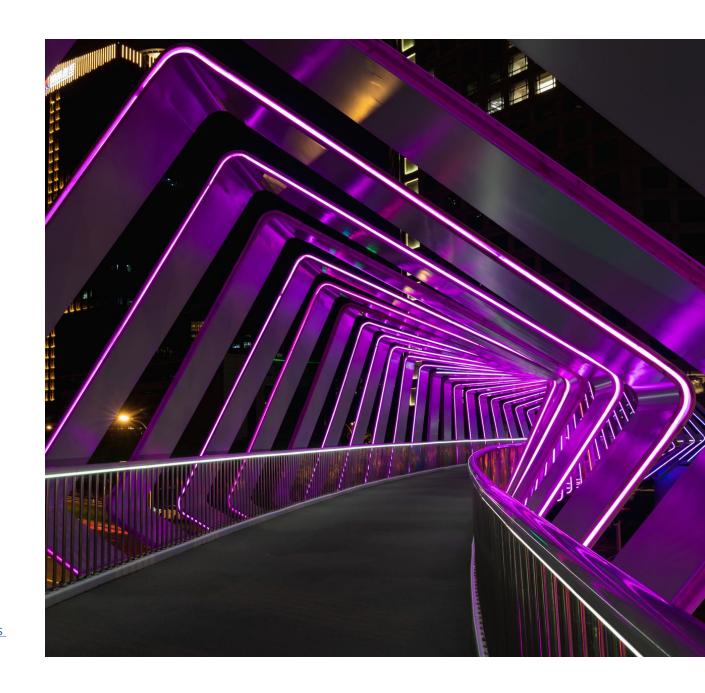
The trajectory toward a modernized cross-border payment infrastructure is characterized by a synergy of incremental improvements and radical innovations. While industry-wide projects such as ISO20022 offer immediate enhancements, the adoption of digital assets, the interlinking of payment systems, and the transformation of the correspondent banking model underscore the seismic shifts reshaping the financial sector. The successful integration of these developments requires the collective effort of all players across the financial landscape.

By embracing collaboration, innovation, and a commitment to inclusivity, the industry is well on its way to establishing a global payment infrastructure that is not only efficient, compliant and secure, but also accessible to all participants in the global economy.



References

- 1. FXC Intelligence, "How Big is the B2B Cross-Border Payments Market?," January 2023
- 2. Citi Group, <u>"Future of Cross-Border Payments,"</u> September 2023
- 3. Paypers, "Navigating the evolving landscape of cross-border payments," March 2024
- 4. The Financial Stability Board (FSB), "G20 roadmap for enhancing cross-border payments"
- 5. The Financial Stability Board (FSB), "G20 Targets for Enhancing Cross-border Payments", 2021
- 6. Bank for International Settlements (BIS), "Project Agora"
- 7. European payment council, <u>"SEPA Instant credit transfer"</u>
- 8. Projective group, "The new EU Regulation for Instant Payments," February 2024
- 9. European Payments Council (EPC), "SEPA Instant Credit Transfer"
- 10. Swift, "CBPR+ Traffic Highlights," August 2024
- 11. Swift, "ISO 20022 for Payments for Financial Institutions"
- 12. Swift, Ibid, "CBPR+ Traffic Highlights," August 2024
- 13. BIS, "Project Mandala," May 2024
- 14. Finance Magnets, "The rise of RegTech," March 2023
- 15. Standard Chartered, "Trade finance to play substantial role in USD 30.1 trillion tokenised real-world assets market by 2034," June 2024
- 16. Juniper Research, "Cross-border eCommerce Market Statistics 2023-2028," August 2023
- 17. Barclays, "Barclays partners with TransferMate to provide an international receivables payments solution for UK businesses," May 2023



Contacts

AUTHORS

Sanjeev Chatrath
EY Asia-Pacific Payments Leader
sanjeev.chatrath@sq.ey.com

Alla Gancz

EY UK Payments Consulting Leader <u>alla.gancz@uk.ey.com</u>

Jennifer M. Lucas
EY Americas Payments Consulting Leader
jennifer.m.lucas@ey.com

CONTRIBUTORS

Ganesh Samvaran Vudayagiri
EY Global Banking & Capital Markets
Analyst - EY Insights
ganesh.vudayagiri@gds.ey.com

Anu Widyalankara

UK Payments Strategy & Technology Leader anu.widyalankara@uk.ey.com

Jeremy McDougall

UK Payments Director jeremy.mcdougall@uk.ey.com

Swaroop Francis

EY Global Banking & Capital Markets Analyst - EY Insights swaroop,francis@gds.ey.com

Sanchit Sethi

EY Global Banking & Capital Markets Analyst - EY Insights sanchit.sethi@gds.ey.com

GLOBAL BANKING & CAPITAL MARKETS

Nigel Moden

EY Global Banking & Capital Markets Sector Leader nmoden@uk.ey.com

Alex Noble

EY EMEIA Financial Services Payments Leader anoble1@uk.ey.com

Karl Meekings

EY Global Banking & Capital Markets Lead Analyst - EY Insights kmeekings@uk.ey.com



EY | Building a better working world

EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and a description of the rights individuals have under data protection legislation are available via ey.com/privacy. EY member firms do not practice law where prohibited by local laws. For more information about our organization, please visit ey.com.

Ernst & Young LLP is a client-serving member firm of Ernst & Young Global

© 2024 EYGM Ltd. All Rights Reserved.

EYG no. 008313-24Gbl 2408-4591606 BDFSO ED None

This material has been prepared for general informational purposes only and is not intended to be relied upon as accounting, tax, legal or other professional advice. Please refer to your advisors for specific advice.

ey.com