

World Report Series
Payments
2022

Capgemini 
RESEARCH INSTITUTE

WINNING WITH SMBs

OPTIMIZING TECHNOLOGY AND DATA
TO DRIVE DEEP ENGAGEMENT



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FOREWORD

Work, shopping, travel, entertainment, services, and commerce all look a bit different from 30 months ago. The impact of global events has similarly reshaped the payments industry as individuals, governments, and businesses reexamine priorities and success strategies. After rebounding from the aftereffects of COVID-19 faster than most sectors, the long-term prospects of payments appear solid, even as rising signs of recession challenge other markets.

As we mentioned in the World Payments Report 2021, the year-over-year growth of non-cash transactions is triggering the adoption of new and alternative payment products (QR codes, digital wallets, and account-to-account payments) and accelerating demand for cross-border and instant payments.

This year's World Payments Report examines the growing importance of the B2B payments value chain and small and medium businesses (SMBs) – the global economy growth engine. SMBs represent an opportunity for payment specialists to capture a burgeoning market. Yet many financial institutions have overlooked smaller enterprises to focus on retail and corporate accounts. And currently, SMBs struggle with poor cash flow and long conversion cycles, which may trigger a growth-prohibitive liquidity crisis. Moreover, during our conversations with SMBs, we learned they feel underserved by their primary banks, and nearly 90% are considering services from challenger banks and alternative providers (PayTechs and BigTechs).

We believe banks and PSPs must innovate their front-end B2C payment capabilities and evolve their back-office payment value chains to retain a leadership position.

The timing is right for payment firms to select and assemble building blocks in various combinations to satisfy customer requirements via layers of services and capabilities on a composable, API-powered platform. Platform upgrades and payment hubs will lay the foundation as banks slowly but surely transition to the ISO 20022 (MX) standard from the ISO 15022 message type (MT). The legacy predecessor was adequate until the pandemic sparked sweeping digitalization, with some banks experiencing a greater than 90% shift to digital transactions.

Further, today's financial regulations require banks to use more exacting, data-rich, quickly tracked messaging to comply with regulatory requirements.

ISO 20022 will harmonize data-driven platforms and connect payments ecosystems, enabling SMBs to take advantage of change-as-you-go payment formats or plug-and-play third-party offerings – all necessary to sustain and future-proof business.

Banks' adoption of the new message standard is crucial as payment value chains become longer, more complex, and non-linear – and transaction and interaction volumes explode. And at the same time, new technologies, such as distributed ledger technology are emerging.

To stay in the game, payment players need to develop compatible systems to integrate DLT. This requires firms to harmonize data at technology, enterprise, ecosystem, and industry levels.

While we cannot predict how digital ledgers will ultimately affect the payments industry, the World Payments Report 2022 offers options for banks and PSPs to consider based on their appetite for investment and risk. We review strategies that may bolster core infrastructure to enable industry competitiveness, such as partnering with central banks to explore central bank digital currency (CBDC).

I've been in the financial services industry for around 25 years and cannot remember a more dynamic or opportunity-filled time for the payments sector. I hope our report encourages conversations among your teams and helps you formulate a strategy to more effectively capture mindshare and share of wallet within the increasingly important SMB segment.



Anirban Bose

Financial Services Strategic Business Unit CEO
& Group Executive Board Member, Capgemini

EXECUTIVE STEERING COMMITTEE MEMBERS

The Executive Steering Committee Members for our World Payments Report 2022 included top leaders and acknowledged payments industry experts from across banks, FinTechs, technology partners, and leading industry players. They helped steer our report content through ideation, hypotheses refinement, validation of key findings, and sharing of best practices. Our committee members represent the Americas, EMEA and APAC to ensure a mix of global perspectives and experiences.

BANKS



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EXECUTIVE SUMMARY

Earn SMB trust through innovation and engagement

Despite unprecedented volatility and uncertainty, the payments industry was resilient throughout the COVID-19 crisis. Digital adoption was high among customers and businesses: non-cash transactions are on track to achieve a 16.5% compound annual growth (2021-2026) on the back of APAC and European upticks.

Growing digital payment infrastructure improvements and maturity has led to accelerated adoption of innovative formats – QR codes, digital wallets, and account-to-account payments are some examples. This has resulted in demand for streamlined customer journeys, an optimal payments mix (traditional and new), and value-added personalized services.

Despite incremental post-pandemic recovery, many small and medium businesses are struggling with cash flow issues and slowed business growth.

- SMBs believe their primary banks have underserved them: nearly nine in 10 are considering a move as agile PayTechs and BigTechs gain favor.
- These newer players are orchestrating ecosystems to bundle core payment services with both financial and non-financial offerings to give SMBs a unified value proposition.

Build platform versatility to unlock payment services potential

Legacy system limitations stifle innovation, yet only one in three payment firms are ready to mothball their heritage systems. However, new platformification approaches are necessary along with composability – a modular, responsive, and open-form architecture. Incumbent firms can improve their cost base and speed to market while reducing their IT footprint via future-proof payment hubs built on API-based, cloud-native open architecture.

A composable payment hub's effectiveness depends on quality data: ISO 20022 is built

on open standards and is critical to enhanced platform value.

- It harmonizes data, so PSPs operate more efficiently based on rich, end-to-end, accurate, and meaningful information.
- Combining the ISO 20022 standard with a payment hub allows incumbent to boost operational efficiency and reduce settlement delays and false positive cases. Harmonized data flow enables seamless, integrated, and secure client-to-bank, bank-to-bank, and bank-to-client interactions.
- It will also allow for integration of new technologies including distributed ledger technology.

Prepare for the age of seamless value exchange

More payments executives will consider the potential of DLT, but we expect adoption rates to remain fairly level and based on careful forethought in the near-to medium-terms. We encourage payments players to evaluate their own innovation potential and risk aversion when considering possible DLT plays:

- **PLAY 1:** Stay in the game with a multi-rail foundation.
- **PLAY 2:** Bolster core infrastructure to enable industry competitiveness, such as partnering with central banks to explore central bank digital currency (CBDC).
- **PLAY 3:** Become a DLT adoption frontrunner through ecosystem collaboration. Scale DLT use cases beyond closed-loop systems to commercialize benefits. Test programmable and smart payments-related DLT use cases (such as trade finance and treasury) and non-banking use cases.

Choose your best play. Leverage your long experience alongside agility and innovation to deliver stronger value propositions to the increasingly competitive and always important small and medium businesses segment.

Payment players need innovation to win SMB engagement

The dynamic payments sector has been an innovation leader with a reputation for adapting quickly to challenges. For example, during the height of the pandemic, the industry reacted with laser focus to build a resilient and robust infrastructure to withstand global lockdowns. But now, new tests emerge as global economies decelerate, which is why banks and payment service providers (PSPs) must maintain momentum to evolve fast and scale economically.

The payments industry has reached an inflection point

COVID-19 prompted customers and businesses to weave digital technologies into everyday life. Similarly, convenience boosted the use of non-cash payment methods, especially among consumers (Figure 1). Worldwide non-cash transactions growth between 2022 and 2026 is expected to remain soft due to the looming threat of recession. IMF projections for the 2023 GDP growth rate suggest that all major economies will witness slowdown. Coupled with significantly high inflation rates and continuing geopolitical issues,

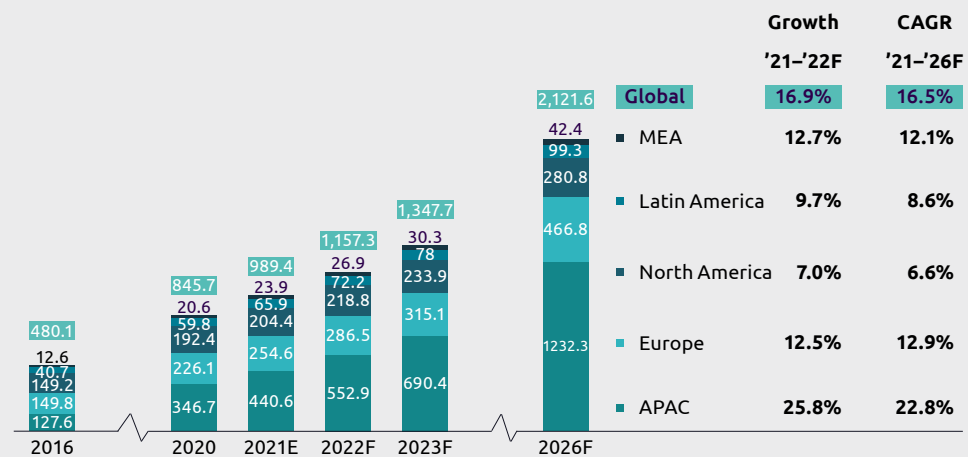
we foresee a relatively slow growth rate for non-cash transaction volumes.

Despite the slowdown, comparative analysis confirms the growing prominence of new payments (instant payments, e-money, mobile and digital wallets, account-to-account, QR code) relative to traditional methods. For example, in 2021, traditional payment methods (cards, credit transfers, and direct debits) accounted for more than 83% of overall non-cash transaction volume, while new payment methods comprised nearly 17%. By 2026, we believe new payment methods will make up around 28% of total volume, while traditional payment methods will drop to about 72% of overall non-cash transactions.

The rapid adoption of mobile payments has driven the acceptance of innovative payment instruments, such as quick response (QR) code payments, tap-and-go (NFC), digital wallets, and account-to-account (A2A) payments.

- For instance, an independent research firm estimated that global QR code payment users may reach 2.2 billion in 2025, up from 1.5 billion in 2020, which suggests that almost

Figure 1. Increasingly mature digital payments infrastructure fuels non-cash transaction growth (volume in billions)



Sources: Capgemini Research Institute for Financial Services, 2022; ECB Statistical Data Warehouse, BIS Statistics Explorer, countries' central bank annual reports.

Note: 2021 non-cash transaction data is sourced from central banks. Forecasted figures were used when data was unavailable. Figures are forecasted for 2022 and beyond.

29% of all mobile phone users worldwide will use QR code payments by 2025.¹

- Similarly, instant payments are on track to a CAGR (2021-2025) of around 29%, reaching 428 billion in volume.
- Fueled by increased adoption of digital wallets, eMoney transactions are expected to witness a similar growth rate of about 27% during the forecast period (2021–2026), to reach about 161 billion in volume. By 2025, researchers say unique digital wallet users globally will increase by roughly one and a half times to reach 4.4 billion.²

From a regional perspective, new payment growth is happening everywhere:

- APAC will likely contribute more than 50% to global non-cash transaction volumes by 2026, sparked by the popularity of mobile wallets.
- In the MEA region, an expanding tech-savvy population coupled with increasing support from the government is enabling the transition to digital payments in the forecast period.
- Considering that TCH (The Clearing House) and instant payments are picking up in North America, non-cash transactions are expected to tally nearly 7% CAGR during the forecast period (2021-2026).
- In Latin America (especially in critical markets Brazil, Peru, and Colombia), the successful adoption of instant payment systems is considered the key driver. For instance, PIX, launched in November 2020 by the Brazilian Central Bank, is the instant payment system used by almost 60% of the population.³
- In Europe, we expect digital wallets to propel non-cash transaction volume growth during the forecast period. Digital wallets will likely gain traction on the back of increasing payment app adoption, ease of cross-border transactions, and the impending launch of the European Digital Identity wallet.⁴

From the market perspective, a significant driver for the broad acceptance of new payment methods is the growing share of e-commerce in global trade. In business-to-consumer (B2C) global retail sales, e-commerce is projected to grow 10.5 times faster than in-store sales during 2019-2025.⁵ This channel shift has prompted several firms to strategize a direct-to-customer (D2C) business model. Moreover, rising online commerce has created a need for streamlined customer journeys, an optimal payment mix (traditional and new), and value-added services (personalization). The trend is also significant in the business-to-business (B2B) space, further ramping up demand for cross-border and instant payments.

Key market trends, changing customer behaviors, and shifting business models

(D2C) have made payments a critical business component to add value, increase user appeal, and streamline supply chains. Today, payment methods ensure operational efficiency. However, to retain their pivotal position, insightful banks and PSPs realize they must innovate their front-end B2C payment capabilities and evolve the back-office payment value chain, which includes a diverse group of vendors and suppliers. However, as B2C payment continues to become experiential, the B2B payments value chain remains unchanged and has become vulnerable.

SMBs struggle amid disruptive macroeconomic forces

COVID-19's after-effects stunted economic progress worldwide as geopolitical crisis worsened. Not surprisingly, an International Monetary Fund outlook predicts a meager 3.2% rise in global growth in 2022, down from more than 6.0% in 2021.⁶ First, the pandemic depleted several nations' foreign exchange reserves. Then, as lockdowns ended and spending resumed, recovery led to supply chain pressure, shortages, and inflation.⁷

Supply chain disruptions also continue to impact the economy, contributing to inflation and business debt. And small and medium businesses (SMBs)⁸ are bearing the brunt of the impact as compared to larger enterprises. SMBs are the lifeline of the global economy, accounting for more than 90% of businesses worldwide. On average, they contribute half of the global GDP and are the leading workforce employer.^{9 10 11}

Despite being the economic growth engine, SMBs face liquidity and cash flow issues, predating COVID-19. By an estimate, almost USD3 trillion was locked in uncleared invoices as of June 2019 for US-based SMBs – a significant amount that might otherwise have funded core business operations. To further the problem, during the first quarter 2021, payable days (time firms take to pay suppliers) rose from 55 to 58 days, despite signs of post-pandemic recovery; consequently, SMBs were forced to delay hiring and business expansion and had to limit inventory purchases.¹² As a result, small and medium businesses continue closing shop as capital reserves dwindle.¹³

The cumbersome B2B payments value chain – which remains manual, error-prone, and reliant upon legacy systems – is a crucial driver of SMBs' inadequate access to capital. Within the B2B payments value chain, procure-to-pay and order-to-cash workflows remain opaque and intermediary-driven, with payments and information flowing via mail, fax, SMS, and paper checks. Moreover, the fragmented accounts receivable and payable landscape restricts value-added

services development, making the end-to-end process inefficient and costly.

Unlike B2C payments, a traditional B2B payment follows a synchronous finalization process involving validation and agreement from multiple stakeholders. Unfortunately, this leads to significant settlement delays due to poor interoperability between involved parties and manual tracking and communication, which increases overhead costs by as much as 5% per transaction. Moreover, complex and opaque processes create vulnerabilities, making high-value B2B transactions an attractive target for cybercriminals.

Ongoing disruption further aggravates these issues. We engaged 150 SMB representatives as part of our 2022 World Payments Report primary research, and over 70% agreed that geopolitical and financial volatility, technology disruption, regulatory pressure, and increasing IT vulnerabilities are driving market upheaval.

Nigel Dobson, Banking Services Lead at ANZ Bank (Australia), said, “Pandemic, inflation, and geopolitical factors have all had an impact on supply chains, causing administrative costs to rise and shortages to occur. They undoubtedly have an influence on the frequency and regularity of payments because of business factors.”

This turbulence has driven changes in SMBs’ expectations and payments requirements. As a result, they seek payment services that are convenient, cost efficient, and digital (Figure 2).

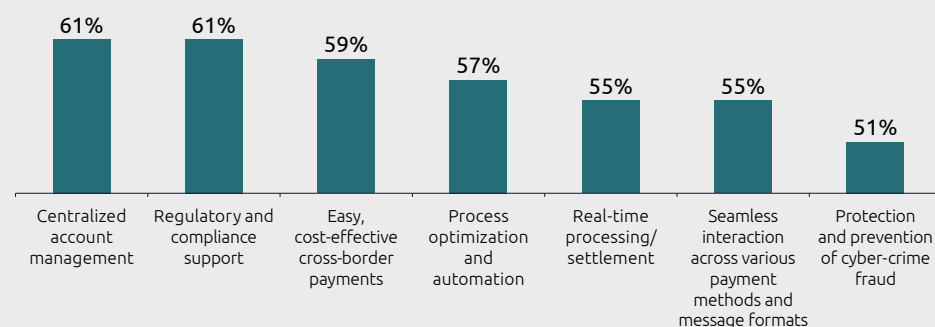
SMBs are important to the banking industry. They contribute upwards of USD800 billion annually to global banking revenue and are on track to grow almost 7% year over year, reaching nearly USD1 trillion by 2027.¹⁴ Despite the high revenue potential, this

client base often finds itself in financial services limbo – stuck between large corporate customers and low-value/high-volume retail customers. On the B2C (and C2B) side, low entry barriers have led to a wave of innovation and competition from FinTechs and BigTechs that have significantly contributed to digitalizing the payments value chain.

Conversely, B2B payments innovation lags. One estimate says more than USD150 trillion was spent on B2B payments globally in 2019, much more than on B2C.¹⁵ Before the pandemic, about 30% of B2B payments were digital, compared with nearly 70% of B2C payments. For many banks and payment service providers, the high cost to serve and low profitability of SMBs diminishes their appeal.¹⁶ Eric Tak, the Head of the Payments Center at ING (Netherlands), agrees: “The SMB market is underserved because offerings are either retail/small or huge. As a result, packaging for the SMB segment is a challenge, especially when they have multi-country operations.” He continued, “This segment has a high cash-flow requirement since they must pre-finance most of their operations. Additionally, prices have increased due to current supply chain challenges, and timelines have been stretched, underscoring the need for better cash management.”

But SMBs have watched the wave of consumer payments innovation mainly from the sidelines because FinTech innovation did not immediately impact B2B payments. Now, however, PayTechs are slowly but surely penetrating the B2B value chain. With BigTechs (Apple, Alibaba, Google, Amazon) and FinTechs (PayPal, Stripe, Block, Revolut, and Starling Bank) entering the mix, the highly lucrative SMB segment is becoming a competitive battleground. But with first-mover positions at stake, can established payment firms meet the SMB challenge in time?

Figure 2. Top SMB expectations of their payment services providers



Source: Capgemini Research Institute for Financial Services, 2022; World Payments Report 2022 SMB survey, N=150. Question to SMB participants: What are your top expectations from your bank?

SMBs are dissatisfied with their incumbent banks

Of the SMB leaders we surveyed, 61% said they had a relationship with two to five traditional banks, and nearly a quarter said they worked with six to 10 service providers. Often unfavorable terms for financial products – including renting fees for POS machines, high interest on working capital, and overdraft coverage – force SMBs to maintain multiple banking relationships. Yet, despite their various affiliations, SMBs still face challenges across the payment value chain (Figure 3).

Significant middle-market enterprise challenges exist around B2B payments, including cybersecurity, provisional liquidity, and operational efficiency. B2B payments providers face issues ranging from forex trading volatility to low margins and high transfer costs. Fraud, such as compromised email, payment delays, poor transparency, and the need for automation, are also problematic. For banks, SMB diversity poses significant service challenges. Banks struggle to accommodate varying sizes of SMB firms, disparate business maturity levels, and industries to which the SMB may belong. For instance, payment and cash management considerations for a food and beverage SMB may differ from an automobile parts manufacturer. For banks to serve SMBs, they need to customize their offerings to suit varying needs.

It’s no wonder many SMBs say they are not completely satisfied with their traditional

banking partners. For example, only 11% of SMBs told us they were happy with their banking relationships, 44% said they were dissatisfied, and 45% were indifferent. The result is that 89% of SMBs say they are reconsidering relationships with their primary banks across various product categories.

New-age players previously focused on B2C payments now target the B2B payments value chain, and SMBs are elated. A win-win situation has developed because B2B opens opportunities for new payments players to stimulate unit economics.

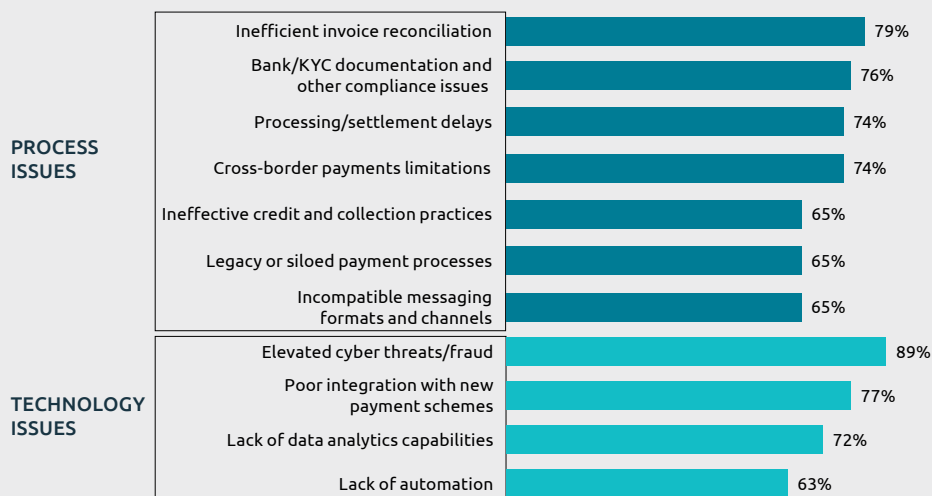
New payments players attract SMBs with value-added services

The pandemic expedited B2B payments digitalization. As a result, the segment, notorious for its paper-based and manual processes, is expected to experience double-digit growth from 2021-2026 in non-cash transaction volumes (Figure 4). Additionally, FinTechs are innovating and supporting small and medium businesses, emphasizing digitalization of the supply and value chains to modernize payment methods and boost settlement time and process.

Digitalization has opened the door to new-age players actively introducing innovative value propositions across the B2B payments value chain. The global B2B commercial spend in 2019 was USD150 trillion, with 5% of the total market served by PayTechs. The remaining USD140 trillion or more ran over legacy domestic and

89%
of SMBs say they are reconsidering relationships with their primary banks across various product categories

Figure 3. Financial executives admit that SMBs face several unresolved issues



Sources: Capgemini Research Institute for Financial Services, 2022; World Payments Report 2022 Executive survey, N=125.

Note: Invoice reconciliation is the process of matching bank statements to the outgoing and incoming invoices.

Question to bank executives: What challenges plague the B2B payments sector? (Fig. 3 represents those respondents who rated a challenge ≥5, where 1 = Least Challenging and 7 = Highest Challenge)

cross-border banking rails. So, it's only natural that more new-age payments players will seek to cash in by leveraging technology expertise to enable faster and richer integrated payment flows.¹⁷

As a result, innovative offerings are up, with a significant focus on and exponential growth in mature categories, such as B2B cross-border payments.

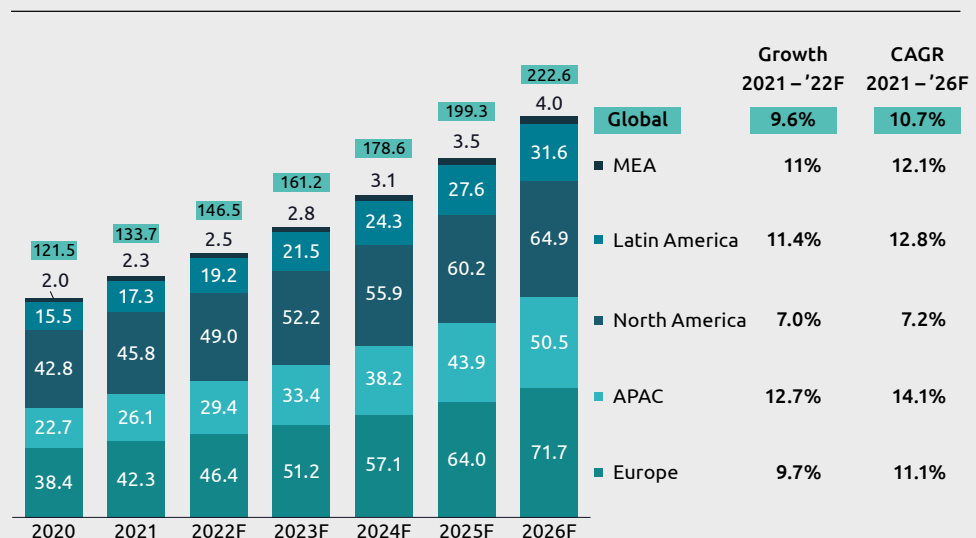
The global B2B cross-border payment market will likely reach USD35 trillion in 2022. Yet it is highly fragmented with low transparency, resulting in risks for SMBs. The traditional process can involve at least six intermediaries – the payer and payee, their respective banks, and two correspondent banks – with high transaction costs and low process visibility.¹⁸

New-age payment firms are targeting these intermediary roles. For instance, Banking Circle and Currency Cloud target correspondent services with global virtual payment and account networks. PayTechs such as TransferMate aim for end-user cross-border payments propositions. Wise, a cross-border payments specialist, offers global multi-currency wallets to SMBs that significantly reduce transfer costs with a higher degree of automation. Wise moves about USD18 billion per year of B2B payments (as per 2021 data) across borders. Previously known as TransferWise, London-based Wise is expanding its network and value proposition from multi-currency transfers to serve more mid-sized businesses. Wise claims to save its clients about USD1 billion a year in transaction fees.¹⁹

Many large banks are trying to retain cross-border payments dominance to counter growing FinTech influence. For instance, HSBC launched multi-currency Global Wallet in May 2021 to mitigate traditional pain points and eliminate beneficiary and correspondent bank charges to offer SMB clients a competitive cost advantage.²⁰ Likewise, Citibank offers Citi Global Collect to ease cross-border payment inefficiencies.^{21 22} Faisal Alhijawi, Chief Strategy & Development Officer, BUNA said, "Instant A2A cross border credit transfer (xCT) is an ideal solution for digital Commerce. Traditional methods are often costly because they involve multiple parties, but cross-currency xCT can be used to pay for goods and services bought across borders in real-time, saving costs on buyers and sellers, enhancing businesses' cash flows, and enabling banks to provide value-added services to their clients."

However, traditional banks have difficulty convincing happy and satisfied SMBs to switch from their FinTech provider. To add to the complexity, mature FinTechs are stepping up their B2B engagement with an ecosystem play. Leading challengers – Stripe, PayPal, Starling, Revolut, Block (formerly Square), and Wise – are orchestrating an ecosystem through bundling core payment services with other financial products (insurance), near-banking products (capital management and advisory), and beyond-financial products (legal services, HR,

Figure 4. Worldwide B2B non-cash transaction volume is on the rise (billions, 2021-2026F)



Source: Capgemini Research Institute for Financial Services, 2022.

Note: B2B non-cash transactions: Transactions between businesses (not individuals) using a mode of payment other than cash. B2B non-cash transactions data for 2020 may differ slightly from estimates published in the 2021 World Payments Report. Figures are forecasted for 2022 and beyond.

and more) to offer a convenient one-stop value proposition for SMBs (Figure 5).

Ecosystems and marketplaces are advantageous for new-age players as they increase client intimacy through an extensive offering, increasing stickiness and thus switching costs for SMBs. Clients leaving the ecosystem don't simply forgo a single payment offering but give up many value-added services that significantly improve SMB operational efficiency. A diverse ecosystem reinforces competitors' entry barriers by creating more collective value for the SMB than an individual payments service provider.

Moreover, ecosystems increase client engagement touchpoints that players can mine for rich and diverse customer data to personalize services further and boost long-term loyalty and retention. Finally, ecosystems can help to harness untapped revenue streams.

For example, in the United States, SMBs spend upwards of USD300 billion²³ to outsource value-added services such as bill payments, accounting/bookkeeping, invoicing, and payment acceptance services. By stitching together value-added services, beyond-banking offerings, and other financial services, FinTechs can become heroes to stressed-out SMBs. As SMBs lower their administrative burdens, costs, and back-end tasks, they can invest more time and resources in business growth and customers.

Where do banks weigh in?

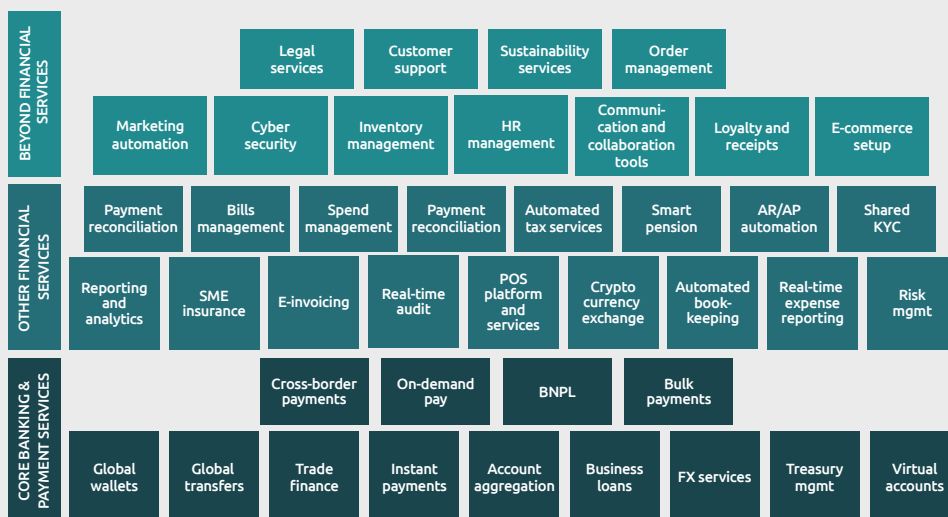
Very few payment players capitalize on the fact that payments provide the bulk of day-to-day customer/bank interactions. And at the heart of interactions, convenient, secure user experience

and consumer preferences drive top-of-wallet engagement, leading to further monetization and cross-sale opportunities. Credit Suisse is a frontrunner in leveraging platforms and open APIs to orchestrate business ecosystems. Zürich-based Alain Schmid, Credit Suisse Head of Business Banking, said, "The firm developed an open ecosystem of connectivity solutions allowing clients to integrate third-party payment solutions. In addition, the bank partners with startups.ch to provide services, including accounting, reporting, and other business requirements, which enhances the bank's overall value proposition."

However, not all payment firms have seized the opportunity. Legacy challenges persist. Banks are still grappling with decades-old systems, and replacement poses significant challenges. The transition to modern technologies often takes longer than expected. In an emerging era of ecosystem-centric growth, futureproofing requires platform strategies and innovative business models.

And at Microsoft, Christian Sarafidis, Chief Business Development Officer of Worldwide Financial Services, and Peter Hazou, Director, Business Development, Financial Services, said, "The challenge for banks is that older legacy technologies are less nimble and agile. Whereas FinTechs are born on the cloud. And it's not always about the cloud; it's the accompanying technologies. Banks-versus-banks competition has grown to banks versus a wide ecosystem of FinTechs and BigTechs. Hence, incumbents must utilize new technologies more fundamentally than ever."

Figure 5. How are FinTechs orchestrating and monetizing B2B ecosystems?



Source: Capgemini Research Institute for Financial Services, 2022.

TCH and EBA CLEARING collaboration aims to streamline cross-border processes

Challenge: The Clearing House (TCH) and EBA CLEARING provide payment systems and related services to a broad community of banks that support PSPs with instant payments in their respective geographies. TCH and EBA CLEARING cover most payment services users on both sides of the Atlantic. TCH and EBA CLEARING user communities asked SWIFT to support them in improving cross-border payments by addressing end-user requirements for fast and accessible cross-border payments and responding to industry calls for action.

Solution: The partners dedicated the immediate cross-border (IXB) payments initiative to ensuring speed to market and to helping meet bank expectations for safety, soundness, and payment service compliance. With proof of concept contributions

from Bank of America, BBVA Group, Citi, HSBC, Intesa Sanpaolo Bank, J.P. Morgan, and PNC Bank, TCH and EBA CLEARING delivered the proof of concept (PoC) in 2021 and are administering a live IXB pilot slated for late 2022 implementation. Full service is planned for 2023. IXB priorities include speed, access, cost, and transparency, as outlined by the international standard-setting Committee on Payments and Market Infrastructures (CPMI) and the global Financial Stability Board (FSB). Based on ISO 20022 message standards, SWIFT Go and TCH, and EBA Clearing instant payment systems, IXB will initially support instant payments in USD (\$) and EUR (€) currency corridors. Twenty-four financial institutions worldwide contribute to the IXB end goal: utilizing the fastest domestic payment options to improve cross-

border payments. The service will leverage components such as TCH's RTP® network in the United States, EBA CLEARING's RT1 in the Eurozone, and relevant SWIFT services. As a result, users can leverage their existing investments and connectivity, enabling fast IXB implementation with minimal downtime.

Business results: Leveraging existing immediate payment systems capabilities will enable IXB participants to provide their customers with transparent and fast payment services with certainty on completion. And the IXB design will significantly reduce the chance of exceptions requiring manual handling, thus improving user experience and enabling banks to support cross-border payments on a large scale.



Boost platform versatility to unlock payment potential

Historically, most firms relied on disparate payment engines for each type of payment transaction. They built payment engines on monolithic legacy architecture to handle individual payment types (e.g., ACH, Fedwire, CHIPS, cards) through on-premises setup or shared data centers. In the mid-2000s, payment firms started to transition toward payment hubs to consolidate these disparate engines and other payment solutions in a systemic approach. Over time, hubs evolved with open architecture, allowing payment firms to deploy a scalable component-based architecture that can easily integrate new payment types/channels with APIs.

Legacy challenges stifle innovation

While incumbents are slowly transitioning to the future via multi-year digital transformation initiatives requiring hefty budget commitments, progress has been tepid. Only a third (34%) of payment executives say their firm is in the final stage of phasing out legacy systems and deploying cloud-native open-platform architecture. Conversely, 27% say they struggle with monolithic,

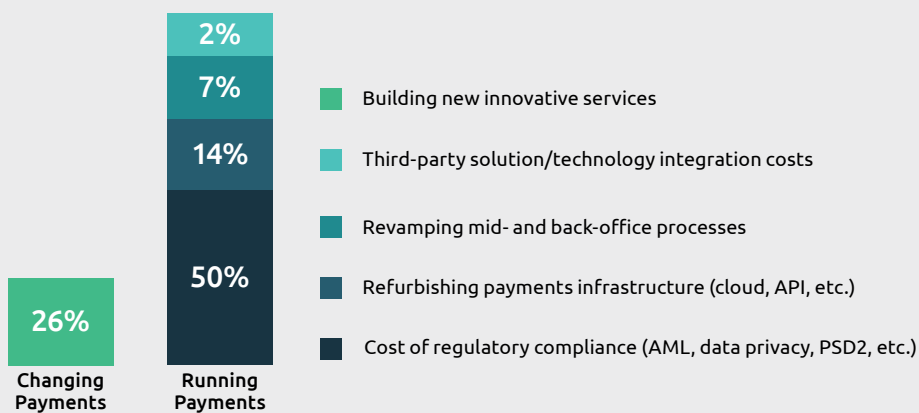
inflexible, and siloed payments infrastructure. Nearly one in three executives surveyed are still confident they can meet today's fast-changing digital needs despite their legacy systems.

Continued reliance on outdated systems stifles transformation. More than 80% of payment executives agree that significant retooling is needed to integrate and interoperate new technologies with platforms of varying ages and formats. More than 70% said they must maintain and upgrade legacy systems iteratively. Banks' most difficult challenge in the technological transformation path is eliminating and rationalizing legacy systems.

The result? Legacy dependencies are taking a toll on incumbents' innovation potential (Figure 6). Only 26% of the payment executives ranked innovation IT spending as their top priority. Moreover, a large part of this innovation budget is spent on front-end (UI/UX), with mid- and back-office systems neglected. This significantly downgrades the end-to-end capabilities of payment firms over time. And increasing regulatory pressure is constraining already skimpy budgets even

Only **26%** of the payment executives ranked innovation IT spending as their top priority

Figure 6. How do bank and payments executives prioritize their IT budgets?



Sources: Capgemini Research Institute for Financial Services, 2022; World Payments Report 2022 Executive survey, N=125. Note: The total may not add up to 100% due to rounding. Question to bank and payments executives: Where have you spent most of your 2021–22 technology budget? (Fig 6 represents executives who ranked IT spending categories as their top priority, within a scale where 1 = Highest spent area and 4 = Least spent area)

further. At ANZ New Zealand, the Head of Payments, Industry, and Engagement, Brian Bonar, said, “Regulatory initiatives and associated compliance delivery programs will often consume up to 90% of the available investment budget. Banks must look at ways to leverage such programs while meeting all stakeholder expectations. An investment landscape is often misunderstood.” (Refer to the World Payments Report website for a more detailed infographic on the regulatory landscape).

Trailing innovation and dwindling profits threaten payments domain viability. At the Commercial Bank of Dubai, COO Ali Imran said, “Payment firms operate in a very competitive space, they need to have an aggressive investment posture to stay relevant. Getting the balance right is critical between run-the-business and change-the-business prioritization.”

Payment firms realize a 60:40 ratio between run-the-business costs and change-the-business investments is optimal. But how can they re-weight the scales?

Embracing composability in payments platforms

Composability is a term that encompasses mindset, technology, and processes that help organizations innovate and adapt quickly to changing demands. When it comes to infrastructure architecture, composability means components

are pluggable, scalable, and replaceable – allowing payment firms to improve continuously through agile development. Further, organizations that follow business modularity principles can activate the concept and achieve scale and pace of change.²⁴

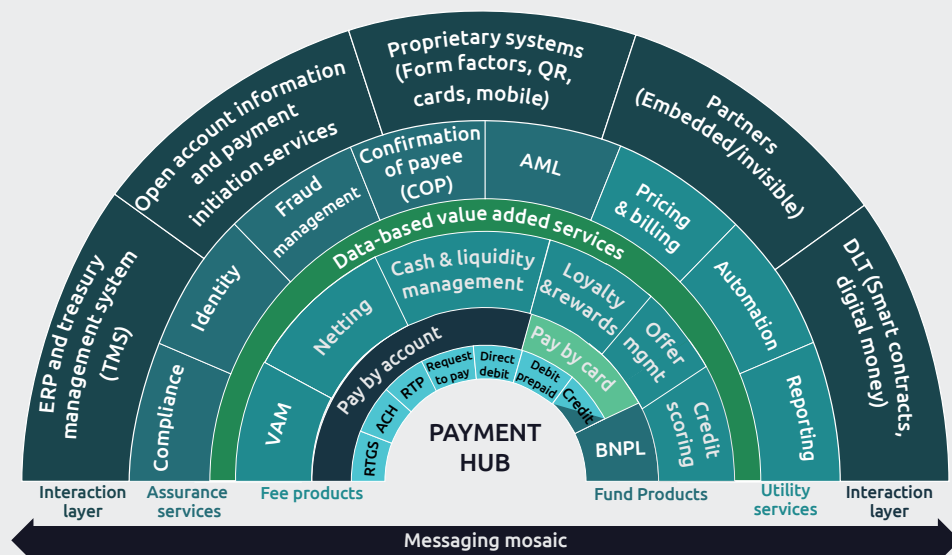
Fast-paced disruption and significant market volatility have forced banks to prepare for multiple future outcomes. As a result, strategic payment firms are waiving build-for-permanence approaches and advancing to build-to-evolve platforms to hedge against VUCA (volatile, uncertain, complex, and ambiguous) environments. The move will enable them to embrace change on the go.

Think of the popular LEGO® construction toys. Composability requires payment firms to select and assemble building blocks in various combinations to satisfy customer requirements. Payment firms can create layers of services and capabilities on a composable, API-powered canvas (Figure 7).

Composability enables payment firms to select and assemble building blocks in various combinations to satisfy customer requirements. A composable modern payments hub can be built on top of critical legacy systems, enabling easy adoption of innovative products and services. Payment firms can either leverage existing features, develop new features in-house, or plug-and-play third-party services via composable architecture.

For payment firms, achieving scalability and rapid innovation at high cost efficiency is a

Figure 7. Payment firms can now configure services, capabilities, and features on the go



Sources: Capgemini Research Institute for Financial Services, 2022.
 Note: VAM is virtual account management

survival imperative, especially when 76% of banks globally struggle to cover their cost of capital.²⁵ However, achieving this is by no means an overnight development. Payment firms will have to craft transformational paths by evaluating their as-is state. The journey from many (siloes systems) to one (payment hub) to none (on the cloud) requires payment service providers to identify tactical changes that can lead to strategic transformation of the payment value chain.

Composable platforms help establish competitive advantage

Composable platforms offer development environments with self-service portals for payment firms to explore and innovate solutions. As a result, payment firms can test, measure, and integrate SaaS turnkey services into their existing systems quickly and economically. This reduces payment firms' IT footprint. Moreover, the total cost of ownership remains significantly lower due to SaaS (pay-as-you-go) pricing models.

On the cost front, the traditional big-bang replace-the-platform transformation model requires substantial upfront costs in license migration and implementation expenditure. However, value realization through new revenue sources and cost savings may not recover these costs in the mid-term (three to five years), which affects overall transformation ROI. Conversely, a composable platform allows payment firms to curate new value propositions actively through APIs; as a result, firms can start realizing value without significant lag time.

Payment firms will no longer be dependent upon a single vendor for services. Instead, composability allows them to select and assemble best-in-market solutions from open ecosystems. PSPs can scale up or down delivered-as-a-service offerings to meet changing business conditions.

While the payments hub consolidates the disparate payment engine, composability also allows payment firms to quickly build and launch new payment formats in the market. For instance, B2B BNPL APIs that can embed into e-commerce platforms so buyer SMBs can get



upfront payment for sales, while seller SMBs receive extended payment terms. The B2B BNPL offering can provide increased flexibility to SMBs to manage their working capital.

As more B2B sales shift to e-commerce, payments firms will add new payment formats that are fast and cost efficient. In 2021, about 45% of Dutch business buyers used the Netherlands-based iDeal payment network for online purchases. iDeal, an account-to-account (A2A) online transfer system, is expected to emerge as a solid alternative to pay-by-invoice.²⁶ Composability allows payment firms to integrate these regional networks seamlessly and offer new payment gateways using APIs.

A composable payments hub enables payment firms to seamlessly connect and interact with clients through ERP systems, treasury management systems (TMS), and form factors (like QR codes). It allows payment firms to embed offerings and capabilities by leveraging B2B APIs, helping to closely align their products and services with the client's value chain.

For example, payment firms can use APIs to enable easy access of global transaction banking (GTB) services from their payment hubs to SMBs. Traditionally, payment firms have relied on legacy host-to-host (H2H) file transfer systems to integrate GTB services with clients' systems. With APIs, payment firms can embed GTB functionalities, such as instant treasury, within SMB workflows and treasury management systems. Instant treasury allows clients to move from schedule-based account reporting to an on-demand real-time model. It enables payment firms to help clients (SMBs or corporations) with just-in-time liquidity, instantaneous reporting, automated credit



Banks today think there is a way they can upgrade their infrastructures and payment systems to create and realize value without significant lag time. That is where the cloud and SaaS offerings come into the picture, allowing firms to customize payments for specific SMBs."

Nilesh Dusane

Head of Institutional Payments
AWS (US)

decisions based on real-time AR/AP status and integrated procure-to-pay and order-to-cash cycles.

Instant treasury can also improve cross-border payment capabilities. Santander's PagoNxt payment platform launched OneTrade for SMBs in March 2022, enabling instant payments from Spain to Brazil in local currencies. In the future, the solution will allow SMBs to manage FX positions and bank accounts in different countries while accessing innovative supply chain financing options.²⁷

Banks can use their composable payment hub APIs as-a-service to augment their clients' capabilities. For example, Citibank's Treasury and Trade solution extended its instant payments offerings across 28 markets in 2021. Using Citi's single point-of-entry and API connectivity approach, corporations and SMBs can offer payment capabilities to their customers across markets. Moreover, they can add complementary APIs to

access value-added services such as real-time verification and instant notifications.²⁸

Payment firms can also borrow B2C payment innovations to streamline the B2B interaction layer. For instance, QR code-based payment options are witnessing exponential growth across markets. A Singapore-based bank launched a QR-based payment solution in 2020 for Singaporean SMBs. The solution helps to consolidate multiple invoices into QR-code-based transactions with the flexibility to make full or partial payments. A firm currently using the solution is expected to save 3,300 person-hours monthly in accounting and administrative tasks.²⁹

Only 4% of the payments executives we surveyed said their firm has (or is exploring) fluid architecture that enables the rapid configuration of payment products and services. Composable platforms allow banks to align products, features, and services with changing customer needs, all while ensuring that banks are not accumulating legacy layers. First Abu Dhabi Bank (FAB) is one such example. Gautam Dutta (Head of GTB Cash Management Product Innovation) at FAB said, "First Abu Dhabi Bank is proactive towards client needs and drives awareness around cyber threats and security breaches by deploying technology tools to mitigate fraud while digitally onboarding clients for secured end-to-end data transfer through channels, including host-to-host (H2H) platforms. In addition to offering cost-effective "packages" for Small and Medium Business (SMB), coupled with seamless Enterprise Resource Planning (ERP) and Treasury Management System (TMS) integration through Application Programming Interfaces (APIs), FAB drives transformative changes through innovative propositions such as virtual accounts mapped to wallets, authentication using UAEPASS and electronic signatures for a diverse client base."

Platforms make incumbent payment firms more efficient and productive, and banks have pushed aggressively toward platformification as part of their digital transformation strategy. However, only a few platforms have produced ROI payoffs, even after steep investments. Not all platforms succeed! Data quality is the lifeblood of a robust and successful platform and differentiates back-end utility platforms from experience-led payments platforms.

Claudio di Nella, SVP and Head of Visa Consulting and Analytics, said, "Payments can become a stand-alone profit center with



digitization generating a wide variety of data to better understand clients and their payments needs, which will enhance CX.”

Do banks leverage data adeptly? Our analysis demonstrates that clunky back-end data systems hinder SMB payment innovation, which can slow new propositions.

The sky is the limit for harmonized data potential

Capgemini’s World Retail Banking Report 2022 found that 70% of banking executives believe their available data is unreliable and difficult to process for insights. More than 60% said they lack the right tools and ability to manage unstructured data.

Siloed, unreliable, and incomplete data offers little value. How does this affect payment firms? Let’s look at the 1-10-100 principle. It costs a dollar to prevent insufficient data, 10 dollars to correct inadequate data, and 100 dollars to fix a problem caused by incomplete data.³⁰ The cost associated with poor data grows exponentially! Other research indicates that data scientists and analysts spend about 80% of their time finding and cleaning data versus using it.³¹

Insufficient or irrelevant data is estimated to shave 15% to 25% off revenue for most companies. Costs often stem from accommodating corrections, third-party confirmations, and cleaning up the aftermath of poor decisions.³²

Today, payments firms work with numerous messaging standards that include several

formats not built for the digital age. ISO 2022, a global open standard, creates a common language for payments worldwide and will help banks significantly improve data-related issues. It lays the groundwork for harmonization, calibration, and utilization of new efficiency potentials. It will ensure transparency, accuracy, compliance, and relevance. Harmonization will give all users a unified and comparable view of data collected through different sources (Figure 8).

When fully integrated across the ecosystem of payment and payment-related processes, ISO 2022 helps to unlock new value sources. For instance, payment firms interact with each other during case resolution to inquire and investigate transactions. These interactions happen on the SWIFT network using unstructured MI199 messages. Hence, the case resolution process requires manual intervention to review and respond, leading to inefficiencies and increased turnaround time. With the ISO 2022

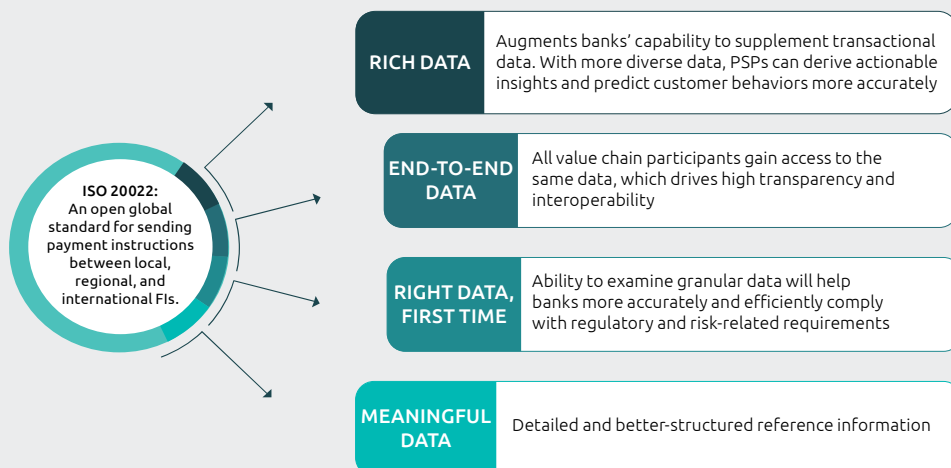


ISO 2022 will increase efficiency across the payment chain and eliminate friction caused by incorrect data identification or categorization.”

Bruno Mellado

Global Head of Payments and Receivables
BNP Paribas

Figure 8. How will ISO 2022 revolutionize the global payments value chain?



Sources: Capgemini Research Institute for Financial Services, 2022; SWIFT.



US financial institution BNY Mellon develops cloud-based, high-value SWIFT payments infrastructure

Business challenge: Microsoft and BNY Mellon were looking to further strengthen their partnership to increase not only mutual infrastructure resiliency but also provide a high value payment infrastructure that is hosted on a public cloud (Azure).

This effort was focused on the firms' strategic priorities including building the foundation of a robust technology service offering, jointly promoting capabilities, and providing a cost-effective solution to a common problem, all-while modernizing the banking/payment infrastructure.

Business solution: The firms collaboratively determined the start-to-finish aspects of implementation, including defining and testing end-to-end transaction flows, and migrating from a single-dollar test transaction to processing a high value (in the millions) of SWIFT payments through Azure. The bank gathered feedback to ensure consistent straight-through processing, to enhance the customer experience.

In late 2019, BNY Mellon, Microsoft, and SWIFT performed a proof of concept (PoC)

demonstrating that payments could be routed through cloud-based architecture while leveraging the security, performance, and user-friendly capabilities often expected from on-premises solutions.

By September 2021, the project was fully live and processing payments within Microsoft's cloud environment using SWIFT's Alliance Message Hub. The bank implemented the solution in phases that began with an early PoC demonstration, working through the identified regulatory bottlenecks, security, and SWIFT customer security program (CSP) requirements. Microsoft high-value treasury payments were the first set of instructions processed through this highly secure, resilient, and public cloud-based setup. Further expansion is planned in late 2022 and 2023, including increasing the public cloud architecture footprint and sharing learnings with regulators.

Results: The three organizations teamed up to design the infrastructure and to build/deliver a solution that BNY Mellon is now planning to expand to facilitate adoption.

standard and rich structured data format, payment firms can automate their systems to read and react to these queries efficiently.

While ISO transformation is a significant milestone for banks, it will also benefit SMBs and corporations aiming to improve their treasury function. SMBs and corporates engage across markets in a global setup while facing different systems, languages, communication channels, payment requirements, and contrasting regulatory environments. As a result, incongruent payment and settlement infrastructures often lead to poor management of account payables and receivables.

Many corporate executives believe integration is the biggest obstacle to achieving a consistent experience. Corporate treasurers are demanding better straight-through-processing and API connectivity from their ERP systems. Consequently, corporate treasurers implement complex reconciliation systems to match funds with itemized invoices. Information flow requires a shared support system across the market that includes payment initiation (corporate to bank), interbank settlement (bank to bank), and cash management (bank to corporate) to unlock B2B payment efficiencies.

End-to-end rich information fields in ISO 20022 credit transfer messages can make reconciliation far simpler and more automated. Additionally, rich and granular data in payments can provide treasurers with new and deep insights into their business. This data could help improve processes, personalize experiences, and build new value propositions.

From the UK, Mick Fennell, Business Line Director, Payments, at Temenos, told us that “ISO 20022 data will help banks develop more meaningful insights into payments as there is a wealth of information that banks have not yet tapped at an aggregate level”. He added, “Analysis of such granular data can help banks collect macro-economic signals about customer interests, activities, and behavior. And modeling this data with AI and machine learning can hyper-personalize offerings. Banks that fortify their data science capabilities can maximize the value of the information they mine to generate customer insights.”

On the cross-border payments front, banks bear high costs in correspondent banking spurred by compliance with monitoring, screening, and filtering requirements. These costs will likely grow as regulatory expectations and scrutiny increase further. Unstructured information in cross-border payments forces banks to maintain sophisticated control systems to monitor, screen, and filter transactions. However, despite these costly setups,

as much as 10% of payments fail straight-through-processing (STP). Moreover, rising regulatory scrutiny on correspondent banks has led to financial exclusion. As the larger ecosystem collectively migrates to ISO 20022 standards, banks will receive rich, structured, and appropriate data regarding the originator, beneficiary, and payment purpose, which will significantly reduce false positives, the cost of setting up sophisticated controls, and cross-border settlement time. “Structured data from ISO 20022 is likely to gradually reduce screening hits by 25 to 30% (such as sanctions and ATF), resulting in cost savings and improved customer performance,” said Société Générale CIB’s Nicolas Cailly, Managing Director and Head of Payments and Cash Management.

Commonly known as MX, ISO 20022 has been around for more than 15 years. Yet, adoption has lagged. Payment firms have long used the ISO 15022 message type standard (often called MT), which sufficed until the rapid digitalization trend. Then, COVID-19 accelerated digital-channel adoption, with some banks experiencing a greater than 90% transaction shift to digital mode. What’s more, digital transformation fueled cross-border payments.

Organizations built MT messages to support data-light and space-efficient systems when computing power and data exchange were nascent. This rigid, inflexible, and limited-size format could not carry vast data, leading to incomplete or missing information, eventually causing delays and unpredictability across the payments value chain. Since then, technology has evolved significantly, making massive innovation and improvements possible. The MT format now restricts the evolution of fast, secure, transparent, and personalized payments.

Therefore, now is the time for incumbents to embrace the MX ISO 20022 standard and unlock the unlimited potential of payments.

Ray Moran (Head of IT Architecture & Strategy) and Jeff Harbourne (Head of Savings and Personal Banking), both from Ireland’s Permanent TSB, said, “ISO 20022 would solve legacy issues. It will help us bring forth new technologies, applications, integrations, and capabilities to improve the bank’s ability to serve their client base across fast-evolving payment journeys.”

However, challenges persist, and 70% of payment executives say challenges in ISO 20022 implementation may be a barrier to payment innovation and transformation. More than 60% of executives cited the identification of different market specifications, understanding ISO 20022 complexities, and deploying new data management schemas as top challenges. During interviews, payment executives agreed that

70%
of payment executives say challenges in ISO 20022 implementation may be a barrier to payment innovation and transformation

budget constraints, siloed systems, and inadequate knowledge of MX formats (both in banks and among customers) were leading barriers to ISO 2022 migration.

Given the pressures and demands on payment firms' resources to pursue other initiatives, ISO 2022 migration is daunting, requiring banks and PSPs to translate data across hundreds of downstream systems to ensure compatibility. Accurate and seamless implementation is also a significant concern. The transition period is challenging because firms must adopt several specific standards concurrently; the shorter this period, the faster the market achieves a uniform standard.

And adoption initiatives require banks to identify suitable partners to help them through the migration journey. Yet almost one in three banks has not selected a strategic IT partner (Figure 9).

We encourage payment firms to resist shortcuts and patchwork. Translating incoming MX messages back into MT format to minimize internal system modifications may hurt the long-term value creation potential. Strategic payment firms will develop a holistic roadmap for ISO 2022 transformation.

From National Australia Bank, Shane Conway (Executive, Transaction Banking & Enterprise Payments, Corporate & Institutional Banking) said, "The bank is retiring legacy engines that orchestrate data flows to modernize internal systems for ISO data flows. The aim is to simplify

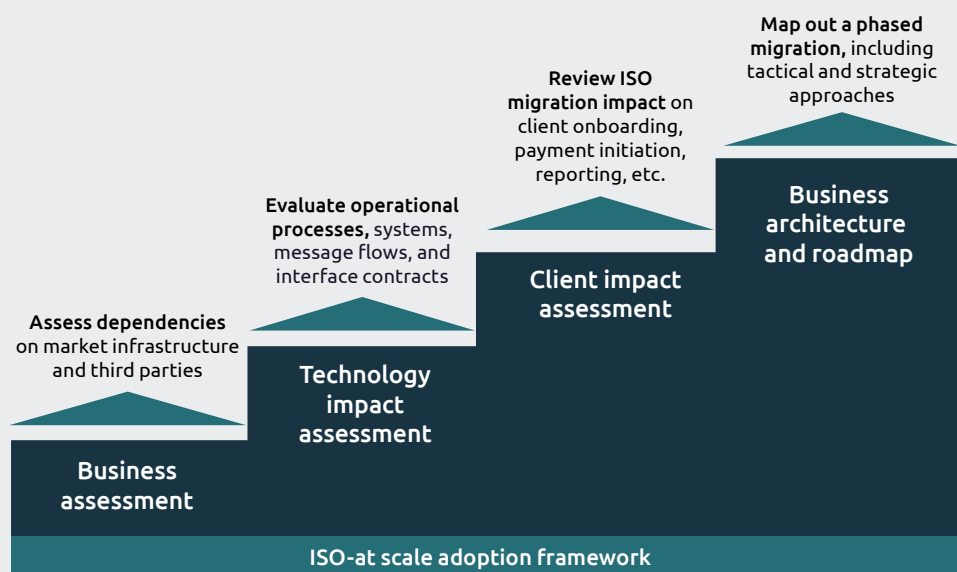
statutory processing for operational benefits and utilise the enhanced data payload, for example to reduce the threat of financial fraud and crimes." He added, "Ultimately, the investments we are making will improve straight-through processing efficiency of inbound international payments to Australia payments, linking in with Australia's New Payments Platform (NPP) – for real-time payments."

Citibank is also exploring ISO 2022 efficiencies and benefits, aiming to capture and store new rich data elements and project them in real-time across customer channels. In addition, the bank is working to ensure it has the necessary data storage and processes to build analytics, provide client advisory, and offer new services.³⁴

Currently, various ISO 2022 adoption timelines exist or are emerging across markets. For instance, the US Federal Reserve delayed its implementation of the standard by two years to 2025.³⁵ The move may provide breathing space for US payment firms. However, we do not advise payment firms to stagger implementation. For example, meeting the minimum compliance requirement could take a year. Meanwhile, extending ISO 2022 enhancements to core systems and scaling them at an enterprise level (surround application) could take two to three years.

Twelve high-value-payment market infrastructures (HVPIMs) were ISO 2022 compliant in February 2022. By year's end, more than 30 systems are expected to be ISO 2022 compliant.

Figure 9. IT partners can help banks comprehensively adopt ISO 2022 standards



Source: Capgemini Research Institute for Financial Services, 2022.



A UK-based global bank takes on ISO 2022 transformation

Business challenge: A UK-based bank was processing more than four billion payments annually and—since 2003—had offered ISO 2022 Extensible Markup Language (XML) products and solutions. The bank reports continuous growth in customer demand and transaction volume. Therefore, the firm needed a strategic solution to capture data flowing across various banking channels in MX format. It is necessary to capture the data at the initiation layer and send it to payment engines and reporting systems. The bank's existing solution had point-to-point integration between payment channels (retail, corporate, mobile, bulk) and the payment engine. Effective payment systems must perform MT to MX conversion and integrate with SWIFT, which led to high dependencies with various applications for integration and testing. Additionally, the bank reported high overhead due to multiple codebases and infrastructure involvement.

Business solution: The bank approached Capgemini to help it adopt ISO 2022 at scale. Capgemini reviewed more than 850 business requirements across geographies related to 20 epics and three minimum viable products (MVPs). Capgemini completed a detailed

impact assessment of transformation across various applications.³³ Next, it developed a unified messaging approach with an extended list of fields that an MX format direct from banking channels could capture. An API layer was created to integrate multiple disparate platforms and payment methods (both domestic and international). Next, an orchestration layer (comprised of services extraction, validations, sanctions, checks, and translation) was inserted between the payment engine and channels. Finally, Capgemini migrated the complex reconciliation process from the channels to the new payment data platform.

Value delivered to the bank: The bank is now wholly aligned with ISO 2022 standards for domestic and cross-border transactions. In addition, eliminating the point-to-point interface led to a faster, more agile way to connect applications via reusable APIs. Moreover, the bank can roll out the solution to new markets through configuration instead of a code change. The move reduces time to market and resource strain during expansion. Finally, the transformation approach ensures minimum service downtime and a better STP rate.

And by 2025, around 80 HVP MIs will likely comply with the new standard. Consequently, by 2025, ISO 20022 use will represent about 79% of total HVP volume (87% of HVP in value terms).^{36 37} Hence, hesitant banks and PSPs could lose out on several dimensions.

Those at the end of the ISO 20022 line may have to accept high-risk, big-bang data migration versus strategically phased transformation. Meanwhile, early adopters unlocking new platform capabilities will capitalize on first-mover advantages. Combining harmonized data with an intelligent composable payments hub can help banks create new value by bolstering operational efficiency and productivity while establishing deep customer intimacy.

Robust platforms and harmonized data are key to SMB value propositions

What do SMBs want? They want time back that they are now non-efficiently devoting to administrative tasks. They want to spend more time running the business contributing to business growth and expansion. At SAP Pioneer, Americas President Mitch Bouchard said, "Banks that spend time with SMBs and learn what they need to succeed can drive long-term growth."

- Our SMB survey revealed that 70% of respondents seek ways to enhance working capital management. Unlike large corporates, underserved SMBs face issues in maintaining liquidity.
- And more than 60% of SMBs want an embedded financial services and payment overlay (such as Google Pay or Amazon Pay) that can help them offer a frictionless payment experience in day-to-day activities. Simone Löfgen, the Payments Transaction Cluster Lead at Frankfurt-based Commerzbank, said, "Clients expect payments embedded within customer journeys instead of being the focus. Therefore, thinking about solutions from the perspective of the customer is necessary. Ultimately, customers want to pay quickly and securely. Customer thirst for convenience, combined

with technological developments such as open APIs, the platform economy, and advanced analytics, will make embedded finance the most significant trend of the next five years."

- And when it comes to leveraging emerging technologies – AI, data analytics, and distributed ledger technology (DLT) – 55% of SMBs told us they are ready even though investment means a potential financial burden. But, for banks, it is an opportunity to provide access to such technologies through their platform. For instance, data analytics could be the most valuable emerging technology for small and medium business banking customers. It can be used for cash-flow predictions and credit scoring, empowering relationship managers to provide better SMB client service.
- Almost one in two SMBs want a single view of data to derive better business insights. SMBs face a lack of insights into their financial position, which is getting better with open banking and new-age players. However, there are still several bottlenecks that require banks to step in.
- Nealy half (47%) of SMBs are concerned about cyber security and expect their banks to provide robust identity and consent management services, especially for third parties.

Ecosystems and B2B marketplaces provide resources to meet unmet needs of SMBs. They favor convenient one-stop-shop access to a broad range of services, including but not limited to payments and banking. As a result, they save significant time and resources searching for disparate service providers. Therefore, an opportunity exists for banks to stitch together various services on a single platform to deliver a connected and unified SMB value proposition that will help them compete with the mature new-age players currently leading the race.

Some leading banks have begun ecosystem approaches and are reinforcing their marketplaces with new innovative services. For instance, Singapore-based United Overseas Bank (UOB) operates a B2B ecosystem for SMBs in key Asian markets.

Almost
50%
of SMBs want a
single view of data
to derive better
business insights



There is a great opportunity for strong collaboration between banks and FinTechs to solve client problems across the entire supply chain (client experience, cost structure, compliance and regulatory risks)."

Sarthak Pattanaik

CIO, Digital Assets, Treasury Services, Clearance & Collateral Management
BNY Mellon (US)

- Through its digital platform, a Singapore-based bank offers value-added services such as accounting, cybersecurity, payroll management, and digital marketing to SMBs. It also includes financial services like cash management tools, FX services, and trade finance solutions.^{38,39}
- Singaporean UOB launched the all-in-one digital platform in 2022 to empower small and medium businesses and enhance their productivity. The platform offers several value-added services, including HR/payroll management and automation, logistics, marketing, and insights on their business. The bank aims to onboard about 200,000 SMBs by 2023-end.⁴⁰
- Incumbents can also spin off industry-specific ecosystems to cater to specific sectors with precise and specialized services. For example, a leading bank in Singapore used its existing marketplace to launch a mini ecosystem of services dedicated to the food and beverage (F&B) sector.⁴¹

Ecosystem play is not only about plugging third-party services. It can also help banks simplify and downsize some of their institutional offerings for SMBs, especially around trade finance and treasury. For incumbents, the SMB space is changing into a battleground, with larger banks trying to right-size their service offerings to go down the market. Meanwhile, traditional SMB service providers – regional and community banks – are attempting to add offerings to maintain their attractiveness.

“Incumbent payment firms are at an inflection point. Their approach to platformification will decide the course of their long-term sustainable growth,” said Ziad B. Al-Yousef, H.E. Deputy Governor for Development & Technology at Saudi Central Bank (SAMA). He added that “platform configurability and extensibility are essential to creating new payment propositions. In addition, the payment infrastructure must be agile and modularized to reduce complexity and time to integrate different systems, services and participants.”



A synchronized ecosystem is key to building future readiness

Regulations, customer demand, and technological evolution are rewiring financial services industry processes. Value chains are becoming longer, more complicated, and non-linear. Transaction and interaction volumes are increasing exponentially, and new technologies such as distributed ledgers are emerging. However, inconsistent and varied business logic and standards can hold up progress.

Payments players find themselves forced to build private data models to integrate new technologies, including DLT. As data is shared directly (without intermediaries) among ecosystem participants, the distinction between internal data and data exchanged is lost or blurred. Therefore, to efficiently leverage empowering technologies, harmonization is critical at the enterprise, ecosystem, and industry levels. As more payment firms transform technologically, it is apparent that the first industrialized proofs of concept (POCs) around emerging technologies like DLT will prominently use a platform with harmonized ISO 20022 data.



Small businesses want intuitive financial tools that mirror the consumer applications their customers love. Platforms are rising to the expectation by helping merchants easily offer online payments, launch subscriptions, and invoice accurately. There's a massive opportunity for Stripe, banks, and financial institutions to build on this momentum so more platforms can help small businesses break through.

Dorothy Copeland

Global Head of Partner Ecosystem & Alliances
Stripe (US)

Prepare to thrive in the age of seamless value exchange

Disruptive technologies spark an innovation conundrum

Since 2010, new technologies have bombarded the financial sector, disrupting a rather staid landscape. Notable among this range of change-evoking catalysts are automation, open banking, cloud transformation, the proliferation of APIs, IoT devices, artificial intelligence, and real-time rails (RTRs) that enable fast data-rich payments. However, as payment firms weigh technology benefits, no one solution may dominate – at least not right away. Instead, we foresee technologies working together to create economic value and scale. As technologies settle into complementary coexistence, DLT could emerge as banks' backend automation alternative.

Incumbent banks and payment service providers agree about distributed ledger potential. Of the payment executives we surveyed, 62% said DLT could help unlock new value sources. Moreover, one in three said ignoring DLT potential could erode future competitive advantages. Nevertheless, we believe DLT adoption will be cautiously steady, not meteoric. Only about 25% of banking executives ranked DLT-related innovation as one of the top 2023 transformation priorities: while a few incumbent players will become DLT enthusiasts and early adopters, not all banks will invest equally.

Future-focused incumbents are reevaluating their business models. The large volume of transformation projects for incumbents is hindering their ability to find resources for further payments innovation. Reassessment has led to hefty budgetary investment in transitioning traditional pipeline banking infrastructure to modular platform business models. Yet, several banks remain at the starting gate or are in between process phases. Although players have made significant investments, infrastructure transformation project ROI is yet to come.

EBA Clearing's Head of Service Development and Management, Erwin Kulk, said, "Both authorities and the industry should carefully choose which new initiatives to launch, especially as bank resources are scarce. Leveraging existing building blocks and recent investments – such as ISO 20022, API access and instant payments – will reduce time to market and give banks the opportunity to monetize such investments."

We can expect industry exploration of on-chain and off-chain process integration at this



conjunction. Transactions could be triggered and configured for business events through smart contracts on DLT-based payments platforms. Payments could also become programmable with the SEPA Request-to-Pay (SRTP) Scheme using the instant-payments rails. At the same time, clearing and settlement could continue on traditional interbank payment systems (non-DLT based) or at some point evolve to DLT-based solutions, depending on evolving market needs.

- In one such instance, IBERPAY, which manages the Spanish payment system, conducted a proof of concept (PoC) in July 2020 with five Spanish banks for an interbank smart, DLT-based payments platform. To complete the PoC, IBERPAY connected the blockchain network to its existing payments system to execute SEPA Instant Credit Transfer (SCT Inst) payments automatically.⁴² Over 20,000 instant credit transfers were completed end-to-end during the PoC in just about 2.5 seconds. The test also indicated that banks could apply DLT capabilities (programmability, automation, traceability, integrity, and network security) to the payments value chain. Moreover, the solution could facilitate future payment types related to IoT networks (machine-to-machine payments).⁴³
- Another instance of on-chain and off-chain integration was the pilot conducted by the Bank for International Settlements (BIS) with Swiss National Bank and SIX Digital Exchange in Q4 2021. The successful pilot demonstrated the integration of wholesale CBDC settlement with the core banking systems of five commercial banks – Citibank, Credit Suisse, Goldman Sachs, Hypothekbank Lenzburg, and UBS. Furthermore, as part of project Helvetia, the test determined that banks could retain the best elements of current financial systems while harnessing emerging technology potential.⁴⁴

How can incumbents approach the evolving DLT horizon?

Payment firms could consider a three-play approach to DLT strategy – prepare, participate, and/or pursue. This will require incumbents to evaluate their capability to take risk and potential to innovate, in terms of resources they can mobilize, based on their size and maturity in the market.

PLAY 1: Stay in the game with a multi-rail foundation

Our survey indicated growing interest in DLT-based transactions among SMBs. Of those surveyed, 83% said they are interested in using DLT-based payments. One in two believe DLT would be instrumental in cross-border payments, while almost two in three foresee DLT-based payment networks emerging as solid alternatives to traditional payment systems.

Independent research estimates that the volume of B2B cross-border transactions on a blockchain will reach nearly two billion by 2025, with an approximately 71% CAGR from 2020-2025.⁴⁵

The expected strong traction of DLT-based payment systems has prompted payment service providers to consider DLT as an alternative rail. At present, the industry has global payment rails (such as SWIFT and cards), regional payment rails (e.g., PIX in Brazil), and private payment rails (e.g., PayPal). However, we foresee the emergence of DLT-based payment rails that can facilitate transactions on a blockchain-like network.

What can central banks do? Considering DLT as an alternative rail allows central banks and financial market infrastructure providers to make arrangements for eventualities. According to the Bank for International Settlements (BIS), a financial market infrastructure should consider alternative arrangements to allow real-time critical transactions in extreme circumstances such as natural disasters.⁴⁶ Nearly three quarters of the surveyed payment executives agreed that DLT could be a necessary contingency network. For instance, the Central Bank of Brazil is conceptualizing the use of DLT as a backup domestic interbank payment and settlement system (project SALT) to provide safety and continuity in the case of a catastrophic failure of the Brazilian RTGS system.⁴⁷

How can commercial banks and payment firms prepare? The new DLT payment rails could also link disparate payment rails. For instance, a transaction could be triggered and initiated on regional payment rail and then completed on global or private payment rail with a DLT-based platform providing the interoperability foundation. Payments firms (e.g., card network providers) have already started exploring DLT-based payment rails. As one example, in June 2019, Visa launched B2B Connect, a DLT-based payments network for SMBs and corporates across 30 markets. Instead of leveraging the existing card network, Visa

developed the new DLT network from scratch using the open-source Hyperledger Fabric framework as the base.⁴⁸ Another example is San Francisco-based FinTech Veem, which built a multi-rail payments platform that allows SMBs to transfer money using six different payment networks, including DLT. Veem leverages a built-in optimization engine that identifies the appropriate payment rail for the transaction.⁴⁹

Investments in building DLT infrastructure are growing. By July 2021, 55 of the top 100 banks by assets under management had invested in the DLT space; they backed 71 companies in 17 different blockchain areas. The blockchain infrastructure area has attracted the most funding, especially in the period of 2018–2021. In 2020, financial services firms funneled 38% of total blockchain investments into DLT infrastructure.⁵⁰ Regardless of their size, banks and payment firms plan to invest in DLT readiness:

- More than a dozen US community banks and credit unions have invested in the JAM FINTOP Blockchain Fund since January 10, 2022. The purpose of this fund is to focus on investments in infrastructure that can help to deploy DLT-enabled applications in payments and lending.⁵¹
- In another example from the United States, the Credit Union National Association (CUNA) partnered with several credit unions to coordinate the development of a DLT-based identity platform.⁵²
- UBS, Santander, Lloyd's, BNP Paribas, BNY Mellon, Goldman Sachs, Barclays, Standard Chartered, and Wells Fargo invested in DLT to build infrastructure readiness and applications that could help them to move, transfer, or store value on distributed ledgers.
- Additionally, Citibank invested in enterprise DLT firm SETL to build a core DLT platform and DLT interoperability solution.⁵³

PLAY 2: Extend your infrastructure to enable industry readiness

As more banks and FinTechs explore DLT potential, unregulated, inherently volatile crypto assets are experiencing explosive growth. Sylvie Calsacy, Head of Public and Regulatory Affairs at Worldline, said, "Cryptocurrencies are speculative



Central banks are considering CBDC as a store of value and DLT as a possible payment rail. They are investigating alternatives to complement the present payment rails. The idea is potentially employing DLT and CBDC to handle certain corners that have not yet been successfully addressed."

Catherine Gu

Head of CBDC and Protocol
Visa (US)

90%
of banking
executive
respondents said
CBDC supports
new payment
innovations

assets with no actual payment acceptance. However, crypto concerns central banks and individuals and might be out of reach for future payments except for highly private groups.”

What can central banks do? The unregulated growth of digital currencies and stablecoins prompted central banks across markets to conceptualize and design central bank digital currency (CBDC) that offers resilience, safety, and lower costs than private forms of digital money. The banks believe CBDC could bring together the best of both worlds: it could improve the present fiat-based monetary system and provide more safe and stable environments than emerging crypto-based systems; and it will enhance accountability, efficiency, adaptability, and user control of fiat-based systems while compensating for stability and integrity shortfalls of crypto-based systems. Nandan Mer, Group CEO of Network International (UAE), said, “CBDCs could ultimately supersede or replace real cash as digital payment infrastructure of most developed markets reaches further maturity.”

Over 100 central banks, representing over 95% of the global GDP, are exploring CBDC.⁵⁴ Some of these central banks are building infrastructure and looking into commercial-scale use cases with domestic and regional banks to establish and demonstrate the interoperability of multiple CBDC, DLT, and market infrastructures. However, no rule books exist. As a result, DLT may interoperate with bank core ledgers, core banking systems, payment engines, and post-trade systems at regional level. However, the end game will require a market-wide standard for executing distributed workflows and exchanging data and assets with legal settlement finality.

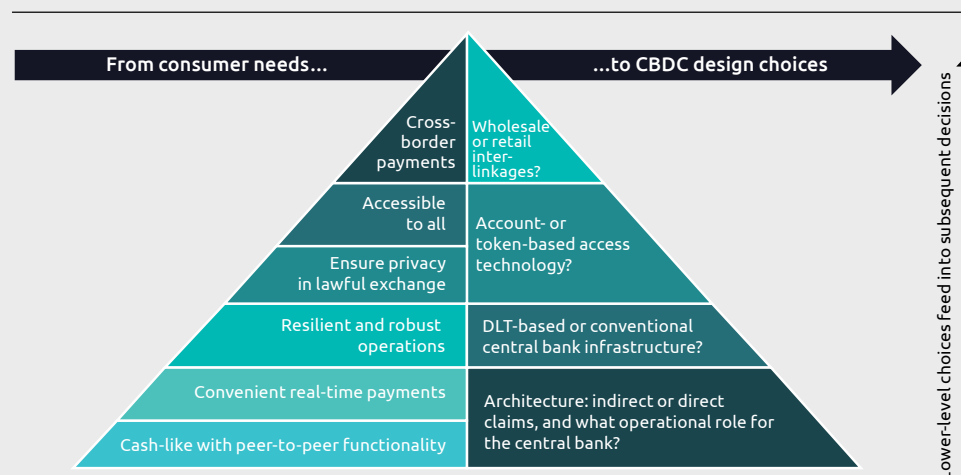
For instance, Banque de France designed a proprietary DLT DL3S for efficient delivery and settlement services. DL3S features an automated market maker platform that could become the basis for a multi-CBDC platform, allowing different central banks to enable fast, automated, and transparent settlement across currencies.⁵⁵ The French Central Bank is nearing a prototype that will lead to the launch of a CBDC as a settlement asset as early as 2023.⁵⁶

Bank executives are boarding the CBDC bandwagon. Among our Executive Survey respondents, 90% said CBDC supports new payment innovations. More than 80% agreed that CBDC is important to cross-border payments and offers a regulated alternative to private unregulated crypto assets. Nearly 80% highlighted the criticality of CBDC to enable access to national fiat during emergencies and serve as a payment channel to distribute benefits.

Existing mid- and back-office bank constructs are fragmented, complex, layered sets of business processes and technology components, and currently, most central banks are undecided about which technology to use to support CBDC. However, a survey of central banks conducted in 2020 suggests that about 70% of them may be interested in using DLT as the enabling technology for CBDC.⁵⁸

Therefore, improvements will require DLT to interoperate with existing processes and systems while considering the legal frameworks in place. Central banks and commercial financial services firms must come together to assess and evaluate several design aspects of CBDC to build a robust framework (Figure 10).

Figure 10. CBDC development approach and design considerations



Sources: Capgemini Research Institute for Financial Services, 2022; Bank for International Settlements.⁵⁹

Note : the CBDC Pyramid maps consumer needs onto the associated design choices for the central bank. The left side outlines consumer-related needs and features that would make a CBDC useful. At the right are associated trade offs, forming a hierarchy in which the lower layers represent design choices that feed into subsequent, higher-level decisions.



Why are central banks pursuing CBDCs? A digital euro perspective⁵⁷

Business challenge: Europe follows a hybrid payments model. The central bank provides the monetary base (deposits and cash, also called public money). In contrast, the private sector (banks and PSPs) provides payment solutions – called private money. A critical success factor of this model is that customers can convert private money to public money anytime. Guaranteed convertibility creates and maintains trust in the system. Public central bank money thus anchors a well-functioning payment system, preserving stability and confidence.

This hybrid system is stressed due to the widespread adoption of digital payments, as public money is only available in cash (banknotes). Cash use and acceptance protect the strategic autonomy of European payments and monetary sovereignty. Cash is a fallback option in during geopolitical issues or extreme situations. However, cash use is steadily decreasing and may lose its central payments role. Moreover, in the absence of digital public money, innovation is restricted. Unregulated crypto assets are exploiting ambiguity and could spark financial instability.

Business solution: To preserve the role of the central bank, the European Central Bank (ECB) is considering a digital euro, a central bank liability available in digital form for payment use. In July 2021, ECB launched the investigation phase. Now, the project team is prioritizing use cases, online/offline availability, and design and distribution options. In Q1 2023, ECB plans to build a prototype to test various functionalities, the role of intermediaries, and the settlement model. By Q3 2023, ECB could reach the digital euro realization phase with a market launch in 2024.

Impact: Digital euro's key features – privacy, offline validation, programmability, and cross-border transactions – are expected to help transacting parties (including people, business, governments, and machines) in any environment (physical or virtual) to make payments. While the initial launch will focus on use cases related to retail payments, the digital euro will likely support business and machine-initiated payments in the long term. The ECB is scrutinizing the impact on the current payment industry to design CBDC that offers a win-win proposition for all parties involved.

Manfred Richels, Cash Management Products at UniCredit Bank, AG (Germany), said, “We support the ECB ambition to design a CBDC for Europe. However, the challenge is to provide additional benefits to the market participants which are currently not covered by industry solutions.”

At the foundation of the framework are architectural considerations – the operational role of central banks and other private intermediaries, including payment firms and banks. Accordingly, we urge central banks and financial services firms to consider their CBDC design strategy across four dimensions.

Which CBDC type to pursue

- **Direct:** The central bank operates a payment system with a direct claim on CBDC. It manages the transactions ledger and execution.
- **Hybrid:** Runs on two systems. Intermediaries (e.g., PSPs) handle payments, but, the central bank has a direct claim on CBDC, allowing it to maintain a central ledger of all transactions and operate a contingency infrastructure to ensure payment continuity in case intermediaries fail.
- **Intermediated:** Similar to hybrid CBDC except that the central bank maintains only a wholesale ledger unlike the central ledger of all transactions in the hybrid type.

Infrastructure: The second layer of design consideration is whether to deploy a conventional centralized database technology or a distributed ledger. Most central banks exploring DLT use permissioned variants; therefore, they will likely not use permissionless networks such

as public blockchains (e.g., Bitcoin and Ethereum).

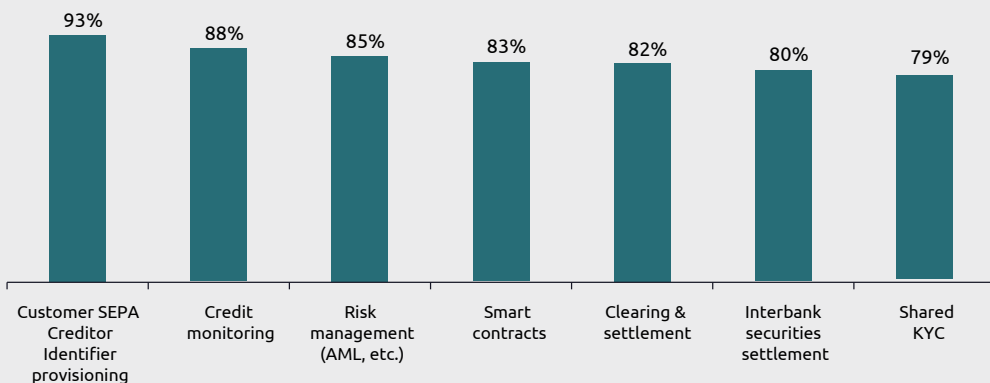
Access: The third design decision revolves around aligning account-based CBDCs to an identity scheme that can support the digital payment network. However, customers relying on cash or who are unbanked may find access challenging. On the other hand, token-based CBDCs (digital tokens) allow for value-based payment options. Transferring one token to another would not require databases to be reconciled as in account-based CBDC transactions; the scenario is similar to handing over banknotes from one party to another. However, the risk of illicit activity and counterfeiting exists.

Interlinkages: Will CBDC be accessible to and used by a nation’s residents and non-residents? As an illustration, within a country, token-based domestic CBDC access may be open to residents and non-residents. However, residents may be the only individuals/businesses that can use the nation’s CBDC.

Central banks across markets are deliberating on these design considerations. Increased CBDC acceptance coupled with a closed-loop regulated environment provides an innovation sandbox for banks to test various PoCs on DLT. Central banks must partner with the private sector to introduce CBDC, solve challenges in the current financial ecosystem, and create an innovative payment medium. CBDC could serve as a common interoperable

Figure 11. Central banks are exploring DLT use cases in collaboration with other FS providers

(Voice of executives)



Sources: Cappgemini Research Institute for Financial Services, 2022; World Payments Report 2022 Executive survey, N=125.
 Note : The SEPA Creditor Identifier is a unique and mandatory reference when concluding a SEPA Direct Debit mandate. It must appear in any direct debit application. Its main purpose is to allow each creditor, who may be located in any SEPA country, and their bank to know the precise identity of the issuer of the direct debit.
 Question to Bank Executives: Which of the Following use cases are important for you to explore as a proof-of-concept? (executives who rated a use case ≥ 5 , where 1 = Least Important and 7 = Most Important)

platform in the new payment ecosystem and enable open finance architecture while being a safe and neutral means of payment.

How can commercial banks and payment firms prepare? The fact is that several central banks have already partnered with commercial, private, and retail banks to explore industry-wide use cases around DLT. Moreover, banks are also partnering with each other and tech firms to identify DLT use cases. Regis Folbaum, Head of Payments at La Banque Postale (France), said, “DLT may support LBP’s innovation strategy : first security and fraud, then focus at innovation that simplify customer journeys while reducing the load on back offices.”

To this end, financial services providers are also building consortia with tech players and FinTechs to explore DLT commercial use cases. Contour and Marco Polo Network are industry consortia focused on specific DLT use cases. For instance, Contour comprises about 50 banks, such as HSBC, BBVA, BNP Paribas, and ING, covering more than 50 countries focused on DLT application in trade finance.^{60 61} Similarly, Marco Polo Network is exploring DLT applications for supply chain transactions and payments. The network includes more than 30 financial service providers, 10+ technology partners, and more than 20 corporate participants.⁶²

Some banks are considering areas beyond financial services as they explore DLT applications. For instance, end of 2018, a bank in Singapore enabled a DLT-based agriculture commodity trade platform developed by Singapore-based Agrocorp using its real-time APIs. The trading platform connects more than 4,500 farmers in Australia with end customers – supermarkets and restaurants. In addition, it digitalized the end-to-end process and reduced Agrocorp’s working capital cycle by 20 days.⁶³

In another example, ANZ is helping the Australian regulator streamline excise duty collection on alcohol. The DLT-based excise platform will automatically leverage ANZ’s Australian Dollar Stablecoin (A\$DC) to enable the movement of alcohol to trigger the remittance of the excise liability to the regulator. ANZ could also offer custodian services for distillers’ and wholesalers’ digitized inventories, enabling immediate transfers, remittances, and refunds through a secure digital wallet. The goal is to reduce red tape, improve regulatory efficiency, open new revenue streams, and protect the brand integrity of stakeholders.⁶⁴

Suzan van Eeten, Area Lead for Payments at Rabobank (Netherlands), said, “The potential of banks collaborating in fraud prevention and transaction monitoring is a big topic.” But she added, “Banks would require additional regulatory flexibility to exchange data for this purpose.”



Growing momentum in digital currency innovation by many central banks, based on diverse technologies, brings about a need for international interconnectedness. Domestic CBDCs will each need to work together, and alongside existing payments systems. Global interoperability will therefore be crucial in ensuring that new forms of regulated money can enable instant and frictionless cross-border payments.

Nick Kerigan

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A collaborative approach to exploring industry-wide use cases will also help banks identify their market niche and shape their technology strategy to position themselves in the evolving future of payments.

PLAY 3: Lead the DLT innovation curve

Some banks were early DLT adopters and are now innovation frontier trailblazers – exploring commercial use cases of DLT, orchestrating partner ecosystems, and moving toward scalability.

For example, J.P. Morgan has been investing in DLT since 2016. It launched a platform, Onyx, in 2020 with a team of 200 dedicated to exploring DLT for moving value and assets seamlessly across the world. Onyx sparked a DLT-based payment information network, Liink, currently used by 75 banks. It designed and issued JPM Coin, evolving it into a viable use case for IoT payments (machine-to-machine payments). The bank collaborated with Siemens to test an automated treasury solution with programmable payments to minimize human intervention across the value chain.⁶⁵ JP Morgan has come a long way from attempting closed-loop use cases and is devoting time and resources to building deep expertise in the DLT domain. As a result, the bank has earned a reputation as a DLT innovation leader.

Another example is HSBC, which launched its FX Everywhere platform built on DLT in 2018. The platform processed three million intrabank trades amounting to USD2.5 trillion as of December 2021. HSBC partnered with Wells Fargo on this platform to settle foreign exchange (FX) transactions in major currencies. HSBC and Wells Fargo aim to add more participants to this platform and build an industry-owned financial market infrastructure (FMI).⁶⁶

Scaling DLT-based use cases beyond a closed-loop environment for commercial purposes could help banks resolve four traditional issues – authentication, cost, speed, and risk. Smart contracts code assurance and trust on DLT networks, which removes the need for unnecessary

90%
of bank
executives and
76%
of SMBs said they
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issues and threats

intermediaries. For instance, the JP Morgan and Siemens programmable payments pilot, in which business events trigger transactions, eliminates the need for human intervention to discover, calculate, and confirm the required conditions for payment execution.

Increased automation could enable significant improvements in transaction time, especially clearing and settlement, which can take days within traditional systems. Additionally, DLT-based platforms can allow near real-time settlement of trades and transactions to mitigate locked-capital costs.

Automating the payments value chain will reduce back-office overhead costs and expenses. A JP Morgan report suggests that a full-scale multi-central-bank CBDC network to facilitate 24/7 cross-border payments could save global corporations up to USD100 billion in annual transaction costs. In parallel, DLT-based platforms can also prevent counterparty and systemic risks.^{67,68}

SMBs are not shy when they discuss DLT-based offerings. Of those we polled, 85% said they want corporate treasury and trade finance DLT offerings by 2027. Moreover, three in four SMBs said DLT-based platforms would improve trade finance efficiency and reduce the cost of transactions through automation.

However, scalability remains a concern.

Clear DLT hurdles through ecosystem collaboration

An analysis by the US Federal Trade Commission suggests that investors lost USD 1 billion in crypto-related fraud between January 2021 and March 2022.⁶⁹ A December 2021 report outlined 115 security attacks – 40 on DeFi protocols and 26 fraudulent schemes – leading to an estimated

USD10 billion in annual losses. Moreover, the International Monetary Fund declared that crypto threatens global financial stability.⁷⁰

While cryptocurrency is unregulated on public blockchains, the high volume of scams raises concerns about gray areas and hidden vulnerabilities.

- It is therefore unsurprising that 90% of bank executives and 76% of SMBs said they are anxious about rising cybersecurity issues and threats.
- Beyond security issues, 87% of the executives and 65% of SMBs cited ambiguous regulatory policies and the lack of reporting and auditing tools as significant barriers to scaling DLT.
- Additionally, 95% of bank executives said the lack of interoperable infrastructure would slow DLT adoption, while 67% of SMBs said fragmented legacy systems would be incompatible with DLT.

Clearly, DLT still has some growing up to do. And right now, only a handful of risk-taking frontrunners are attempting to build a first-mover DLT-based payments niche. However, most banks and payment service providers are at the exploration stage. Regardless, we are calling on payments players to collaborate with industry associations (e.g., SWIFT, BIS, ECB), regulators, central banks, and the tech sector to build a cohesive roadmap for seamless value exchange, which is coming soon.

We recommend a three-layer collaborative approach to navigate DLT. For beginners, every business line within the organization should assess how DLT could impact profitability. For pacesetters, the CTO/CIO layer must explore how DLT can improve the efficiency of existing processes by applying smart contracts and APIs. Finally, for frontrunners looking for the next wave of growth opportunities, innovative financial products, solutions, and asset classes, DLT presents a payments frontier in which they could create new value.

IN CONCLUSION

Introspective bank and PSP executives are mapping the future of payments by asking, “How can we better serve our clients – particularly underserved SMBs with limitless market potential?” We believe it is time for players to react in three ways:

- **REALIGN** priorities amid changing market expectations. Innovation, prominent within the B2C payments segment, must now be similarly funneled to business-to-business enterprises. Empower the B2B payments value chain with automated processes, systems that speak the same language, and data analytics that personalize engagement.
- **ASSEMBLE** modern payments hubs with API-first, cloud-native open architecture to help to boost product and sales velocity. A composable canvas of services, products, and capabilities fueled by a harmonized data structure will offer payment firms novel ways to build and capitalize on up-to-the-minute value streams.
- **EXPLORE** emerging distributed ledger horizons. While still somewhat experimental, DLT could coexist with and augment existing IT infrastructure to bolster payment value-chain capabilities.

We encourage incumbent payment players to tap into their strengths to energize service to SMB clients. For example, banks have expansive, long-time customer bases. And they have earned a high-trust reputation grounded in capital adequacy (available principal versus credit exposure).

By leveraging their depth of experience and resources to foster complementary payments ecosystem partnerships, banks and PSPs can boost speed to market, agility, and innovation. The move will deliver a win-win value proposition for all stakeholders, particularly the increasingly influential SMB segment.



METHODOLOGY

Scope and research sources

The World Payments Report 2022 draws on insights from two primary sources – the Global Small and Medium Businesses Survey 2022 and the Global Banking and Payments Executive Surveys and Interviews 2022. These primary research sources cover insights from 17 markets: Australia, Canada, France, Germany, Hong Kong, India, Italy, Japan, Malaysia, the Netherlands, Singapore, Spain, Sweden, Switzerland, the UAE, the UK, and the United States.

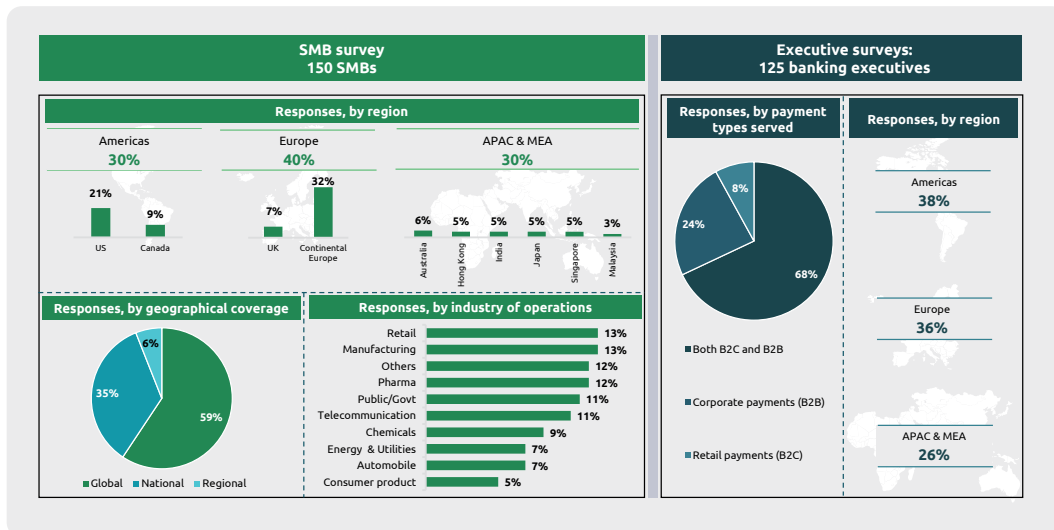
2022 Global Small and Medium Businesses Survey

The survey questioned 150 SMBs on factors driving payments disruption, expectations from corporate banks, satisfaction levels, factors driving relationships with their banks, non-banking

services currently used, emerging payment services such as real-time payments, distributed ledger technology, and more. Participants were also asked about the implementation of blockchain for trade finance, smart contracts, and the future of cryptocurrencies in B2B payments.

2022 Global Banking and Payments Executive Surveys and interviews

The report includes insights from focused interviews and surveys with 125 senior executives of leading banks, financial service organizations, payment service providers, industry associations, and central banks representing all three regions: the Americas, Europe, and Asia-Pacific & Middle East



Partner with Capgemini

Payments modernization is crucial to your business growth

As technology, competition, regulators, and customers continue to raise the benchmark, your ability to respond at speed and scale becomes critical. Capgemini can help you solidify your competitive position through next-generation payments solutions with small and medium businesses (SMBs) and across all your priority customer segments, while maximizing your ROI.

Connected Payments

Capgemini's Connected Payments expertise can help put you a path to payments leadership. We'll help you add efficiency to your internal operations and boost customer engagement as you reinvest and refocus on value-added payments services and delivery. We'll help to enhance your:

- Business strategy and performance, to address the constant pressures of lowering costs and the pursuit of new revenue streams
- Operational model, to allow increased flexibility across processes and the adaptability to mix and match an ecosystem of third-party providers
- Technology and data capabilities, to allow for open systems through APIs and richer data capabilities to better capture and act on customer preferences and needs.

Open Banking Platform

Open API strategies are transforming once tightly closed banking systems into openly connected institutions: as a result, firms are empowered to offer capabilities beyond banking by leveraging FinTech partner solutions.

With Capgemini's open banking offering, banks can seamlessly and securely exchange data and resources, enabling them to deliver innovative customer propositions and accelerate time-to-market for new products and services – as well as effectively comply with local regulations and monetize APIs.

ISO 20022 Transformation

The payments world is moving to the ISO 20022 standard based on its proven ability to improve operational efficiency, harmonize data, automate reconciliation, enable robust risk and compliance controls, and develop value-added services.

Adopting the ISO 20022 standard will impact the entire payments landscape, from channels and integration layers to payments engines. Capgemini has rich experience in handling ISO 20022 transformation journeys with clients, and we follow a 360-degree approach that includes a multi-dimensional impact analysis and business case definition, and continues through roadmap development, program scoping, and migration.

Trusted Data Exchange

Data-sharing processes often lead to duplication of efforts and inefficient back and forth between involved parties. Moreover, the sharing of sensitive data is often not adequately managed and controlled, resulting in information asymmetries and poor data lineage.

Capgemini's Trusted Data Exchange solution leverages a DLT framework to enable the exchange of data on a need-to-know basis in a trusted, private, traced, and secure manner. This can help clients accelerate time to business and boost monitoring and auditability.

With this accelerator, clients can navigate a decentralized future within the context of their own unique infrastructure transformation journey.

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