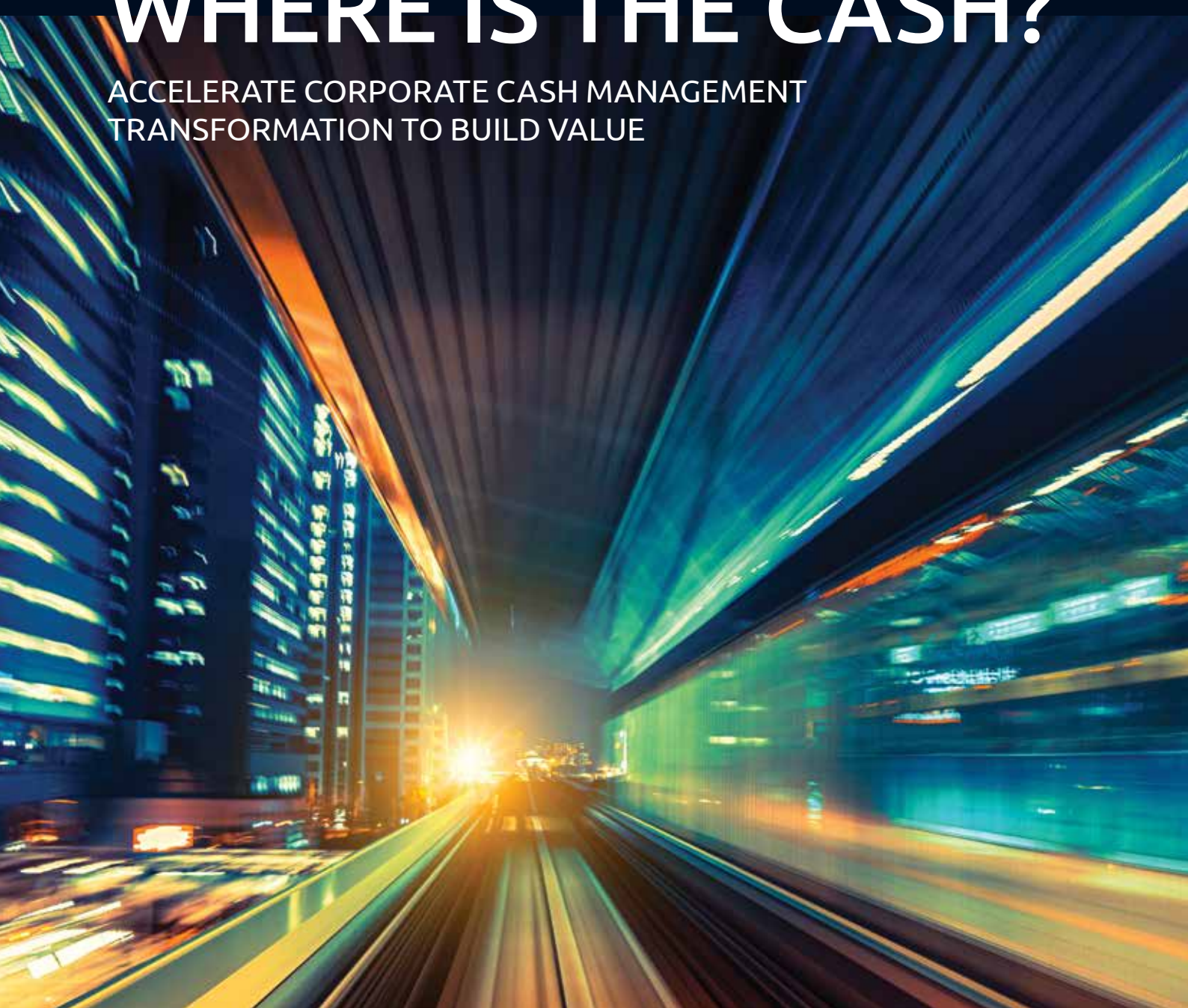


World Report Series 2023
Payments

Capgemini 
RESEARCH INSTITUTE

WHERE IS THE CASH?

ACCELERATE CORPORATE CASH MANAGEMENT
TRANSFORMATION TO BUILD VALUE



CONTENTS

Foreword	3
Executive Roundtable participants	4
Executive summary	5
Innovation, regulation, and profit dynamics shake payments status quo	6
Enterprise cash management is a challenge to be met	18
Forge strategic corporate relationships underpinned by efficient cash management	25
In conclusion	35
Methodology	36
Partner with capgemini	37

FOREWORD

In the recent past, the World Payments Report focused primarily on retail payments. After rebounding from the pandemic, business-to-consumer payments was the fast-moving sector; however, in addition to retail payments, we now see a significant opportunity for banks and payment service providers (PSPs) to support corporate treasuries and commercial enterprises.

Capgemini's World Payments Report 2023 found that non-cash transactions remained resilient as consumers and small and large businesses adopted digital payment schemes. Our data suggests that non-cash transaction volume growth will continue accelerating at a 15% CAGR from 2022 to 2027 due to improving macroeconomics, expanding digital payment infrastructure, and a proliferation of new payment instruments. As global regulations, initiatives, and innovations surge, new payment instruments and use cases abound: banks and PSPs are finding it costly to juggle these simultaneous changes. Banks and payment firms will have to re-balance their focus on retail and commercial payments to unlock new value.

We talked with corporate treasurers across multiple industries, and more than half told us they urgently need effective and efficient cash management services (CMS) because of ongoing trade globalization and supply chain disruptions. Another third said evolving risks (geopolitics and cybersecurity) make CMS critical, while nearly 30% called out rising inflation as being behind their growing need for better cash management. And therein lies the opportunity.

One-size-fits-all solutions don't work for today's enterprises, and corporate treasurers say they are dissatisfied with their banks and seek more relevant advice and strategic partnerships. They want support to mitigate long cash conversion cycles and issues such as poor credit risk assessment, delayed payment processing, inefficient working capital management, and supplier overpayment. In short, they want 24/7 visibility into their organization's cash.

So how can banks and PSPs help?

Our report outlines strategies for financial firms to optimize their cash management value chain to offer business and technology advice to enterprise clients. Building a digital foundation is the first step, with a future focus on leveraging cloud-native platforms. Firms can augment their CMS productivity and performance through virtual account management for increased efficiency, rationalized cash management structure, and automated processing.

While we cannot predict how the economic world stage will play out over the next year, we believe strong relationships with corporate treasuries can be lucrative, win-win alliances.



Anirban Bose

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

EXECUTIVE ROUNDTABLE PARTICIPANTS

The Executive Roundtable participants for our World Payments Report 2023 included top leaders and acknowledged payments industry experts from leading banks. They helped steer our report content through ideation, hypotheses refinement, and validation of key findings. We are grateful they generously shared their time, experience, and vision.



Nicolas Cailly

Global Head of Payments & Cash Management
Société Générale Corporate and Investment Banking



Paul Van Sint Fiet

Head of Cross-Currency Solutions, APAC
JPMorgan Chase & Co.



Wim Grosemans

Global Head of Product Management -
Payments & Receivables - Cash Management
BNP Paribas



Sailesh Panchal

Director
Digital Transformation Advisory
TSB Bank



Jan Rottiers

Head of Liquidity Management Solutions for Corporates
BNP Paribas



Rachel Whelan

Managing Director, APAC Head of Corporate
Cash Management & Global Head of Payments
& Transactional FX Product Management
Deutsche Bank

EXECUTIVE SUMMARY

Since 2022, a steep rise in inflation, rising interest rates, tumbling stock markets, waning consumer confidence, supply chain disruptions, and escalating geopolitical crises have affected global commerce. Current volatility has even driven a temporary rebound in cash use, indicating that reliance on paper notes remains despite its general decline.

INNOVATION, REGULATION, AND PROFIT DYNAMICS SHAKE PAYMENTS STATUS QUO

Per our estimates, non-cash transaction volume globally will reach almost 1.3 trillion by 2023, a nearly 16.6% year-over-year growth rate. And by 2027, non-cash transaction volumes are expected to reach about 2.3 trillion, doubling since 2022. This exponential growth is driven by the expansion of instant payment infrastructure in major markets, ongoing adoption of open banking frameworks, and more: evolving customer expectations, regulations, and industry initiatives are catalyzing the fast adoption of new instruments and instant payments.

Managing the volume, velocity, and variety of these simultaneous changes comes at a cost for banks and payments firms – especially when revenue sources are under pressure. Payment executives surveyed in this report indicate that nearly 80% of traditional payment revenue sources (fee, fund, and float income) are stressed. In parallel, costs related to regulatory compliance, scheme implementation (including ISO20022 and SWIFT GPI), and payments modernization leave limited resources to invest in innovation.

Banks and payment firms need to rebalance their focus between retail and commercial payments to maximize value. Globally, the overall value of commercial payment transactions surpasses that of retail payments – 56% versus 44% of total transaction value. Commercial payment instruments such as virtual cards, account-to-account payments, and digital wallets are gaining attention from corporate treasurers: very quickly, commercial payments are catching up with the digitalization trend – prompting banks and payment firms to act now and act fast to expand commercial payment capabilities.

ENTERPRISE CASH MANAGEMENT IS A CHALLENGE TO BE MET

Maximizing value from commercial payments requires banks and payment firms to engage and meet the changing expectations of enterprise clients. Cash management is a constant and important challenge for corporations facing macroeconomic headwinds

and uncertain growth. Yet, inefficient working capital management often traps cash within the enterprise-banking value chain. As businesses struggle to access a 360-degree view of their cash, 79% of corporate treasurers complain about lengthy cash conversion cycles. Despite having multiple banking relationships, 70% of corporate treasurers say banks' cash management services are underwhelming.

From slow client onboarding and lackluster bank-to-enterprise connectivity to inaccurate reconciliation and cash forecasting, banks face multiple challenges in offering efficient, lean, experiential cash management services to corporate clients. Outdated and increasingly expensive systems and slow or disconnected transformation initiatives result in underdeveloped cash management capabilities for banks and payment firms. Banks are missing a significant opportunity to create new revenue streams and cost-saving levers.

FORGE STRATEGIC CORPORATE RELATIONSHIPS UNDERPINNED BY EFFICIENT CASH MANAGEMENT

End-to-end digital transformation in transaction banking, including effective cash management services for corporates, requires top-down commitment, cohesive planning, and a unified purpose for structural reforms. Despite the fact that large corporates have many banking relationships, there is still a sizeable opportunity for banks to step up as strategic partners at the regional or domestic level. We offer banks and payment firms a three-layered strategy to nurture strategic cash management relationships with corporate clients:

- Simplify the back stack to enable innovation and agility
- Perform with platforms to boost cash management efficiency
- Engage with corporate clients as strategic partners, not service providers.

When successful, sustainable value can be unlocked. Sixty-seven percent of bank executives acknowledged that strategically partnering with corporate clients reduces the threat of disintermediation by FinTechs and others; and 57% of payments executives said strategic banking partners enjoy increased cross- and up-selling opportunities because of these relationships. The time to solve the challenges of cash management services delivery to corporates is now.

Innovation, regulation, and profit dynamics shake payments status quo

16.6%

year-over-year growth rate in global non-cash transactions, 2023 estimate

For banks and payment firms, 2022 was unprecedented. High inflation, waning consumer confidence, rising interest rates, recessionary fears, and tumbling stock markets left a volatile, uncertain, ambiguous, and complex environment in their wake. Thanks to unprecedented government stimulus, consumers and businesses began the year robustly across most major markets. But while the jump-start boosted market liquidity, global supply chains were stressed by inflationary pressure.

Indeed, high inflation triggered cost-of-living crises across the globe. And as seen previously in the first year of the pandemic (2020) and during the 2007–2008 recession, cash use picked up during an economic crunch, decelerating the 13-year decline.¹ According to the Nationwide Banking Society (UK), 2022 cash withdrawal volumes increased by 19% year over year, indicating at least a short-term reversal in declining cash use.²

Cash remains an important payment instrument around the world, alongside digital alternatives. Yet, despite its near-term convenience, global use of cash continued to dip during 2022.

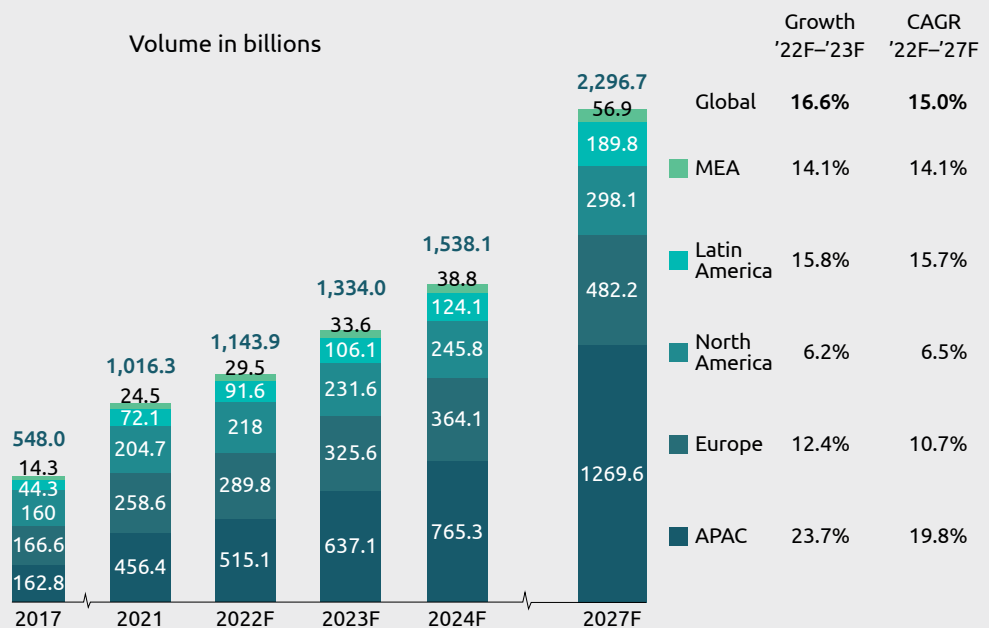
Non-cash transactions proved resilient amid global uncertainties

Non-cash transaction volumes maintained upward momentum as consumers and businesses adopted digital payment schemes. Our estimates suggest that from 2022 to 2027, non-cash transaction volume growth will continue accelerating at a 15% CAGR due to expanding digital payments infrastructure and a proliferation of new payment instruments (Figure 1). Let's take a closer look at trends by geographic region.

Europe

Non-cash volumes compound annual growth of 10.7% is expected from 2022 to 2027 thanks to expansion of instant payments, open banking regulatory (PSD3) enhancements, and an EU Digital Identity Wallet 2023 pilot initiative. While Eurosystem launched the Target Instant Payment Settlement System (TIPS) in November 2018, its

Figure 1. Expanding digital payments infrastructure fuels non-cash transaction volume growth



Sources: Capgemini Research Institute for Financial Services Analysis, 2023; ECB Statistical Data Warehouse; BIS Statistics Explorer; Countries' central bank annual reports.

Note: Forecasted figures were used when data was unavailable. Figures are forecasted for 2022 and beyond.

adoption was tepid, with Single Euro Payments Area instant credit transfers (SCT Inst) accounting for just 14% of all SEPA credit transfers during the first half of 2023. The European Union proposed amendments to the 2012 SEPA regulation in 2022 to eliminate adoption barriers and streamline instant payment (IP) system use.³

Moreover, the European Payment Initiative (EPI) is piloting an IP scheme in 2023 after acquiring iDeal, a Dutch payment method that enables consumers to pay online through their bank, and Belgium-based Payconiq, a mobile payment and processing platform. The EPI pilot will include digital wallets and an open-banking instant payment system in Germany and France. The European Central Bank (ECB) backed payment-integration initiative said the EPI scheme might eventually have buy now, pay later (BNPL) and digital identity features.⁴ In parallel, the Immediate Cross-Border Payments (IXB) initiative from EBA Clearing, SWIFT, and The Clearing House in the United States is aiming to enable instant processing of USD and EUR currency exchanges in 2023 to strengthen the US and European digital payment adoption rate.⁵

North America

As the region catches up to the instant payment revolution, non-cash payment volumes are projected to rise at a 6.5% CAGR (2022–2027). The US Federal Reserve's FedNow Service went live on July 20, 2023. FedNow aims to create a European-style real-time payments network and will function in addition to the RTP Network by The Clearing House, which has been operational since 2017. Noteworthy is the fact that RTP and FedNow only supports push payments: this means payment types like recurring payments, subscription payments, and P2P payments that require pull capabilities are not supported by FedNow.⁶

The new instant payment service will need further investments to build new capabilities and propel the US market to double-digit growth. In parallel, the US Consumer Financial Protection Bureau is developing an open banking framework and rules that it expects to finalize by 2024.⁷ Canada's Real-Time Rail is slated to go live in 2023,⁸ and Canada has also announced open-banking launch plans for 2023. The two initiatives will bolster non-cash volume growth in Canada.

Asia Pacific

The region lacked domestic digital payment infrastructures and had heterogeneous payment rails across key markets – unlike in Europe, where SEPA instilled standardization. But during the last decade, government-backed (or led)

development of instant and real-time payment infrastructure across critical jurisdictions (including India, China, Singapore, Australia, and Thailand) has been driving adoption of digital payments. As a result, APAC is now on track to comprise more than 50% of global non-cash payment volumes and will likely register an accelerated 19.8% compound annual growth rate for 2022–2027.

To further improve domestic and cross-border digital payments' convenience, efficiency, cost, and acceptance, APAC markets are also building bilateral and multilateral payment infrastructures. For instance, in 2021, Thailand's PromptPay and Singapore's PayNow real-time payment infrastructure were linked.⁹ In 2021, Singapore also connected its real-time payment infrastructure with Malaysia's DuitNow.¹⁰ Singapore and India (UPI) also aim to join real-time payment infrastructures. Moreover, Singapore, Indonesia, Malaysia, the Philippines, and Thailand have all announced plans to integrate regional QR payment systems.



Middle East

A growth trajectory similar to that being realized in APAC is unfolding here. The region has been heavily cash reliant despite high mobile penetration. However, regulatory reforms and maturing digital payment infrastructure are poised to boost non-cash volumes CAGR by 14.1% in 2022–2027. Open banking reforms are already underway in the region. Bahrain, Saudi Arabia, the UAE, and Jordan are beginning to embrace open banking frameworks.¹¹

In parallel, several Middle East markets are also launching instant payment schemes: Saudi Arabia launched SARIE in 2021,¹² and the UAE is set to launch its instant payment platform in 2023.¹³ The region is also working to integrate payment rails through initiatives such as the Arab Monetary Fund-owned Buna payments platform and AFAQ, a regional payments system provided by the Gulf Payments Company in cooperation with Saudi Central Bank.



Post-Covid, the shift to digital payments has stuck with consumers. Developing regional digital payment infrastructure and regulations will drive the next phase of movement to a less-cash economy. Cross-border payment options will develop along leading trade corridors such as the Middle East to China, India, and Hong Kong further boosting non-cash payments in the region.”

Ali Imran

COO, Commercial Bank of Dubai

Africa

The continent is catching up to its neighbors in terms of non-cash transaction volume. Studies say 18 African nations are developing domestic instant payment systems. Moreover, three development projects aim to build regional instant payment platforms.¹⁴ Such initiatives will likely boost non-cash payment capacity in the region.

Latin America

The region has been consistently developing instant payment infrastructure. Non-cash volumes in the region are trending toward 15.7% compound annual growth from 2022 to 2027. Ten Latin American countries are pursuing or launching instant payment schemes led by Pix, created by Banco Central do Brasil (BCB) in 2020.¹⁵ Since its launch, Pix has solidified its position as a preferred Brazilian payment option; BCB aims to expand Pix’s reach for instant cross-border payments among a bloc of countries by 2025.¹⁶

Evolving regulations and industry initiatives are driving payments competition and innovation

The dynamic payments sector has been at the forefront of innovation, with a reputation for adapting quickly to challenges and changes. Regulations and industry initiatives have kept pace with changing times to ensure resilience, transparency, security, fair competition, and quick-to-market innovations (Figure 2). In particular, four key industry initiatives and regulations bear further discussion here.

Nexus Gateway sets sights on cross-border payment efficiency

A key trend in payments since 2020 has been the bilateral and multilateral integration of real-time and instant payment systems between different jurisdictions.¹⁷ From Asia to the Middle East, Africa, and Latin America, markets are attempting to integrate instant payment infrastructure for greater cross-border payment efficiency, transparency, and speed at a lower cost.¹⁸ However, cross-linking is complicated because of foreign exchange (FX) conversion, compliance checks, heterogeneous messaging, and varying technical standards.

To overcome such challenges, the Bank for the International Settlements (BIS) built a network prototype, Nexus Gateway, to standardize the multilateral linking of IP systems. The pilot was conducted in 2021 to connect the systems of Europe (TIPS), Malaysia (DuitNow), and Singapore (PayNow); in addition, BIS aims to connect instant payment systems in five Asian markets – Indonesia, Malaysia, Philippines, Singapore, and Thailand – during a 2023 testing phase. Scaling the Nexus initiative should help ease cross-border transactions and digitalize remittances flow.¹⁹

Tokenization

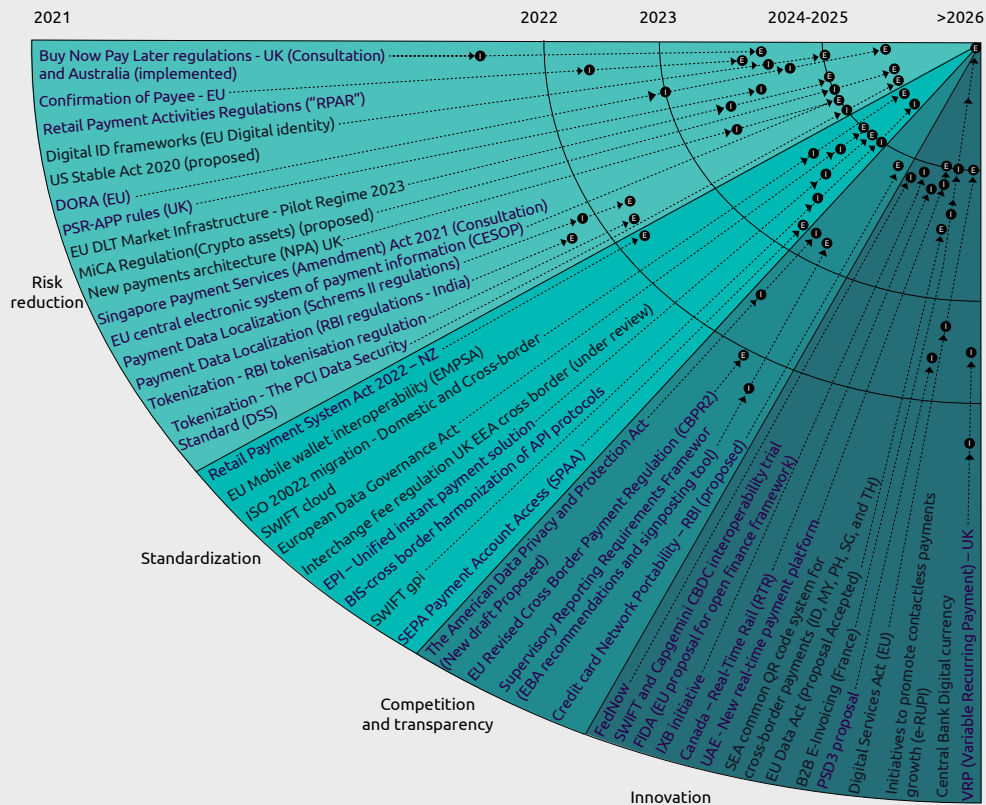
Within the risk reduction category, tokenization is essential as banks and payment firms pursue ecosystem orchestration so that financial data can flow among multiple parties safely, securely, and instantly. Tokenization is gaining traction in areas where cyber fraud protection is necessary around sensitive data. The most popular is credit card tokenization, where an algorithmically generated token replaces the card's primary account number. Tokens can be saved in wallets or passed through payment rails without risking data exposure. The process simplifies payment card industry security compliance by limiting the number of systems storing customers' sensitive data. Beyond compliance, tokenization also improves payment processing speed and security as it:

- Allows businesses to offer card-on-file transactions for seamless subscription billing and recurring payments
- Enables one-click checkout for e-commerce sites
- Lets customers store tokenized cards conveniently in Apple Pay and Android Pay wallets.

Central bank digital currencies

Another key initiative shaping the future of payments is the development of central bank digital currencies (CBDCs). As of June 2023, 130 countries representing 98% of global GDP were exploring CBDCs, a significant jump from 2020 when only 35 countries were considering a CBDC.²⁰ Industry bodies like SWIFT are

Figure 2. Key Regulatory and Industry Initiatives (KRIs) are evolving to harmonize the payments landscape



- EPI – European Payments Initiative
 - DORA – Digital Operational Resilience Act
 - PSR - Payment Systems Regulator
 - MiCA – Markets in Cryptoassets
 - IXB – Immediate Cross-Border Payments
 - SEPA – Single Euro Payments Area
 - PCI – Payment Card Industry
 - SEA – Southeast Asia
 - FIDA – Financial Data Access
- Intermediate implementation of the initiative/regulation
 - E Full implementation of the initiative/regulation
 - ↑ Elapsed time
 - New KRIs introduced in WPR 2023

Source: Capgemini Research Institute for Financial Services Analysis, 2023.
 Note: Elapsed time is shown only for regulations and initiatives where key implementation dates are defined.

collaborating with regulators and financial services firms to seamlessly integrate CBDC with existing payment infrastructures. In 2022, SWIFT and Capgemini demonstrated interlinking of disparate CBDCs with traditional payment infrastructure to achieve successful cross-border transactions. This pilot paves the way for the interlinking of multiple CBDC systems via a shared platform.²¹

ISO20022 migration

Banks and payment firms are also switching to a data-rich messaging standard, ISO20022, that allows financial firms to pass down more granular data; this new standard requires tokenization as a security layer. In the [World Payments Report 2022](#), we analyzed the adoption and benefits of ISO20022 migration: the SWIFT ISO20022 messaging standards aim to replace legacy message type/text (MT) and harmonize the payment infrastructure across jurisdictions.

As part of our World Payments Report 2023, we surveyed payments executives who said they use one or a combination of four approaches for ISO20022 migration: outsourcing to an IT vendor, buying off-the-shelf solutions, building solutions internally, or collaborating with FinTechs. Responses indicated that:

- More than half of the surveyed payments executives indicated outsourcing as their preferred approach, followed by 43% indicating they were buying off-the-shelf solutions
- Nearly one in three payment executives said they are attempting to build an ISO20022 solution internally
- Despite the strong push, only 44% of payment executives said they were in the final phase or had completed the ISO20022 migration
- A quarter of payment executives said ISO20022 migration is in process, while 27% said they are yet to start the ISO20022 migration journey.

The European Commission (EC) is setting global payments trends

The EC is working to orchestrate an efficient and integrated European payments market that aims for harmonious rules across jurisdictions, a common instant payment infrastructure, strong consumer protection controls, and a wide choice of payment instruments.²²

- As the EU's executive arm, the EC began payments transformation in 2007 with the first Payment Services Directive (PSD1) to set common rules in the European Economic Area (EEA) covering all non-cash payments. PSD1 laid the foundation for the single euro payments area (SEPA).
- EC launched SEPA in 2008 and fully implemented it in 2014 to harmonize payment standards across all member countries and eliminate distinctions between domestic and cross-border payments.
- PSD2 went into force in 2018 – triggering Europe's open banking revolution and inspiring several countries worldwide to launch similar application programming interface (API) frameworks.
- The strong customer authentication (SCA) requirement of PSD2 came into force in 2019 to make digital payments safer and more secure for customers.
- EC adopted the digital finance (DigFin) package and retail payments strategy with four main priorities in 2020: remove digital fragmentation in the EU single market, facilitate digital innovation, promote data-driven finance, and address digital transformation challenges. The package further boosted the adoption of open finance and the region's platform economy.
- Also in 2020, 16 major Eurozone banks launched the European Payments Initiative (EPI) to create a unified payment solution for European consumers and merchants.
- In 2021, the EC initiated instant payments consultation and amended SEPA to boost the adoption of instant payments in the region.
- In June 2023, the EC proposed further PSD2 improvements and set the groundwork for PSD3, along with proposed revisions to EU payment services legislation, and a proposal on an open finance framework, called FIDA.

SWIFT global payments initiative

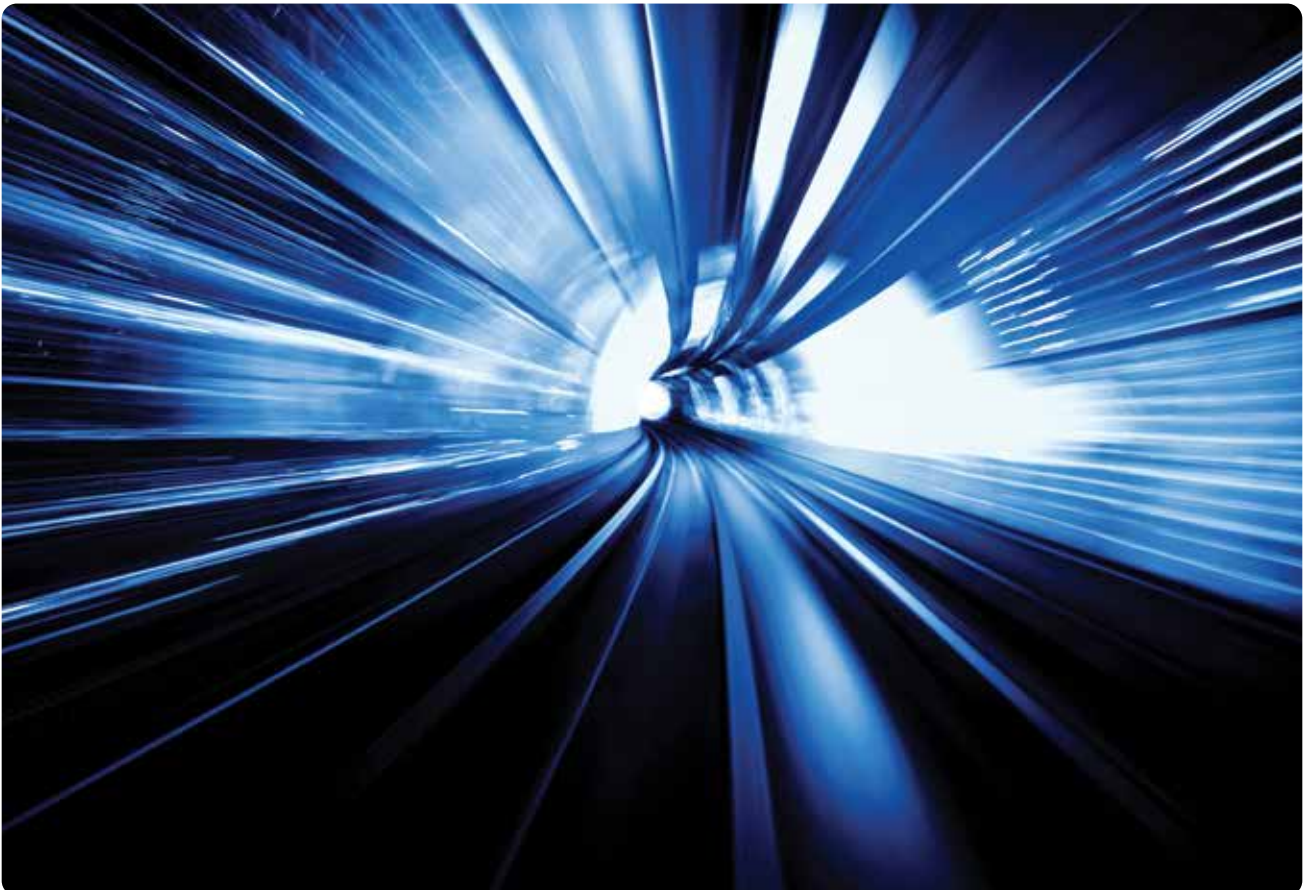
Another critical SWIFT program, gpi (global payments initiative), was launched in 2017; SWIFT followed with gpi for corporates (SWIFT G4C) two years later. Both initiatives aim to improve the transparency and traceability of payments across the correspondent banking network. Only 38% of the payment executives we surveyed said their firm's adoption of SWIFT gpi was complete. Nearly 29% said adoption is in process, while almost 24% are yet to begin. Swift's Shirish Wadivkar (MD and Global Head of Wholesale Payments and Trade Strategy) said, "As a messaging network, SWIFT is agnostic to value representation. We focus on global interoperable value transmission that is safe, secure, and instant across participants. We are enabling banks to leverage SWIFT capabilities (data, technology, and consulting) to deliver advanced solutions in payments and cash management."

Instant payment methods and rails are changing the industry

Expanding digital payment infrastructure, regulations, and open banking are swiftly changing how customers and businesses pay. A comparative analysis confirms the growing prominence of new payment instruments

(instant payments, e-money, digital wallets, account-to-account, and QR code payments) relative to traditional methods (checks, direct debits, cards, and credit transfers). Per the World Payments Report, in 2022, conventional payment methods accounted for more than 83% of overall non-cash transaction volume, while new payment methods comprised nearly 17%. According to World Payments Report 2023 research findings, we believe that by 2027 new payment methods will make up around 28% of total volume, while the share of traditional payments will drop to nearly 72% of overall non-cash transaction volumes.

New payment instruments are challenging long-dominant schemes, especially cards. Despite their convenience, speed, and security, cards are expensive. High penetration in developed economies left little choice for merchants but to bear the brunt of card providers' high intermediary fees. During pandemic lockdowns, cards emerged as a customer-preferred payment method. However, as transaction value increased, retailers incurred significantly high costs for accepting card payments; for example, UK retailers incurred more than GBP 1 billion (USD 1.3 billion) in fees to accept card payments in 2020.²³



India's digital payment revolution driven by Unified Payment Interface

When the Reserve Bank of India (RBI) established the National Payments Corporation of India (NPCI) in 2008, it laid the foundation for the country's digital payment revolution.²⁴ The launch of digital ID Aadhar followed in 2009, and real-time payments rails, IMPS, in 2010.²⁵ In 2016, NPCI introduced the Unified Payment Interface (UPI), an interoperable payments system that powers direct and instant settlement across multiple bank accounts for C2C and C2B transactions. Finally, in 2021, India unveiled the account aggregator framework for consent-based encrypted data sharing for consumers and businesses. Multiple open APIs followed.²⁶

Powered by a real-time network and open banking, UPI reported exponential growth of 1.9 times in volume and nearly 1.8 times in transaction value from 2021 to 2022.²⁷ UPI transaction value and volume overtook credit and debit card totals by a significant margin

in 2022 as UPI A2A payments became the preferred payment instrument for consumers and businesses.²⁸

UPI supports push and pull payments and event-based and time-based payment triggers (for recurring or subscription-based outflows). India's central bank plans a new UPI feature – single block, multiple debits (SBMD) – which will enable consumers to block their account funds and complete payments after service delivery. The feature will likely boost UPI use for e-commerce and replace cash on delivery. It may also help consumers to invest in various securities in the future.

RBI's Vision 2025 document emphasizes UPI globalization for efficient and affordable cross-border payments. India is in talks with 30 countries regarding UPI adoption, and France, the UAE, and Singapore signed a memorandum of understanding in 2022.

Account-to-account (A2A) payments have a competitive edge over cards as they move money between accounts without an intermediary. Open banking and expanding real-time payment networks turn A2A payments into a formidable card rival. A2A leverages traditional payment rails (like ACH or SCT) or instant payment rails (such as RTP and SCT instant) to make exchanges. While A2A payments are popular for consumer-to-consumer (C2C) transactions, we expect similar traction in consumer-to-business (C2B) use. A USD 100 purchase on a credit card can cost a merchant up to 3% (or three US dollars). In contrast, an A2A purchase of the same value will cost less than 1% (or nearly USD 0.60). At scale, retailers and merchants, especially small-to-mid-size enterprises, can achieve significant cost savings.

Of World Payments Report 2023 Executive Survey respondents:

- 45% ranked A2A payments as the most preferred C2C payments instrument
- Digital wallets followed at 30%
- For consumer-to-business payments, offline and online, nearly 40% ranked A2A payments as their preferred instrument, followed by digital wallets (at about 35%)

- Only 25% of payment executives selected cards as their top preference for consumer-to-business payments.

A2A is gaining traction compared to card payments because of simple and convenient customer experience. However, cards still have room for improvement. Several initiatives such as Apple Pay and Click2Pay are already reinforcing card use for payments. Visa and Mastercard are boosting contactless payments, including transactions made by tapping a contactless card or payment-enabled mobiles and wearable devices. Contactless payments are also helping card operators, including Discover, Mastercard, and Visa, develop new mass-market use cases.

One example is leveraging contactless open-loop payments to cover mass-transit fares. The practice allows card operators to digitalize low-value transactions while encouraging contactless payments. Visa enables contactless payments in cities worldwide and, by 2022, has supported more than 550 urban mobility initiatives. From January to September 2022, Visa's network processed over one billion contactless payments worldwide for mass-transit fares.²⁹

Innovation and regulatory changes are increasing payment provider costs

The payment industry is undergoing a surge in global regulations, initiatives, and innovations, resulting in new payment instruments and use cases. However, managing the volume, velocity, and variety of these simultaneous changes comes at a cost for banks and payments firms – and it is significant.

The payments executives we surveyed said managing risk, regulatory compliance, and scheme compliance (such as SWIFT ISO20022 migration) comprises 36% of total payment business costs. Maintaining and modernizing legacy systems followed at nearly 27%. Payment processing incurred another 17% of expenditures, and 9% went into talent-related expenses. Payment firms are left with barely 11% to invest in innovation (Figure 3).

At the same time, revenues are under stress. Survey participants said traditional revenue sources for a payment business include 37% fund revenues, 13% float income, and 29% fee income, but these metrics are changing:

- Instant payments are reducing float-income and this trend will likely continue
- Fee income that includes interchange fees is under pressure, too: regulators in the United States, the UK, and Europe aim to cap interchange fees to reduce payment costs for consumers and merchants

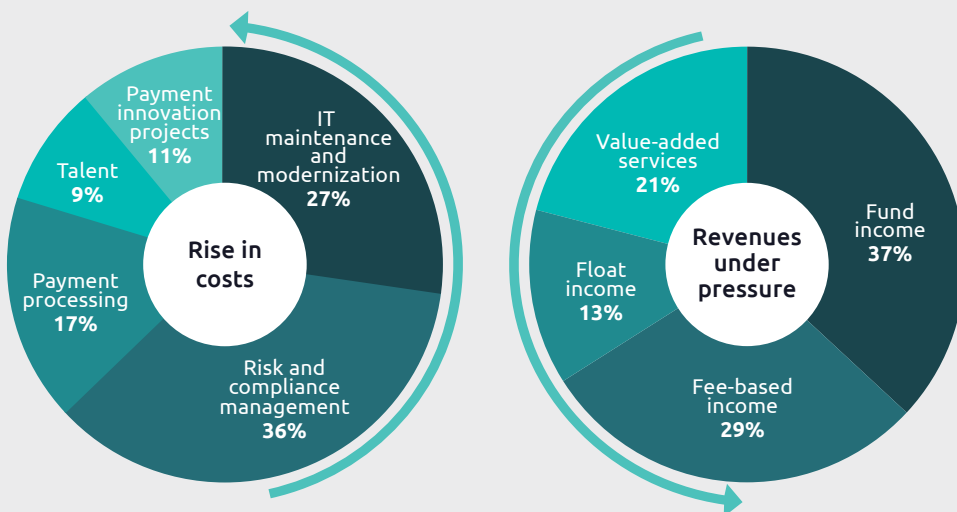
- Fund income primarily comprises interest income from credit cards and more recently BNPL products. Rising consumer debt and lack of regulatory clarity around BNPL can dent fund income growth.

Consumer credit card debt is increasing due to high inflation and its impact on the cost of living. In the United States, consumers’ total credit card balance was USD 986 billion in Q1 2023, according to June 2023 consumer debt data from the Federal Reserve Bank of New York; that total is unchanged from Q4 2022’s record number, leaving the balance the highest it has ever been since the New York Fed began tracking in 1999.³⁰

Debt balances of this magnitude trigger fear of payment delinquencies, which may also impact payment firms’ fund income. For instance, in 2022, AMEX and Discover reported year-over-year profit declines of 13% and 21%, respectively, as charge-offs and delinquencies increased.³¹ Card operators may also likely earmark funds for potential 2023 loan losses.

In contrast, income from value-added services contributes 21% of total income, which cannot offset fee and fund revenue losses.

Figure 3. High costs and stressed revenues leave little room for innovation



Sources: Capgemini Research Institute for Financial Services Analysis, 2023; World Payments Report 2023 Payment Executive Survey (N=115).
 Question asked to payment executives: What is the current payment revenue structure? What is the payment industry cost structure?

Changing market dynamics trigger payment business restructuring

Banks and payment firms across the globe are examining the implications of ongoing disruptions, cost stress, and evolving revenue models; the actual impact on each banking and payment firm depends on its market position and payment value chain capabilities. As a result, providers are grappling with strategic decisions, including whether to:

- Own versus outsource a payments network
- Forge alliances to boost payments volume
- Build, buy, or collaborate with third parties to manage technology infrastructure.

Accordingly, we are witnessing a surge in strategic restructuring initiatives. Often driven by margin pressure and rising competition from FinTechs, some banks and payment firms divest their payment function (partially or completely) to payment specialists. In November 2022, Intesa Sanpaolo, a leading European banking group, sold its stake in its retail payments partner Nexi.³² However, not all banks and payment firms are considering divesting. Some are strengthening their capabilities or striving to improve market share with acquisitions. In late 2022, JPMorgan acquired cloud-based FinTech Viva Wallet, with

operations in 23 European countries.³³ And Fifth Third Bancorp acquired Big Data Healthcare, a healthcare payments and remittance FinTech, to improve its value chain capabilities in the medical payments sector.³⁴ Earnings pressure has also led to acquisitions in payment processing. For example, Canadian investment firm, Brookfield Asset Management, acquired UAE-based payment processor Network International in 2023. Brookfield also acquired the payment business of First Abu Dhabi Bank PJSC in 2022.³⁵

Banks are also forging strategic partnerships with payment specialists to consolidate payment volumes. For instance, in April 2023, Credit Agricole, a France-based international banking group, partnered with payment processing firm Worldline to set up a joint venture to provide payment services to businesses.³⁶ Banks and payment firms collaborate with third parties to offer new services or manage technology and payment infrastructure. In Q2 2023, British bank Standard Chartered partnered with WorldPay to expand market coverage and launch a new Straight2Bank Pay feature for digital collections.³⁷ And some banks are building internal capabilities and platforms. HSBC rolled out a banking-as-a-service (BaaS) platform in 2021 to offer enterprise clients embedded payment services.³⁸





Rebalance retail and commercial payment focus to capture expanding value pools

The 2023 World Payments Report Executive Survey results indicate that retail payments comprise 59% of total transaction volume while commercial payments comprise 41%. However, in terms of value, commercial payments make up nearly 56%, while retail accounts for only 44% of total payments value (Figure 4).

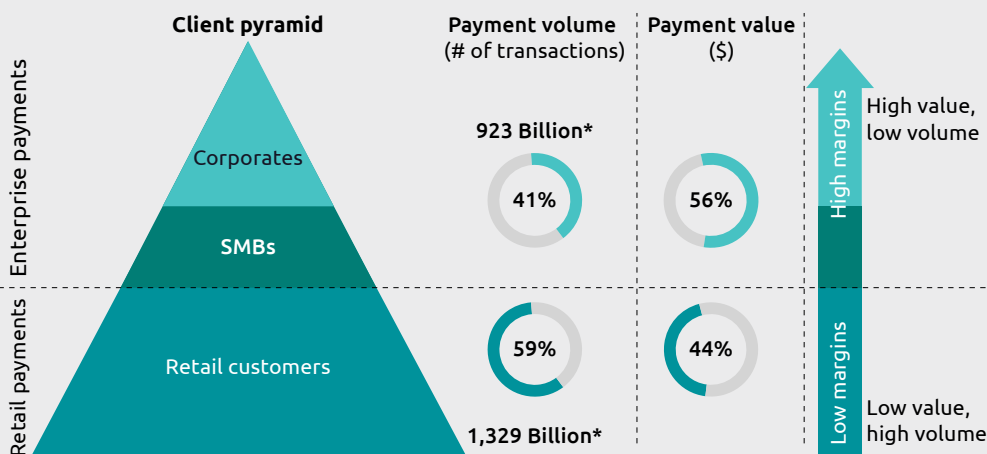
Shares of value and volume change from region to region. In the Americas, commercial

and retail payments account for 54% and 46% of total value, respectively. In Europe, commercial and retail payments account for 62% and 38% of the share, respectively. And in the APAC region, the split between commercial and retail payments value share is nearly 50% each.

Globally, more than one in two payment executives agreed that commercial payments offer better profit potential than retail payments. In Europe, this perspective is even more pronounced as nearly 56% of executives believe commercial payments have more high-profit potential than retail.

56% of total global payments value is attributable to commercial payments, outpacing the retail payments total

Figure 4. Payment executives say commercial payments offer higher profit potential than retail



Sources: Capgemini Research Institute for Financial Services Analysis, 2023; World Payments Report 2023 Payment Executive Survey (N=115); GlobalData Payments Market Analytics 2023.

Question asked to payment executives: How payment share is split between retail and commercial payments in your region by value and volume?

*The number of transactions include both cash and non-cash transactions for 64 countries for the year 2022.

Commercial payments are catching up quickly with digital payments trends, so it's time to act

Global non-cash commercial payments will grow at compound annual growth of nearly 11.3% (2022–2027), primarily driven by Asia Pacific. From a regional perspective, Europe leads the non-cash transaction volume share, followed by North America. APAC comes in third in value share yet is fast-trending to a 14.6% CAGR during the forecast period (Figure 5).

Nearly three-quarters (74%) of surveyed payments executives ranked the entry and building scale of new-age players (FinTechs and PayTechs) as drivers for growth in non-cash commercial payments in the forecast period. Most new-age players seek to improve their unit economics profitably, and commercial payments offer a stable source of revenue with a smaller pool of competitors and long-term engagement scope. As a result, challengers are launching commercial payment products and services to target SMEs, if not large global corporations. As one example, the UK's cloud-native Starling Bank launched a business ecosystem to target and nurture SME client relationships.

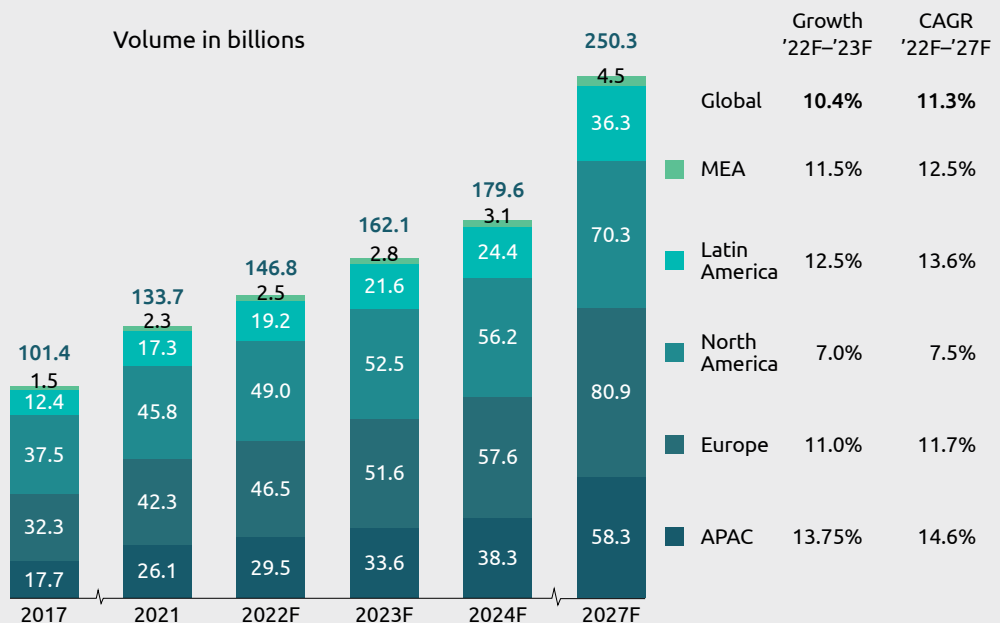
Enterprise clients demand retail-like payments from banks and payment firms,

such as digital and efficient experiences. More than 60% of payment executives agreed that the demand for a better payment experience accelerates commercial payment digitalization. Marc Andrews, Vice President, Financial Services and Insurance Industry Market Leader from Pega, said, "Commercial banking has been slower to implement digital automation and engagement capabilities in general. However, things are beginning to change as their clients seek real-time transparency into payment status and faster response to requests, especially when there is a processing problem or need to make a change, which can significantly impact corporate cash management."

Regarding payment methods, around 60% of the corporate executives we surveyed as part of the World Payments Report 2023 ranked commercial cards as the leading instrument. Suppliers become stressed during periods of high inflation if payments are delayed significantly from the invoice date. High inflation makes money less worthwhile over time. As a result, traditional payment instruments, such as paper checks, become less effective for all value-chain stakeholders, making commercial cards a preferred choice.

74%
of payments executives said new-age players are helping drive non-cash commercial payments volume growth

Figure 5. Global commercial non-cash transactions to set for robust growth



Source: Capgemini Research Institute for Financial Services Analysis, 2023
 Note: Commercial non-cash transactions: Transactions between businesses (not individuals) using a mode of payment other than cash. Figures are forecast for 2022 and beyond.

Rising interest and acceptance of commercial cards are also fueling innovation. Card operators seek to deliver integrated value-added services such as highly configurable spend-control features, expense management, reporting, and budgeting tools for efficient and real-time visibility into enterprise spend. In 2023, AMEX and Microsoft collaborated to build AI-powered intelligent expense management and reporting features for businesses.³⁹

In addition to cards, nearly 45% of corporate executives ranked digital wallets among the top three preferred payment instruments. Another one-third of corporate executives ranked A2A payments as the preferred payment method. With instant payments and real-time payment infrastructure maturing across critical markets, A2A payments and digital wallets are heading toward a watershed moment. However, traditional payment methods are still relevant. For example, 57% of corporate executives said credit transfers and direct debits on conventional rails (ACH, SCT, etc.) are suitable payment methods. Moreover, 37% of corporate executives

said they still use paper checks as a payment instrument.

Commercial payments are fast catching up with the overall digital payments trend – borrowing innovation from retail to meet evolving corporate client demands. And a particularly important aspect of commercial payments is cash management services. Cash management revenue for banks suffered during the global pandemic in 2020; however, in 2022, it is now back on a growth trajectory because of growing corporate deposits and high net interest margins. The accelerating shift away from paper-based processes, rising adoption of digital transactions, and FinTech collaborations are all contributing to fast evolution within the commercial payments segment, offering new and expanding cash management value pools for banks and payment firms. However, maximizing value from cash management services require banks and payment firms to engage and meet the changing expectations of enterprise clients.

Tokenization boosts virtual card acceptance for small-to-mid-size businesses and corporations

Enterprises use tokenized cards to increase security and embed cards directly into digital wallets. In combination with virtual cards, tokenization offers enterprises more spending control and security. They can set unique codes in tokenized virtual cards to track spending and improve reconciliations. Control parameters can restrict card use via the date, dollar amount, or supplier credentials. Tokenized virtual cards offer seamless integration with corporate enterprise resource planning systems to improve decision-making and payment tracking.

The worldwide value of virtual card transactions is poised to reach USD 6.8

trillion by 2026, up from USD 1.9 trillion in 2021 – indicating the strong demand among enterprise clients for virtual cards.⁴⁰ Banks, card operators, payment processing firms, and new-age players are collaborating to offer tokenized virtual card solutions to corporates. In 2022, California's Marqeta, a cloud-based open application programming interface platform, integrated with the Mastercard Track Instant Pay virtual card solution to leverage machine learning (ML) and high straight-through-processing (STP) rates for instant payment of supplier invoices.⁴¹ In another instance, HSBC partnered with Extend in 2022 to offer virtual card capabilities to enterprise clients.⁴²

Enterprise cash management is a challenge to be met

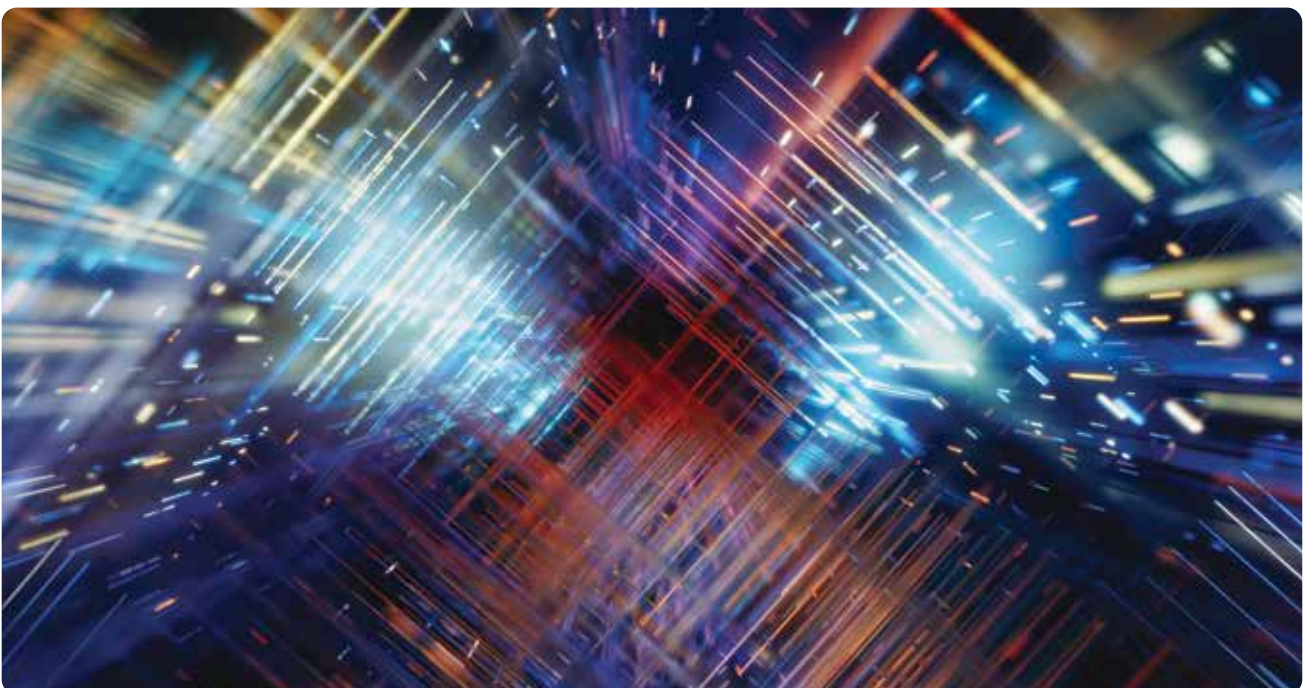
Enterprise clients and their corporate treasurers are soldiering through ongoing macroeconomic and geopolitical upheaval. The odds of recovery in 2023 are uncertain worldwide, according to the US credit rating agency S&P Global Ratings. The number of firms operating at a negative cash flow is on track to rise from 2021's 8% to 11–16% by the end of 2023.⁴³ Cash flow in the United States is not keeping pace with profit expansion, according to Bloomberg: simply put, cash inflows matched only 88 cents for every dollar of profits, the largest discrepancy since at least 1990.⁴⁴

More than half of corporate treasurers across multiple industries told us that rising globalization of trade and ongoing supply chain disruptions drive demand for effective and efficient cash management services (CMS). Another third said evolving risks (geopolitics and cybersecurity) made CMS critical, while nearly 30% called out rising inflation for their growing need for better cash management. Reliable around-the-clock CMS is key for operational efficiency, they added. Enterprise clients realize they must elevate their cash management capabilities to build resilience and navigate volatility.

Cash remains trapped as corporations navigate economic headwinds

For over a decade, capital has been easy to come by for large enterprises. However, since March 2022, as central banks began to increase interest rates, the cost of debt reached up to 13%.⁴⁵ It has also become challenging for large enterprises to re-finance their debts. In parallel, high debts and rising rates are increasing interest expenses, which means less cash for corporates to invest in strategic initiatives. As a result, corporate treasuries must focus on working capital management. Freeing up operational cash is cheaper than seeking external credit!

Companies aim to improve collection management to shorten days sales outstanding (DSO), which measures the average time it takes to collect customer payment. However, a lack of automation, fragmented payment collection channels, inefficient dunning (communicating with customers to ensure accounts receivable collection), and often missing invoices spark disorganized collection management.



On the other hand, corporations cannot extend days payable outstanding, which measures the average time it takes to pay suppliers. The inventory cost is also affected because businesses must maintain higher inventory buffers. Put these circumstances together and the result is a higher cash conversion cycle. In 3Q 2022, the cash conversion cycle of S&P500 companies deteriorated to 61.6 days, up from 55.4 days in 2021.⁴⁶ Not surprisingly, 79% of the corporate treasurers we polled agreed that poor cash management capabilities contribute to more lengthy cash conversion cycles (Figure 6).

Delays in the cash conversion cycle also lead to stuck working capital. According to the J.P. Morgan Working Capital Index, nearly USD 523 billion was stuck in the balance sheets of S&P 1500 firms in 2021 (compared with USD 507 billion in 2020).⁴⁷ Organizations could have used this cash to fund strategic initiatives. Of the corporate treasurers we surveyed, 78% complained about inefficient working capital management, and more than 70% said subpar cash management support results in higher operating costs, delayed cash pooling, and ultimately high debt levels.

Enterprise clients need more visibility into their cash

On average, an enterprise has more than 27 banking relationships to meet its treasury needs. Despite multiple connections, enterprise clients face payment challenges across procure-to-

pay and order-to-cash cycles. Over 70% of the treasurers we surveyed said they face issues in credit risk assessments, collection processes, and reconciliation.

- 73% of treasurers said payments are often stuck and delayed due to false positives and manual operations handling
- 69% responded that they do not receive adequate payment options from their banks and payment firms.

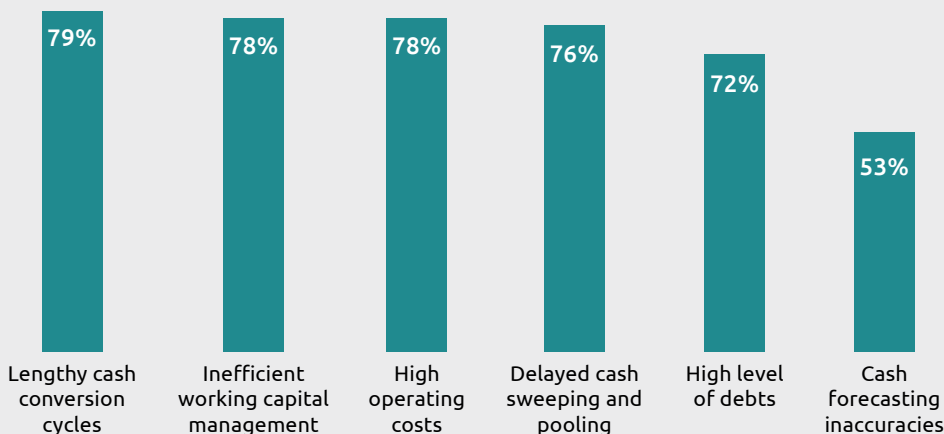
As a result, the enterprise has to rely on paper checks and traditional non-cash payment instruments – ACH, SCT, wire transfers, and the like. More than one in two treasurers complained about missing invoices.

Consider a multinational enterprise with a diverse global supplier base and sales offices in worldwide markets. In such an extensive corporate value chain, receiving cash from customers and paying suppliers is demanding and, at times, punishing. Money flowing through multiple jurisdictions with heterogeneous compliance and messaging standards makes cross-border payments prone to failure and delays. Moreover, incomplete data fields covering information like payment purpose, type, and source can lead to false positives and compliance issues. These payments must pass through a network of correspondent banks, meaning treasurers cannot trace the money flow and are often unaware of whether a payment is stuck or settled. Late payments exacerbate the problem and open corporate treasuries to FX volatility.

79%

of corporate treasurers agreed poor cash management contributes to lengthy cash conversion cycles

Figure 6. Enterprises with ineffective cash management services are vulnerable to business upsets



Sources: Capgemini Research Institute for Financial Services Analysis, 2023; World Payments Report 2023 Corporate Executive Survey (N=355).
 Question asked to corporate treasury executives: What business impact does your firm face because of poor cash and liquidity management?

Consider the impact when millions of dollars en route from Asia to Europe become stuck for a week – and FX rates change during that time: the company risks losing value on the generated invoice. For a treasurer, poor payment capabilities translate into a lack of cash visibility and forecasting inaccuracies.

In our survey of corporate treasurers, 62% did not find cash management services offered to them by banking partners satisfactory. So, where are banks and payments firms lagging?

A fragmented digital landscape hinders effective cash management delivery to corporates

Existing legacy systems remain as financial institutions' biggest barrier to offering superior cash management services.

- 64% of payment executives said a lack of data management and processing capabilities, incompatible and non-interoperable systems, and heterogenous messaging standards across entities create a digital disconnect
- 55% complained that their IT systems could not scale, which meant slow transformation of existing processes.

We asked payment executives about the progress of their digital initiatives to transform cash management services. Not surprisingly, respondents rated cloud migration as an ongoing initiative.

- 45% of payment executives said they had completed 30–50% of the migration, while 44% indicated less than 30% progress
- Progress was comparable on building internal APIs to eliminate functional silos – with 50% of payment executives rating progress as medium to high and nearly a third indicating less than 40% progress
- On average, more than 40% of payment executives said their firm was far from completing half of these initiatives.

Cloud-native applications are key to accelerating the digital transformation journey. Yet, more than a third of organizations said they had made less than 30% progress in building cloud-native applications. Almost one in two payment executives said their firm's progress in rationalizing its IT footprint was less than 30%. Only one in three payment executives rated IT footprint rationalization at 30–50%. Many banks and payment firms still follow the lift-and-shift model for cloud migration relying on redundant integration interfaces. This stop-gap remedy slows legacy system decoupling or decommissioning. Siloed digital transformation and a fragmented approach result in banks and payment firms failing to achieve cloud advantages (costs, agility, and scalability) and struggling to embrace advanced technologies like AI and intelligent automation.

When exploring advanced capabilities, nearly 70% of payment executives said they run multiple pilots to build and roll out their customized API library. About one in two said their firm is piloting various artificial intelligence (AI) and automation-powered use cases around cash management services. However, with poor data capabilities and delayed cloud migration, high AI and automation efficacy is often out of reach, making firm-wide scalability of AI and automation use cases a concern. The Global Head of Institutional Payments at AWS, Nilesch Dusane, added, "Financial institutions store large volumes of data but need a lot of resources to derive insights from the data. Cloud-based data lakes and technology infrastructure allow financial institutions to avoid spending on inefficient AI/ML projects and instead leverage costs-effective cloud AI/ML services to more easily get the most value from their data."

Outdated systems and slow/disconnected transformation initiatives result in underdeveloped cash management capabilities, hurting banks' market competency. Many improvements in the cash management capabilities of banks and other large payments providers are needed to meet the needs and expectations of corporate clients. Pain points across the cash management value chain have resulted in many challenges for providers to address (Figure 7).

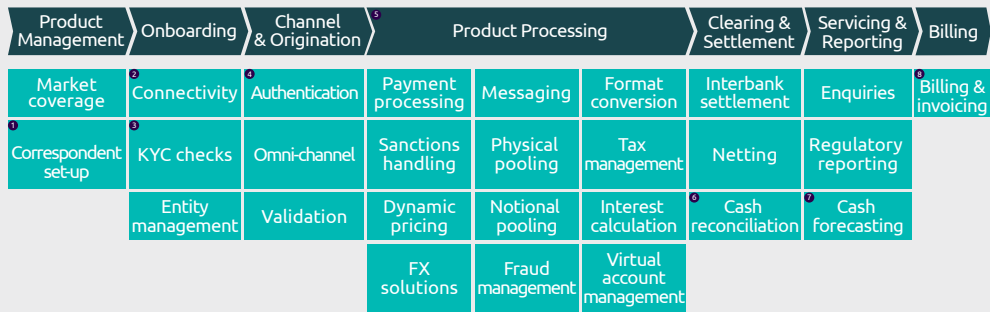


Many banks still use 10-year-old technology, and upgrade only when absolutely essential. They don't see the necessity for a complete IT estate overhaul. However, a shift to cloud is inevitable, especially with AI technology gaining attention and adoption. Banks that lag in cloud transformation will find it difficult to compete."

Sailesh Panchal

Director, Digital Transformation Advisory Ltd.,
TSB Bank

Figure 7. Disjointed digital transformation leads to cash management challenges



Sources: Capgemini Research Institute for Financial Services Analysis, 2023; World Payments Report 2023 Payment Executive Survey.

1. Shrinking payments coverage

For transaction banks, global reach is critical for building and sustaining enterprise relationships. Large transaction banks and payment firms rely on a network of correspondent banks to facilitate cross-border payments. However, high operational and compliance costs and declining profits have forced many banks to close or let go of their correspondent relationships. Instead, it makes strategic sense for banks and payment firms to connect with domestic payment schemes across multiple jurisdictions. Additionally, they can join or participate in industry initiatives such as Swift’s iXB (cross-border) pilot based on existing real-time payment systems and Project m-Bridge, a blockchain-based multi-CBDC platform to interconnect various central bank digital currencies across multiple jurisdictions (China, Thailand, and the UAE).

However, interoperable payment schemes and participation in industry initiatives require banks to boost API and digital maturity – a difficult task. Payment executives (72%) said they struggle with cross-border capabilities and delivering CMS beyond their regional (or local) jurisdiction.

2. Lackluster bank-to-enterprise digital connectivity

A full 70% of payment executives said poorly digitalized bank-to-corporate enterprise resource planning (ERP)/treasury management systems (TMS) connectivity makes CMS delivery challenging. Banks and payment firms still use banking portals to manually download/upload to and from corporate ERP/TMS. Issues are significant for multinational enterprises working with scores of banks across geographies. Over time, banks have also embraced H2H (host-to-host)

connectivity to overcome manual tasks. However, H2H requires banks and payment firms to build a customized connection interface. A corporation working with 27 banks may end up building and managing 27 H2H customized connections – a strain on already stressed IT resources. Banks and payment firms struggle to embrace and shift to multi-bank connectivity channels (like SWIFT and EBICS) or API-based connectivity.

3. Slow enterprise client onboarding

Bank and payment firms, on average, can take more than three months to onboard an enterprise client. Onboarding is consumed by inefficient, redundant, manual KYC processes followed by account opening. Banks and payment firms often manually feed client data through disconnected internal systems, duplicating efforts and creating inefficiencies that result in delays. Surveyed payment executives (51%) said onboarding and KYC are mostly manual, paper-based, and inefficient.

70% of corporate treasurers reported current bank cash management services are underwhelming



Bank-to-corporate connectivity is a key challenge. Legacy and complex systems impede the delivery and analysis of information between banks and enterprises, and the use of custom-built and disparate file formats mean treasurers need to spend more time and effort managing the flow of data rather than using the data to generate insights and drive business growth.”

Paul Van Sint Fiet

Head of Cross-currency solutions APAC, JPMorgan Chase & Co

4. Delayed payment authentication

More than half (65%) of payment executives told us it takes undue authentication time because their firm lacks structured processes and has poor inter-functional data sharing.

5. Underdeveloped integration capabilities

Almost 67% said they still don't deliver instant payment capabilities, multi-banking integrations, and connectivity. And they struggle to provide value-added services such as virtual account management (VAM).

Intuitively, banks and payment firms must shift from current batch processing cycles to year-round, always-on, continuous transaction processing. In parallel, the goal should be to manage reconciliations and handle exceptions instantly when they arise. The Head of Transaction Banking at Nordea, Kirsi Wiitala, agreed, saying, "Corporate customers want transaction environments that are both real-time and secure. As we approach high-interest rates and diverse geopolitical scenarios, real-time payments become increasingly critical for corporates to manage cash flow."

However, such a future state requires overhauling and realigning existing systems. Some banks and payment firms may attempt to graft real-time payment engines on top of their existing batch-processing system. But integration complexities may impede sustaining improvements over a long period, making it difficult to handle rising volumes.

On multi-banking integration, each bank has created a unique set of APIs using their proprietary authentication standards and custom messaging formats for their enterprise clients. However, the lack of corporate API standardization may hinder multi-bank integrations.

Similarly, integration and incorporation with a bank's current operating model remain challenging for value-added services such as virtual account management that interact with multiple bank areas and functions and require several touchpoints (integrations) across the legacy systems. VAM success depends on the bank and payment firm's cash management capabilities. Hence, at times, it simply becomes a reporting and reconciliation tool.

6. Manual cash reconciliation

Half of the payment executives we polled said reconciliation remains manual. The volume of data analyzed through spreadsheets takes significant time and effort and is error-prone. Missing data fields, delayed payment communication, and regulatory compliance during reconciliation yield low match rates (high mismatches).



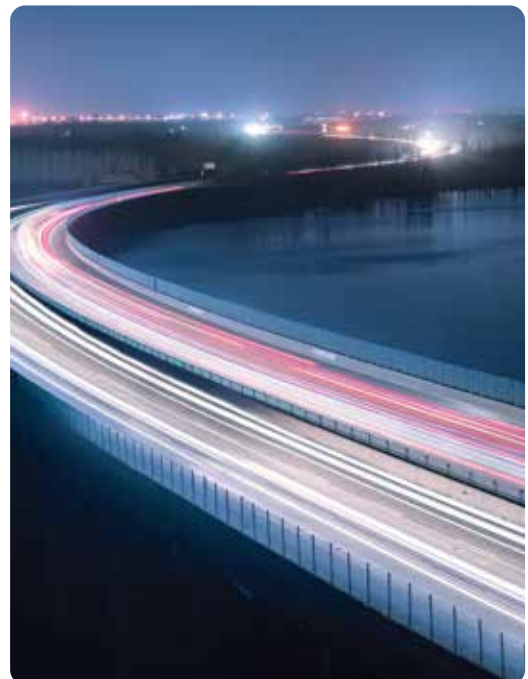
Businesses can streamline B2B operations by seamlessly integrating workflows and value chains combined with a real-time payment solution. Real-time payments provide businesses with a range of advantages like improved cash flow management and faster payment cycles that can positively impact their financial performance, customer satisfaction, operational efficiency, and market competitiveness"

Rachel Whelan

MD, APAC Head of Corporate Cash Management & Global Head of Payments & TFX Product Management, Deutsche Bank

Reconciliation also negatively affects the cash-netting process. Missing invoices and mismatched transaction details deter banks and payment firms from implementing cash netting.

The ISO20022 messaging standard can enable richer, end-to-end, structured, and meaningful data, allowing for improved automation and high reconciliation rates. However, poor bank-to-corporate connectivity results in banks often being unable to pass down the advantages of ISO20022 to corporates. Nearly 70% of corporate treasurers surveyed said they experienced very little to modest improvements due to SWIFT initiatives (ISO20022 and gpi).



7. Inaccurate cash forecasting

More than 60% of payment executives said offering clients cash forecasting and a single view of their cash daily and around the clock remains challenging. Issues for banks and payment firms include fragmented and inconsistent data, delays in consolidating information, and diminishing relevance of historical data in predicting future cash flow. Historical data is becoming inconsequential with the growing number of black swan events (such as the pandemic, ongoing geopolitical crises, and natural catastrophes).



The emergence of e-invoicing is an important opportunity to streamline payments and collections – and the entire financial sector has a key role to play.

Wim Grosemans

Global Head of Product Management,
Payments & Receivables - Cash Management,
BNP Paribas

8. Heterogeneous invoicing standards

Without a defined standard, e-invoicing processes are fragmented and transferred over email with PDF attachments, retrieved from supplier portals, or exchanged through electronic data interchange. This lack of uniformity and standardization fosters integration complexity and low interoperability between systems. Not surprisingly, 63% of payments executives rely on paper-based and manual invoicing processes.

Cash management challenges adversely impact corporate bank relationships

Basic cash management services are a source for deposits and routine activities such as wire transfers, cross-border payments, collections and payables, and check processing for banks and payment firms. However, it also opens doors to various offerings – from loans and FX services to sophisticated merger and acquisition support, investment banking, liquidity management, and other customized bank services. Therefore, although obstacles exist, cash management can be at the heart of banker and enterprise client relationships: it can be an engine to drive broader banking growth.

Complex processes and needs, and deep interdependencies, bind corporate and bank



60%

of payment executives said providing clients a daily 24/7 view of their cash remains challenging

relationships. Such partnerships cannot end without business implications. However, poor cash management services and related issues left unaddressed can lead to “silent attrition.” Over time, corporations forced to endure weak cash management capabilities begin to defect by narrowing their scope of services, transferring a share of accounts to a competitor bank, cutting transaction volumes, and reducing business volume: the result is revenue leakage and business loss. During market uncertainties, silent attrition gains momentum as enterprises cautiously consolidate their relationships with banks that can provide efficient and effective cash management services. Banking firms often miss the signals as discontented clients shift to competitors.

One-size-fits-all offerings are a primary reason firms lose ground in transaction banking relationships. Each corporation has unique needs depending on its industry, geography, end users, and suppliers. But even recognizing and understanding these large differences between clients, banks and payment firms struggle to customize because of the inherent complexity of their own operating and IT models.

National Australia Bank’s Shane Conway, Senior Executive, Transaction Banking, Enterprise Payments and Asset Servicing, Corporate & Institutional Banking, said, “Demand for solutions that help businesses efficiently optimize their working capital is growing. Real-time cash visibility, automated banking processes, AI engines, and seamless API-first connection with banks enables corporates to run scenario analysis quickly and intelligently, based on economic conditions, disruptions, and client segment activity, to improve cash forecasting, risk management, and strategy development.” Leading banks will invest in building these capabilities.

FinTechs are up and coming as cash management competitors – and partners

The competitive landscape is changing, with new entrants in the corporate cash management arena. Indeed, 44% of the corporate treasurers surveyed for this report told us that they are exploring collaboration opportunities with new-age players to access better cash management capabilities. More than one in two corporate treasurers said FinTechs offer ease of integration and use of payment solutions. FinTechs offering solutions like instant payments, reconciliation, account payable/receivable automation, digital invoicing, and cash forecasting are aiming to address key cash management pain points for corporates.

- For example, a global consumer goods company collaborated with FinTech Treasury Intelligence Solutions (TIS) to improve cash forecasting capabilities. TIS helped the corporate to improve forecasting accuracy from 50% to 80% with variance for some categories below 10%.⁴⁸
- Similarly, Coupa (a FinTech with spend management specialization) helped a leading telecom player to manage USD 5 billion of spend

annually by optimizing the invoice cycle and providing a 360-degree view of supplier relationships.⁴⁹

- Another FinTech, TransferMate, is helping corporates to streamline accounts receivable with automated collection and processing.
- New-age players like Stripe are also offering broader cash management services by leveraging banking as a service. Stripe launched Stripe Treasury in 2020 to enable corporates to embed financial services in their businesses. The FinTech is also expanding its banking network to include Goldman Sachs Bank USA, Evolve Bank & Trust (US), Citibank, and Barclays to enable standardized access of financial products using its APIs.⁵⁰

While FinTechs do offer digital-first and seamless cash management capabilities, they are bound by limited geographical reach and lack ability to orchestrate wider bank partner networks that some large banks already have. Moreover, cash management services across jurisdictions also require significant

regulatory guidance and advice where banks step up as the trusted partner. Finally, for many corporates, cash management services are a gateway to access more sophisticated financial products, including factoring and refinancing, M&As, and investment advisory services.

For bank-corporate relationships, FinTechs pose less of a challenge as competitors and can be an enabler – as collaboration partners. From the US, Stripe's Revenue and Finance Automation Marketing Lead Katie Ochieano said, "FinTechs such as Stripe complement banks when it comes to cash management. Banks have extensive experience in asset and liability management, and in managing relationships with clients as well as with regulators. They provide corporations with hedging, FX, risk management, capital, and extended liquidity lines. Stripe enables banks to deliver efficient cash management to enterprises with services including payments, invoicing, money movement, and fraud detection."

Forge strategic corporate relationships underpinned by efficient cash management

Existing legacy systems and their inherent complexities obstruct banks and payment firms from unlocking sustainable value. IT research firm IDC predicts the cost of running and maintaining legacy payment systems will climb from USD 36.7 billion in 2022 to more than USD 57 billion in 2028 – a 7.8% annual growth rate. IDC also says banks and payment firms operating within legacy constraints may be unable to compete for new payments-related income and risk missing 42% in incremental revenue while losing up to 21% annually in cost savings if they do not migrate to future-ready platforms.⁵¹

In cash management, several departments own different parts of the value chain. For instance, Know Your Customer (KYC) and onboarding may be part of shared services, account opening in banking, or payments processing within payments BU. Distributed ownership can lead to a fragmented digital environment, as each business unit may have a transformation plan, budget, and timelines. Hence, end-to-end digital transformation in transaction banking requires top-down

commitment, cohesive planning, and a unified purpose for structural reforms.

To overcome legacy obstacles, banks must pursue an end-to-end digital transformation journey: a three-layered approach to simplify, perform, and engage (Figure 8).

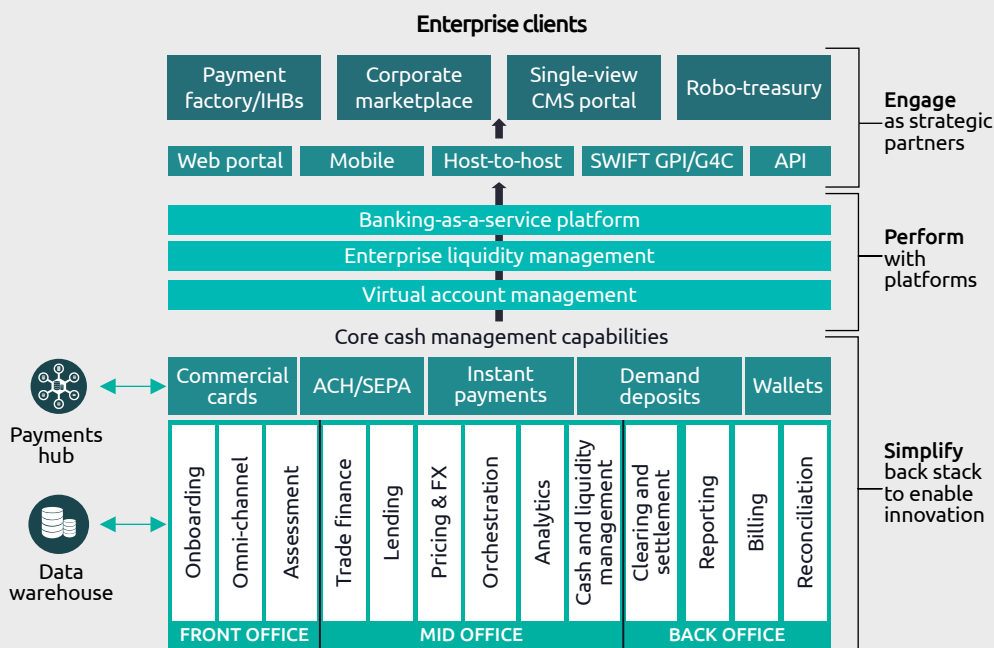


As a broader bank strategy, HSBC has invested in Global Payments Solutions to elevate transaction banking capabilities to address the needs of corporate clients today and tomorrow with a five-year committed investment plan. We focus not only on payment transactions but the entire corporate payment journey to provide digital-first, and efficient experience. With a strong and modular digital foundation and innovative platform capabilities, HSBC is at the heart of transaction banking relationships for corporates of all sizes."

Stewart Halliday

Global CIO, Global Payments Solutions, HSBC

Figure 8. A layered approach to nurturing strategic relationship with corporate clients



Source: Capgemini Research Institute for Financial Services Analysis, 2023.



SIMPLIFY the back stack to enable innovation and agility

For the past few years, banks and payment firms have expanded operations, acquired new firms and capabilities, and built new systems. This growth has led to multiple localized product portfolios, applications, and databases. However, it prevents banks and payment firms from leveraging a unified view of the cash management value chain. Managing the full spectrum of products and offerings becomes challenging, and the result is often inefficient pricing strategies and risk management, as well as strained relationships with corporate clients.

Mick Fennell, Business Line Director, Payments at Temenos, agrees when he says, "Transaction banks have built layers of multiple systems, resulting in large legacy footprints, high operational costs, and slow time to market. Simplifying this requires a flexible, API-first platform that supports the composable banking approach to plug-and-play various cash management capabilities in the cloud. Banks must leverage an open and secure cloud-native platform for composing, extending, and deploying capabilities at scale."

Banks and payment firms must orchestrate implementation of cloud-based point solutions for efficiency and agility. Fast-paced disruption has forced banks to prepare for multiple future outcomes. As a result, a composable digital stack that is "build-to-evolve" enables banks to embrace change on the go. Composability allows banks and payment firms to select and assemble capabilities to satisfy business requirements. Banks and payment firms can integrate SaaS-based turnkey solutions into their existing systems quickly and economically. This also helps to future-proof the

technology and data stack as the SaaS service provider delivers system upgrades over the cloud.

At First Abu Dhabi Bank, Gautam Dutta, MD and Head of Global Cash Product Management & Innovation, said, "Embedding cloud-based as-a-service pre-packaged functionalities into the bank's back-end architecture helps to reduce strain on resources, drives cost efficiency, boosts deployment speed, enriches capabilities and features, improves personalization, and enables standardization of processes like onboarding and KYC."

Industry cloud marketplaces are further accelerating the digital transformation journey of banks and payment firms with the ease of deployment of SaaS-based solutions. A cloud marketplace acts as an online storefront hosted by cloud service providers like AWS, Google, and Microsoft offering third-party software, applications, data and services. Banks and payment firms can re-design their digital landscape by leveraging the cloud marketplace and reduce time-to-value for digital transformation initiatives, streamline IT procurement and decision-making processes, and automate deployment of solutions.

Leveraging cloud-native solutions to simplify the IT landscape allows banks and payment firms to reduce operational costs and overheads, enhance efficiency, and improve regulatory controls and security. Nigel Dobson, Banking Services Lead at ANZ, said, "Based on risk and cost considerations, banks often undervalue the benefits of decommissioning legacy systems. However, banks must prioritize and gradually move to cloud. ANZ has already migrated 40% of its target applications to cloud and we're in the process of migrating our domestic real-time payments infrastructure to cloud."

PERFORM with platforms to boost cash management efficiency

A robust, capital-light (low upfront investment), agile, and scalable digital foundation allows banks and payment firms to build specialized solutions and platforms. With regard to cash management, three solutions create market differentiation.

Banking-as-a-service (BaaS) capabilities unlock new revenue streams

In its simplest form, the BaaS platform allows firms to expose their cash management functionalities using APIs and embed them into corporate business environments. BaaS enables firms to collaborate and partner with enterprise clients and FinTechs to co-create customized cash-management solutions.

First Abu Dhabi Bank's Anand Sampath, MD and Head of Global Payments, Collections, and Client Implementation, said, "We have started offering Transaction-Banking-as-a-Service to monetize its regulated infrastructure. The bank provides white label transaction banking services and treasury advisory to enterprise clients." He

added, "BaaS and API-first banking will emerge as universal channels similar to online and mobile channels. Hence, banks must build and maintain BaaS capabilities now."

Goldman Sachs' BaaS platform, *TxB*, made its debut in 2020, offering embedded transaction banking services to enterprise clients.⁵² In 2021, Deutsche Bank launched its *In-House Banking-as-a-Service* (IHBaaS) platform for mid-size and large enterprise clients.⁵³ Along similar lines, HSBC developed its BaaS platform in partnership with Oracle. The bank has embedded international payments and expense management functionalities in Oracle NetSuite's banking platform to enable enterprise clients to automate accounts payable, receivables, and reconciliation processes.⁵⁴

An explosion of business banking APIs also encourages embedded cash management services. Big and small banks now have API catalogs (or libraries) that allow enterprise clients to directly integrate cash management functionalities into their enterprise resource planning (ERP)/treasury management systems (TMS).

Treasury-as-a-service solution mitigates merger and acquisition obstacles

Business challenge

Corporate clients often face challenges when creating new legal entities or spinning off a part of their business. The process can be painful for treasuries with limited resources and little time to set up a new-business treasury unit. When detached or acquired, an entity does not necessarily have all required functions – particularly treasury. Corporations can replicate the parent company treasury structure or install a new platform and recruit new treasury expertise in the market. However, both options are costly and consume time and energy, which can delay closing the deal.

Business solution

BNP Paribas partnered with its strategic global corporate clients, from pharma to large industrial groups, to co-create and develop an all-in-one solution called *EasyTreasury*, a plug-and-play treasury-as-a-service solution that helps new legal entities set up and operationalize a treasury unit within three

to four months, including certified resources and a control framework. The complete packaged solution allows treasurers of new entities to manage cash flows and pay employees' salaries and suppliers' invoices, as well as execute all basic treasury operations (spot, forward, term deposits, money market funds, etc.). It covers all elements of a new treasury organization, from technology to people, from onboarding/offboarding to connectivity and integration.

Business results

BNP Paribas reports that *EasyTreasury* has been well-received since its June 2023 launch. And although envisioned initially to ease the life of large corporations on the selling side (mother companies), it has also progressively been perceived as a buy-side match, with industrial buyers and private equity companies valuing it for newly acquired companies, given the aggressive time to market and pricing structure.

70%
of corporate
treasurers said
open banking
capabilities are
important

At Singaporean multinational bank DBS, RAPID (real-time APIs by DBS) leverages nearly 180 business banking APIs to embed cash management services directly in enterprise clients' business flow.⁵⁵ Similar to DBS, several other banks like Bank of America, Citibank, JP Morgan Chase, Nordea, Standard Chartered, and Wells Fargo offer corporate and commercial APIs. Annelinda Koldewe, Global Head of Payments Wholesale banking at ING, told us, "As business models evolve, corporates seek flexible financial services embedded within customer journeys via seamless API-based solutions. For instance, Amazon has embedded ING's lending proposition. Other retailers consume ING's payment request APIs. Embedded finance is bringing new payment offerings to corporate clients wanting to embed banking expertise within their customer experiences. We now see big potential for embedded transaction banking services with treasurers becoming aware of the possibility to digitalize interactions along their corporate supply chain."

These APIs also form the connectivity layer to improve the flow of information between banks and corporates. APIs allow for multi-bank connectivity, data aggregation, and integration of bank back-office with corporate ERP/TMS. APIs also improve SWIFT connectivity for banks as well as corporates. Two primary use cases of API connectivity include:

- Aggregating bank balance and transaction data from multiple banks
- Payment initiation through multiple payment rails.

While some banks offer APIs that can be directly used by corporate treasurers, we are witnessing third-party API solution vendors helping corporates and banks reduce IT costs, time, and effort in setting up API connectivity. For instance, Deutsche Bank, which already had several corporate APIs, partnered with FinTech FinLync to leverage pre-built API integrations for improved bank-to-corporate connectivity.⁵⁶

Nearly 70% of the corporate treasurers surveyed for the World Payments Report 2023 said open banking capabilities around FX solutions, request to pay, accounts payable/receivable automation, data analytics, cash forecasting, and digital billing/invoicing are important to them. Leveraging APIs to aggregate data and integrate with TMS/ERP systems helps banks to offer these open banking capabilities to corporate treasurers seamlessly. Anith Daniel, Group Head of Transaction Banking Services at Emirates NBD Bank, said, "APIs have improved reconciliation by simplifying instant information flow between banks and corporates. Today APIs are helping in FX services, account validation, connecting to SWIFT gpi, and building subscription service."

BaaS sparks bank/FinTech teamwork to enhance cash management value

According to the World Payments Report 2023 Payment Executive Survey, 71% of respondents said they prioritize collaboration with FinTechs to create and offer innovative cash management services. More than 70% said FinTech partnerships provide access to new technology, improve speed to market, and optimize IT expenses. Nearly one in two payment executives also said cooperation helps expand client reach and new service development.

When asked to name essential collaboration areas, two in three payment executives listed open banking services such as request-to-pay and multi-account aggregation along with other cash management services, including automated reconciliations, digital invoicing, cash forecasting, and AP/AR automation.

- Goldman Sachs shared its TxB platform with Irish/American FinTech Stripe to combine and

complement each other's transaction banking offerings. For instance, businesses using the Stripe Treasury banking-as-a-service API can now open TxB-powered wallets without directly interacting with the TxB platform.⁵⁷

- Goldman Sachs also partnered with San Francisco-based FinTech Modern Treasury to expedite client onboarding time.⁵⁸
- Similarly, DBS collaborated with Singapore FinTech FinLync to improve API integration with enterprise clients.⁵⁹
- FinTechs, including HighRaidus, TIS (Treasury Intelligence Solutions), Kryiba, and TransferMate, are collaborating with banks including Citibank, J.P. Morgan, Barclays, and Société Générale to fuel cash management capabilities.

Virtual account management (VAM) offers smarter, leaner, and more efficient cash management

VAM is not new as banks have offered it for nearly 20 years. Fundamentally, virtual accounts organize and report data in a real, physical bank account. However, the inherent flexibility of defining virtual account hierarchies that reflect various business operations can help banks support multiple liquidity and cash management propositions from a single VAM platform.

Of the corporate treasurers surveyed in the World Payments Report 2023, 63% ranked automated reconciliation and reporting as the top benefit from VAM platforms, followed by improved tracking and transaction management (53%), simplified cash management structure (47%), and lower banking fees and rationalized banking relations (46%).

Yet, despite several VAM benefits, platform installation is a challenge for enterprises.

- 60% of corporate treasurers said they struggle to optimize virtual account structure to meet organizational requirements,
- 58% noted issues in managing tax implications,
- 50% said understanding and navigating VAM regulations across multiple jurisdictions is challenging, and
- Nearly one-third cited difficulty with integrating a VAM platform with their ERP/TMS system.

However, VAM platforms have evolved to solve technical and operational challenges. Next-generation VAM platforms are a virtual overlay implemented on top of a bank's core platform with minimal impact to the existing infrastructure. API architecture ensures a seamless interface and integration with corporate ERP/TMS systems, with self-service capabilities and extended account hierarchies (the ability to open unlimited accounts).

Moreover, next-generation VAM platforms leverage emerging instant payment rails and open banking to offer real-time liquidity management services. VAM platforms are no longer limited to account rationalization and reporting purposes. Now they enable sophisticated cash-management services such as managing multi-currency liquidity, intercompany funding, interest, and margins, as well as centralizing and automating "on-behalf-of" structures.



For example, in 2018, Citibank launched an in-house proprietary VAM platform across 16 Western European markets and 37 currencies.⁶⁰ By 2022, the bank expanded the offering to US corporate clients and 41 currencies. Citibank plans to expand its offering to Asia and Canada. Citibank's VAM platform can streamline the documentation process and reduce IT requirements for enterprise clients, significantly simplifying the account opening process. Citibank can now open accounts and make them transactional within 24 hours. Previously it could take months! With multiple payment methods, VAM helps the bank provide instant payment capabilities for domestic and cross-border transactions. Corporate clients leveraging Citibank's VAM platform can access instant cash management capabilities like real-time cash concentration, account segregation, automated account receivables/payables, and instant reconciliations. In 2022, Citibank reported an 82% increase in virtual account balance growth thanks to 33% VAM platform adoption.⁶¹



Blockchain and tokenization initiatives can boost the cash management value chain

Virtual accounts can be grafted on top of blockchains (or permissioned DLT networks) to enable value and information transfer. This capability can also help to overcome the complexities of integrating blockchain in an enterprise client environment.

Commercial banks are working on deposit tokens (equivalent to existing deposits held by banks) to support a variety of use cases, including domestic and cross-border payments, trading/settlement, and cash collateral provision. How does it work? Consider a scenario in which Company A has bank deposits. The bank can tokenize these deposits and store them in Company A's virtual wallet or account. Transactions occur on a private blockchain network across the virtual account hierarchy. This enterprise setup can simplify cash sweeping and pooling exercises by eliminating intermediaries and automating reconciliations. Company A can also use deposit tokens in its wallet to pay Company B by transferring them over the blockchain network. The banks of companies A and B can settle on a separate interbank network.

Moreover, the programmable nature of deposit tokens opens doors to novel use cases leveraging smart contracts to trigger payments or

conditional fund transfers and intraday lending decisions – and interest-payment disbursement. Automation significantly reduces human intervention and the scope of manual errors, resulting in highly efficient liquidity management.

Gautam Dutta, MD and Head of Global Cash Product Management & Innovation at First Abu Dhabi Bank (FAB) said, "We believe that the co-existence of fiat and tokenized systems will raise the level of interoperability among stakeholders, and this will be key to driving customer value. At FAB, we are currently evaluating tokenization through deposit tokens and soon we will explore tokenized assets and central bank digital currency (CBDC) to determine how programmability can be built in for cash management use cases such as trigger-based funding, defunding, interest payouts, etc. Looking ahead, our initiative(s) can be extended for pilot participation in single/shared ledgers before we look at universal or unified ledgers to create building blocks for new clearing and settlement systems."

In addition, underlying blockchain technology can bolster data collection and validation processes, giving corporate treasurers more precise

cash forecasting capability. Treasury systems can use smart contracts and programmable deposit tokens to capture data from invoices, payment transactions, bank accounts, and inventories. As a result, employees are free from numerous manual data-entry tasks, and the enterprise eliminates data loss, duplication, and manipulation. In parallel, blockchain can ensure that data recorded in ledgers is authentic, immutable, and traceable. Moreover, automation enables corporate treasuries to establish a consistent, reliable single source of truth for all data across different systems, stakeholders, and subsidiaries.

J.P. Morgan's blockchain unit, Onyx, is piloting various use cases deploying blockchain and deposit tokens, including creating customizable virtual account structures, multi-currency notional pools, programmable money, and cross-currency liquidity. In March 2023, the Swiss Bankers Association (SBA) released a whitepaper exploring deposit tokens as an alternative to private stablecoins.⁶² Similarly, DZ Bank in Germany partnered with four corporate clients to issue deposit tokens directly into a private blockchain network.⁶³

An enterprise liquidity management (ELM) platform facilitates diagnostic decision-support intelligence

An ELM enables actionability and operational interconnectivity between internal and external systems. Transaction banking API catalogs and VAM platforms with intercompany tracking capability laid the foundation for an ELM platform. ELM platforms bring together siloed resources and functionalities and offer corporate treasurers complete visibility on ownership of cash, working capital management, payment security, and liquidity risks (Figure 9). ELM is gaining traction as complexities in managing enterprise liquidity rise and the corporate treasurer role expands. Corporations expect strategic liquidity management advice from treasurers. Sometimes, ELM platforms are compared with TMS; however, we consider TMS as a subset of the broader ELM platform.

The operations layer of the ELM platform groups application modules to run treasury (including TMS), payments, risk management, and working capital optimization. Next, the API-rich connectivity layer helps unify data from multiple ERPs and standalone systems within the enterprise setup and externally (suppliers, customers, banks, etc.). Finally, the execution layer leverages artificial intelligence, machine learning, and data visualization to analyze data collected from disparate systems and support decision-making.⁶⁴



Liquidity management offers a single view and control over cash positioning. It requires harmonization across multiple TMS and ERP systems across the enterprise – a challenging proposition. Thanks to APIs, banks can seamlessly integrate multiple systems and eliminate silos to help treasurers improve liquidity management.”

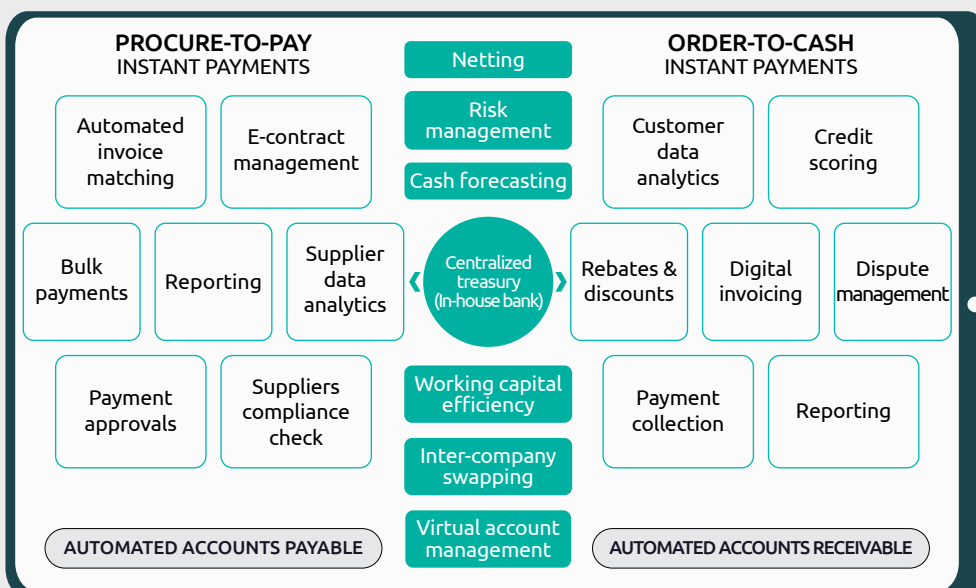
Jan Rottiers

Head of Liquidity Management Solutions for Corporates, BNP Paribas

ENGAGE with corporate clients as strategic partners, not service providers

Corporate treasury teams are often understaffed, and disruptions such as COVID-19, high inflation, supply chain disruptions, and geopolitical crises significantly strain resources and efficiency. Considering the evolving role of corporate treasurers, as true strategic partners, banks must offer transformational support. There are three key areas where banks can lead change and add value for corporate clients.

Figure 9. An ELM platform converts operational data into actionable insights for quick decision making



Source: Capgemini Research Institute for Financial Services Analysis, 2023.

53%
of corporate treasurers are exploring centralizing treasury management at the regional level

Robo-treasury

In today's volatile environment, corporate treasurers require on-demand, always-on treasury support. Corporate treasurers need as much time as possible for strategic initiatives instead of spending effort on repetitive and low-value-adding tasks. Therefore, intelligent robotic process automation (iRPA) can be critical. For corporate treasurers, automation is important in payment execution and monitoring as well as accounting. RPA eliminates tedious and manual daily processes, enabling corporate treasurers to spend more time on value-added tasks. Banks that embrace iRPA in payment areas can deliver quantifiable value.

In-house banks and payment factories

In-house banks and payment/collection factories are on corporate treasurers' radars. Of those surveyed for the World Payments Report 2023, 53% said they are exploring options to centralize treasury operations at the regional level. And one in three corporate treasurers said their firm had begun its centralization journey. Demand for high efficiency and transparency in managing cash and liquidity has made in-house banks (IHBs) top of mind for corporate treasurers.



Leading corporates aim to centralize treasury operations to leverage real-time payments and a full suite of API connectivity to enable 24/7, 360-degree visibility of their cash. Banks and payments firms are instrumental and play a major role in enabling corporate treasurers' transformation journey."

Nicolas Cailly,

MD, Global Head of Payments & Cash Management, Société Générale CIB

Bank boosts high-traffic payments efficiency with automation

Business challenge

A global bank was experiencing difficulties managing various types of payment exceptions, typically requiring significant manual processes and multiple human touches to resolve. The bank's operations team working on these exceptions had grown to 1,000 people as their payment volumes grew and they struggled to meet their service level agreements (SLAs).

Business solution

The bank leveraged US-based Pega's low code platform for AI-powered decisioning and workflow automation to manage all of their commercial payment exceptions. Real-time, bi-directional integration with SWIFT and other systems automates the capture and interpretation of information to determine the exception reason. Intelligent automation with advanced business rules are then used to route cases to appropriate

operations personnel for more rapid review and automate processing to reduce the level of manual work and review required, sometimes even resolving issues without any human intervention. The bank has even incorporated AI to gradually learn from common issues and increase the level of straight-through processing (STP) over time.

Business results

The bank can now automatically resolve about 80% of exceptions with no human intervention, and the average number of human touches per exception was reduced by 70%, leading to a 29% improvement in same-day resolution. In addition, while the number of payments processed have doubled over the past several years, along with the number of exceptions, the bank is now able to resolve these exceptions with only 300 operations people...an effective reduction of 85% in the number of people required.

What do in-house banks include?

- Payment factory to control outgoing payments, manage POBO (pay-on-behalf-of), and automate reconciliation
- Collection factory to automate and manage account receivables, COBO (collecting-on-behalf-of), reconciliation, and accounting processes
- Intelligent netting for inter-company payments and settlements
- Intercompany financing for seamless loan disbursement and automated interest calculations
- International risk management with FX and internal interest rate hedging
- Liquidity management with automated postings and centralized trading

Banks and payment firms with a robust digital foundation and platform capabilities are integral to corporate treasurers setting up an in-house bank. Next-generation VAM and enterprise liquidity management platforms are essential to building in-house banks and accelerating benefits for corporate treasurers.

Corporate or B2B marketplaces

Finally, several large corporations and B2B firms are orchestrating marketplaces and ecosystems. As more sales shift to e-commerce channels, they become a point of convergence for data and payment volume. Large transaction banks seek a central role in helping corporations manage these emerging B2B marketplaces. Transaction banks with a strong digital foundation can work more closely with enterprise clients to set up corporate marketplace portals or support their payment ecosystems.

In June 2023, Standard Chartered launched B2B marketplace support for corporate clients. The bank is piloting B2B marketplace projects in multiple regions spanning various industries like travel, contract manufacturing, and commercial vehicles.⁶⁵ Similarly, Société Générale partnered with FinTech Lemonway to offer payment services for large European corporates entering the B2B marketplace arena.⁶⁶

Step-up with clients to build long-term sustainable value

Large, diversified corporations with multinational presence work with several banks. Therefore, for one bank to emerge as a global strategic partner is challenging because of regulatory and geographical barriers. However, there is a sizeable opportunity for banks to step up as strategic partners at the domestic or regional level. We asked banks and payments executives how their firms could benefit through corporate client partnerships.

- 67% of payments executives said firms strategically partnering with corporate clients face a reduced threat of disintermediation from new-age players (FinTechs) and industry peers
- 65% of executives said strategic banking partners could embed multiple value-added services within their corporate clients' business flow and can expect higher margins from deep engagement
- 57% of payment executives said strategic banking partners could increase cross- and up-selling opportunities with their corporate clients because of their relationships.



Strategic partner banks are well-positioned to help drive green treasury initiatives

Green and sustainable cash management is a top agenda item for corporate treasurers who have prioritized environmental, social, and corporate governance (ESG) strategies; these executives are keen to integrate ESG metrics across their cash management processes. Included in the World Payments Report 2023 corporate survey results:

- 45% of treasurers said they want to assess their suppliers' ESG scores
- 50% said they are willing to offer better credit terms to suppliers with high ESG scores
- Nearly one in three corporate treasurers also evaluated the ESG metrics of investment opportunities their banks presented.

Transaction banks are key to driving sustainable cash management initiatives. Most corporations turn to their strategic banking partners for advice and tools to implement green cash management processes. 67% of payment executives said they are either providing or planning to provide advisory and education to corporate clients on green cash management practices. Regarding green cash management products, options are proliferating:

- Banks are introducing green deposit accounts. Deutsche Bank launched short-term green deposit accounts for corporate clients in 2021.⁶⁷ Similarly, in 2022, Citibank launched new deposit solutions to help clients invest excess cash in sustainable time deposits or sustainable minimum maturity time deposits based on the bank's sustainability framework.⁶⁸ More recently, in February 2023, Japan's MUFG launched Green Deposits, allowing corporations to invest excess cash in an interest-bearing product that funds green projects.⁶⁹
- In addition to deposits, some transaction banks offer factoring (collateralizing account receivables to raise immediate cash). For instance, in 2022, Société Générale embedded ESG considerations in its factoring strategy for SMEs and mid-sized businesses in France.⁷⁰
- Additionally, sustainability-linked loans (SLLs) help enterprises to green their cash. According to a Bloomberg report, the market for ESG debt could reach USD 15 trillion by 2025. BNP Paribas is a leading SLL orchestrator.⁷¹

There are multiple ESG standards in the market, and they vary regionally; a large global enterprise may report ESG data from several geographies under different criteria. Most banks link sustainable loans to a client's completion of ESG goals, and disparities in ESG data reporting make it challenging for banks to assess ESG status accurately. The result is poor compliance. What's more, 54% of payment executives said they do not get high-quality ESG data, and 51% said their firm lacks an ESG framework.

Despite several green cash management products, supply is limited: a few leading transaction banks are at the forefront of sustainable cash management services. Other banks are hamstrung by data limitations: indeed, 64% of payment executives said they lack the necessary standardized ESG data. For banks and payment firms aiming to launch ESG-linked cash management products, capturing, analyzing, and interpreting high-quality and harmonized ESG data is imperative. Banks and payment firms need ESG data hubs to capture granular data across multiple parameters from transaction data, invoices, investments, and other sources.

IN CONCLUSION

Reenergizing and expanding relationships between banks/payment firms and enterprise clients will be no small feat. Today's economic uncertainty has upended numerous global corporate operations, leading treasurers and other executives to seek active engagement with financial services partners – including business advice and technology-driven efficiency solutions. Yet, enterprise clients say their incumbent financial service providers' support is often underwhelming. Commercial payments are fast catching up with the digitalization trend, offering new value pools for banks to tap into. So, banks must establish strategic partnerships and client trust to leverage the trend. This will require banks to:

Maneuver through the dynamic payments landscape and align priorities with key industry initiatives, compliance schemes, and regulations to retain competitive positioning in the market. Banks and payment firms must balance their focus between retail and commercial payments to explore and capture expanding value pools.

Transform cash management services with a digital foundation and intelligent platform capabilities. The Simplify, Perform, Engage model outlined in this report offers guidance into enabling innovation, streamlining core capabilities, and engaging with clients in new ways.

Break the mold and forge strategic relationships with corporate clients to drive deeper engagement. Banks and payment firms that behave solely as service providers sell themselves short. Those that overcome legacy obstacles to become valued strategic partners will achieve sustainable value in the years ahead.

Methodology

Scope and research sources

The World Payments Report 2023 draws on insights from two primary sources – the Global Large Businesses Survey 2023 and the Global Banking and Payments Executive Surveys and Interviews 2023. These primary research sources cover insights from 17 markets: Australia, Brazil, Canada, China, France, Germany, Hong Kong, India, Italy, the Kingdom of Saudi Arabia, the Netherlands, Singapore, Spain, Sweden, Switzerland, the UAE, the UK, and the US.

payments, distributed ledger technology, and more. Participants were also asked about the current challenges they face in cash management and their expectations from partner banks on value-added services in cash management.

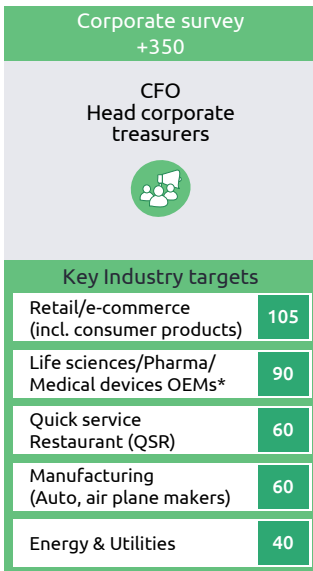
The survey respondents represented key industries: Retail/e-commerce, life sciences (including pharma and medical device OEMs), quick service restaurants, manufacturing (including automotive), and energy & utilities.

2023 Global Large Business Survey

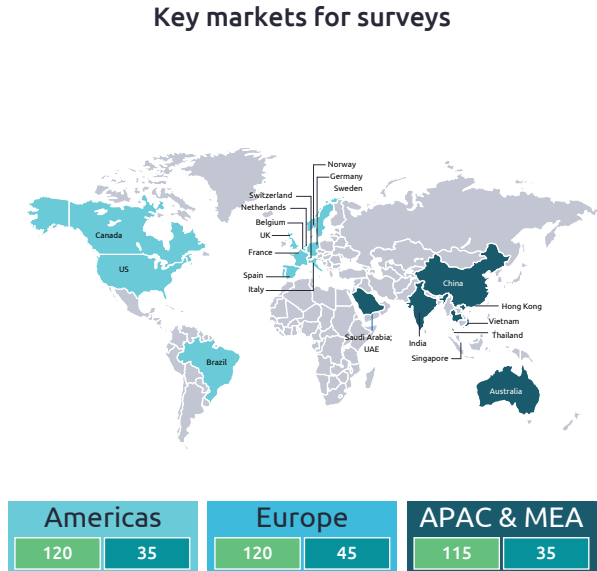
The survey questioned 355 senior executives of corporate treasury departments of large corporates on factors driving payments disruption, expectations from banks, satisfaction levels, factors driving relationships with their banks, non-banking services currently used, emerging payment services such as real-time

2022 Global Banking and Payment Executives Survey and Interviews

The report includes insights from focused interviews and surveys of over 130 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.



Note: *OEM – Original equipment manufacturer



Partner with Capgemini

The time to transform your business is now

Connected Payments

Our integrated Connected Payments offering helps banks take a transformational view of their payments' capabilities. We offer a path to payments leadership through implementing the efficiencies and flexibility necessary to thrive in the new ultra-competitive landscape.

Let us help you modernize payments technology to optimize data analysis and streamline related business operations.

Addressing the end-to-end application landscape of a typical payments estate can maximize results as you reinvest and refocus on value-added services. We work with you to create a plan that provides benefits along the transformational journey while tailoring the roadmap within your specific contexts and needs. Solution components include:

- Co-creation of current state assessment and roadmap development
- Deployment of a range of transformational levers such as ecosystem integration, data and analytics implementation, cloud adoption, platform replacement, bespoke builds, test and migration factories, and business operations
- Continuously track and report top- and bottom-line value
- Connected Payments helps financial institutions achieve benefits including (but not limited to) technology future-proofing, additional value-added services, and lower optimization and productivity improvement costs.

Open Banking Platform

The Open X framework unlocks a world of new business models for financial services firms via effective collaboration with an extensive ecosystem of businesses (from FS to non-FS firms) enabled by open and evolutive platforms. It allows partners to exchange revenue-generating services by accessing each other's data, unique knowledge, existing customer base, and specific distribution channels.

The API economy can become a competitive advantage for financial institutions, allowing them to provide customers with compelling experiences, relying on transaction-based business models through third-party solutions rather than via substantial – and usually lengthy – in-house investment. Open API strategies are transforming once tightly closed banking systems into openly connected institutions that empower firms to offer capabilities beyond banking by leveraging FinTech partner solutions.

Capgemini can help banks balance offering traditional banking products through existing channels and going completely digital. Our assessment frameworks and API-based value creation models provide an end-to-end solution that combines all the necessary elements to leverage an open ecosystem through standardized APIs. The Capgemini API-based value creation models help financial institutions:

- Unlock new revenue streams by identifying and prioritizing the correct API monetization opportunities

- Manage APIs by leveraging prebuilt APIs for open banking (AISP, PISP, PIISP), API lifecycle management, API monitoring, API traffic management, and API analytics
- Be compliant by keeping customer data secure and protecting banks from legal and liability issues
- Accelerate time to market through a modern, scalable, and resilient API platform
- Tap into future innovation by engaging with a diverse ecosystem of partners
- Experiment before launch by providing an API sandbox.

ISO20022

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. ISO 20022 transformation affects both business and IT layers.

Adopting the standard will impact the entire payments landscape, from channels and integration layers to payments engines. Incumbent firms should avoid remaining in the tactical phase for too long. Adoption in its entirety will involve a complete change of data models and relevant downstream systems to build compatibility. Capgemini, with its rich experience in handling ISO 20022 transformation journeys, follows a 360-degree approach that includes:

- Business, technology, and client impact analysis
- Roadmap development, including overall migration, program scope, and business case.

Cash Management

We help organizations with their end-to-end Cash Management transformation, from strategy definition to solution implementation.

We have developed a payment orchestration cloud platform that enables banks to improve their transaction banking proposition, decomplexifying banking relationships, unlocking the full potential of real-time cross-border money movement and real-time cash forecasting for their corporate clients.

It enables corporate treasurers, large retailers, and insurers to have a simplified and seamless integration between their ERP / Treasury / Payments Factory and their banking partners.

Our solution is cloud and ISO20022 native and leverages microservices-, API- and data-driven architecture. This makes the platform highly robust, secured, performant, resilient, scalable, and cost-efficient. It is also highly composable and provides a strong degree of personalization.

We have strategic partnerships and pre-vetted integration with most of the leading cash & liquidity management, virtual accounts, and foreign exchange vendors in the market. This enables a transaction banking business line to focus on their proposition go-to-market, greatly reduce their time-to-market, and generate quick wins.

Ask the experts



Nilesh Vaidya

Global Head of Banking and Capital Markets

nilesh.vaidya@capgemini.com

Nilesh has been with Capgemini for 20+ years and is an expert in managing digital journeys for clients in the areas of core banking transformation, payments, and wealth management. He works with clients to help them launch new banking products and their underlying technology.



Jeroen Holscher

Global Head of Cards and Payments Practice

jeroen.holscher@capgemini.com

Jeroen is an expert in transformation programs in the cards and payments domain. He has been with Capgemini for 24 years and helps clients to improve their payment products and their underlying technology.



Christophe Vergne

Cards & Payments SME (Europe)

christophe.vergne@capgemini.com

Christophe played a critical role in building Capgemini's global payments transformation capability. He has co-authored the World Payments Report for the past decade.



Venugopal PSV

Cards & Payments SME (APAC)

venugopal.psv@capgemini.com

Venu leads advisory and client solutions in Payments, Cards, and Transaction Banking. He has more than 23 years of hands-on banking and banking IT advisory experience.



Stanislas de Roys de Ledignan

Managing Director of Global Financial Services & Sponsor for Asia Pacific

stanislas.deroy@cargemini.com

Stanislas leads Capgemini Invent activities with banks and insurers across the globe, and support industry leaders on topics such as innovation strategy and business transformation. He has over 25 years of experience working with Financial Services lead players in Asia, North America and Europe to support the industry to stay ahead of the game.



Dr. Stefan Huch

Global Head of Payments, Capgemini Invent

stefan.huch@cargemini.com

Stefan is a global acting integrator within Capgemini focusing on E-payment, card business, and E-commerce in the field of business transformation. He specializes in top-line growth and payment implementation programs across all industries.



Elias Ghanem

Global Head of Capgemini Research Institute for Financial Services

elias.ghanem@cargemini.com

Elias is responsible for Capgemini's global portfolio of financial services thought leadership. He has more than 20 years of experience in FS, focusing on effective collaboration between banks and the start-up ecosystem.



Chirag Thakral

Deputy Head of Capgemini Research Institute for Financial Services

chirag.thakral@cargemini.com

Chirag leads the Banking and Capital Markets portfolio of financial services thought leadership. He has over 15 years of experience as a strategy and thought leadership professional with in-depth FS expertise with a focus on banking and FinTechs.

Key contacts

Global

Nilesh Vaidya
nilesh.vaidya@capgemini.com

Jeroen Hölscher
jeroen.holscher@capgemini.com

Asia (China, Hong Kong, Singapore)

Sriram Kannan
sriram.kannan@capgemini.com

Guillaume Rico
guillaume.x.rico@capgemini.com

Australia and New Zealand

Vasant Gore
vasant.gore@capgemini.com

Susan Beeston
susan.beeston@capgemini.com

Saugata Ghosh
saugata.ghosh@capgemini.com

Belgium

Robert Van Der Eijk
robert.van.der.eijk@capgemini.com

Youssef Sakkali
youssef.sakkali@capgemini.com

France

Christophe Vergne
christophe.vergne@capgemini.com

Yann Leclerc
yann.leclerc@capgemini.com

Jean-Charles Croiger
jean-charles.croiger@capgemini.com

Sébastien Salvi
sebastien.salvi@capgemini.com

Germany

Andreas Fredrich
andreas.fredrich@capgemini.com

Stefan Huch
stefan.huch@capgemini.com

India

Rajesh Hegde
rajesh.a.hegde@capgemini.com

Kamal Mishra
kamal.mishra@capgemini.com

Sriram Thiagarajan
sriram.thiagarajan@capgemini.com

Ravinder Wadhwa
ravinder-anand.wadhwa@capgemini.com

Italy

Francesco Fantazzini
francesco.fantazzini@capgemini.com

Lorenzo Busca
lorenzo.busca@capgemini.com

Japan

Makiko Takahashi
makiko.takahashi@capgemini.com

Middle East

PSV Venugopal
venugopal.psv@capgemini.com

Vincent Sahagian
vincent.sahagian@capgemini.com

Nordics (Finland, Norway, Sweden)

Abhishek Mohan
abhishek.a.mohan@capgemini.com

Thierry Morin (Norway)
thierry.morin@capgemini.com

Johan Bergstrom (Finland/Sweden)
johan.bergstrom@capgemini.com

Spain

M^a Carmen Castellvi
carmen.castellvi@capgemini.com

Enrique Cepeda Lázaro
enrique.cepeda-lazaro@capgemini.com

The United Kingdom and Ireland

Michel Vaja
michel.vaja@capgemini.com

Stephen Dury
stephen.dury@capgemini.com

North America

Ravi Vikram
ravi.vikram@capgemini.com

Mischa Koedderitzsch
mischa.koedderitzsch@capgemini.com

Patrick Bucquet
patrick.bucquet@capgemini.com

Acknowledgments

We would like to extend a special thanks to all the banks, FinTech firms, technology service providers, and individuals who participated in our executive interviews and surveys.

Firms

FS Firms: ABN AMRO, ANZ, Bank of Ireland, BBVA, BDO, BNP Paribas, BNP Paribas Fortis, Commercial Bank of Dubai, Credit Mutuel Arkea, Deutsche Bank, DZ Bank AG, Emirates NBD Bank, Eika, First Abu Dhabi Bank, HM Revenue and Customs UK, HSBC, ING Bank, JPMorgan Chase & Co, Landesbank Baden-Württemberg, Länsförsäkringar Bank, National Australia Bank, Nationwide, NatWest, Nordea, PagoNxt, Rabobank, Santander, Security Bank Corporation, Société Générale CIB, Standard Chartered Bank, Swedbank, SWIFT S.R.L, TSB Bank, UniCredit Bank AG
FinTech firms: Stripe, TransferMate Global Payments, CorticAI, Thunes, Upflow, Yondr
Corporates: Delaware, Bel Group, Netcetera SAS, SimplyTreasury
Technology firms: Amazon Web Services, Pega, Temenos
Survey partners: INJ Partners

Teams and individuals

Capgemini Sponsorship Committee: Christophe Vergne, Gaurav Sophat, Gopalakrishnan GK, Jeroen Holscher, Nilesh Vaidya, Philippe Durante, Sankar Krishnan, Senol Mehmet, Sreepad Kamath, Stefan Huch, Venugopal PSV.

Elias Ghanem, Chirag Thakral, and Vivek Singh for their overall leadership for this year's report. Vaibhav Pandey, Bipin Jose, Raghava Bethanabhatla, Donald Francis, Prateek Samtani, Sravanthi Bijinemalla, and Yasmine Bennani for in-depth market analysis, research, compilation, and drafting of the findings. Tamara Berry for editorial contributions and content leadership. Dinesh Dhandapani Dhesigan for graphical interpretation and design.

Capgemini's Global Payments network for providing insights, industry expertise, and overall guidance: Alan Gregory, Andreas Fredrich, Anuj Agarwal, Ashiq Nagda, Christophe Vergne, Enrique Cepeda, Ernst Kokke, Gerold Tjon Sack Kie, Guillaume Rico, Jeroen Hölscher, Joost van Putten, Karishma Panda, Klas Rutberg, Li Cheng, Marco de Jong, Maria Äng, Marwan Farah, Michel Vaja, PSV Venugopal, Rajesh Hegde, Richard van den Engel, Sriram Kannan, Stefan Huch, and Thierry Morin.

Laura Breslaw, Marion Lecorbeiller, David Merrill, Meghala Nair, Swathi Raghavarapu, Fahd Pasha, Jyoti Goyal, Anthony Tourville, Vamsi Krishna Garre, Brent Mauch, Pranoti Kulkarni, and Martine Maître for overall marketing leadership; and the Creative Services team for graphic production: Balaswamy Lingeshwar, Pravin Kimbahune, and Sushmitha Kunaparaju.

Lead Analysts



Vivek Kumar Singh

Program manager for BCM thought leadership with 12 years of experience in research, consulting and business strategy.



Vaibhav Pandey

Project manager for BCM thought leadership with 8+ years of experience in cross-sector research and consulting.

About us



Capgemini is a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of over 360,000 team members in more than 50 countries. With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering and platforms. The Group reported in 2022 global revenues of €22 billion.

Get The Future You Want | www.capgemini.com



Financial Services World Report Series

The Capgemini Research Institute for Financial Services is an in-house think tank focused on digital innovation and technology issues impacting global banks, wealth management firms, and insurers. The institute annually publishes its signature Financial Services World Reports, which draw upon primary research voice-of-the-customer surveys, CXO interviews, and partnerships with technology companies and academia. These data-driven perspectives explore how financial institutions can meet emerging business challenges with transformative thinking enabled by technology and data. Independent analysts named the World Retail Banking Report 2021, published by the institute, as one of the year's top 10 publications among consultancy and technology firms.

To find out more or to subscribe to receive reports as they launch, visit www.capgemini.com/worldreports.

Disclaimer

The information contained herein is general in nature and is not intended and should not be construed as professional advice or opinion provided to the user. Capgemini assumes no liability for errors or omissions, or use of this material. This document is provided for informational purposes only; it is meant solely to provide helpful information to the user. This document does not purport to be a complete statement of the approach or steps necessary to address or solve any particular matter or to accomplish any particular business goal. The user also is cautioned that this material may not be applicable to, or suitable for, the user's specific circumstances or needs and may require consideration of additional factors if any action is to be contemplated. The text of this document was originally written in English. Translation to languages other than English is provided as a convenience to our users. Capgemini disclaims any responsibility for translation inaccuracies. The information provided herein is on an as-is basis. Capgemini disclaims any and all representations and warranties of any kind.

Endnotes

- 1 [BIS](#), "Digital payments make gains, but cash remains;" January 31, 2023.
- 2 [Nationwide Building Society](#), "Note to self: Cash usage rises for first time in 13-years amid cost-of-living crisis;" January 11, 2023.
- 3 [European Commission](#), "Payments: Commission proposes to accelerate the rollout of instant payments in euro;" October 26, 2022.
- 4 [Insider Intelligence](#), "The European Payments Initiative's scaled-back pilot could boost instant payments;" April 26, 2023.
- 5 [Payments Journal](#), "IXB Nearing Full Commercial Launch;" October 10, 2022.
- 6 [Atlantic Council](#), "Can FedNow bring the US closer to real-time payments?;" May 19, 2023.
- 7 [Finextra](#), "Money20/20 US: CFPB to finalise US open banking rule by 2024;" October 25, 2022.
- 8 [FinTech Futures](#), "Payments Canada further delays launch of real-time payment system;" June 15, 2023.
- 9 [Monetary Authority of Singapore](#), "Singapore and Thailand Launch World's First Linkage of Real-time Payment Systems;" April 29, 2021.
- 10 [Bangkok Post](#), "PromptPay now linked to DuitNow;" June 19, 2021.
- 11 [SALTEDGE](#), "Doors wide open for Open Banking in the Middle East;" March 20, 2023.
- 12 [Electronic Payments International](#), "Saudi Payments unveils instant payment system in tie-up with IBM, Mastercard;" April 22, 2021.
- 13 [Open Banking Expo](#), "UAE's central bank to issue CBDC and launch instant payments platform;" February 14, 2023.
- 14 [AfricaNenda SIIIPS Report](#); October 25, 2022.
- 15 [Iupana](#), "These are the Latin America's instant payment systems;" February 13, 2023.
- 16 [Bexs](#), "Nexus, international Pix and cross-border ecommerce in 2023;" April 4, 2023.
- 17 [BIS](#), "Enabling instant cross-border payments;" March 2023.
- 18 [Central Banking Institute](#), "BIS to trial Asian instant payments link;" March 24, 2023.
- 19 [Ibid](#).
- 20 [Atlantic Council](#), "Central Bank Digital Currency Tracker;" Accessed on July 22, 2023.
- 21 [SWIFT](#), "CBDCs interoperability: 5 key takeaways from our ground-breaking experiments;" November 24, 2022
- 22 [European Commission Payment Services](#), Accessed July 2023.
- 23 [BRC](#), "CARDS NOW ACCOUNT FOR MORE THAN FOUR IN EVERY FIVE POUNDS SPENT;" September 21, 2021.
- 24 [The Economic Times](#), "After UPI, now credit cards overtake debit card transactions;" June 13, 2023.
- 25 [Inc42](#), "Record-Breaking Numbers of UPI In 2022 Hint At India's Maturing Digital Payments Ecosystem;" January 6, 2023.
- 26 [Indiatimes](#), "From Nepal To UAE-List Of Countries That Have Been Adopting India's UPI For Payments;" November 23, 2022.
- 27 [Inc_42](#), "Record-Breaking Numbers of UPI In 2022 Hint At India's Maturing Digital Payments Ecosystem;" January 6, 2021.
- 28 [Business Standard](#), "Credit card linkage to UPI: Uncertainty over pricing leaves players in dark;" June 11, 2022.
- 29 [Visa](#), "Ten months, one billion tap-to-pay transactions on public transit;" September 21, 2022.
- 30 [Lending Tree](#), "How much credit card debt do Americans have?" June 21, 2023.
- 31 [Payments Dive](#), "Profits slip for Amex, Discover;" April 21, 2023.
- 32 [Reuters](#), "Intesa sells 584 mln euro Nexi stake at 11% discount;" November 15, 2022.
- 33 [Reuters](#), "JP Morgan signs deal for stake in fintech Viva Wallet for over \$800 million;" December 18, 2022.
- 34 [PYMNTS](#), "Fifth Third Increases Healthcare Focus With Big Data Purchase;" March 8, 2023.
- 35 [Bloomberg](#), "Brookfield to Buy Network International for £2.2 Billion;" June 9, 2023.
- 36 [Reuters](#), "Credit Agricole and Worldline plan French payments business;" April 19, 2023.
- 37 [Standard Chartered](#), "Standard Chartered partners Worldpay from FIS to accelerate global expansion of Straight2Bank Pay;" May 16, 2023.
- 38 [PYMNTS](#), "HSBC Will Roll Out BaaS Platform;" October 19, 2021.
- 39 [Skift](#), "American Express Taps Microsoft AI for New Expenses Tool;" February 9, 2023.
- 40 [PYMNTS](#), "HSBC Teams With Extend to Offer Virtual Cards;" December 14, 2022.
- 41 [Yahoo Finance](#), "Marqeta Announces Integration with Mastercard Track Instant Pay Virtual Card Solution;" December 7, 2022.
- 42 [PYMNTS](#), "HSBC Teams With Extend to Offer Virtual Cards;" December 14, 2022.
- 43 [The Jakarta Post](#), "Companies with negative cash flow could double in 2023: S&P report;" December 12, 2022.
- 44 [Bloomberg](#), "Corporate America's Earnings Quality Is the Worst in Three Decades;" March 1, 2023.
- 45 [CNBC](#), "Corporate bankruptcies and defaults are surging – here's why;" June 24, 2023.
- 46 [The Wall Street Journal](#), "Rising Rates Boost Companies' Focus on Working Capital Management;" November 3, 2022.
- 47 [JP Morgan](#), "Working Capital Index Report 2022;" July 2022.
- 48 [IIS](#), "Cash forecasting and working capital made easy;" January 11, 2023.
- 49 [Coupa](#), "Telenor leverages Coupa to effectively manage \$5 billion in spend;" Accessed on July 12, 2023.
- 50 [Stripe](#), "Stripe launches Stripe Treasury in major expansion of financial services offering for platform partners;" December 3, 2020.
- 51 [The Paypers](#), "Global banks to spend USD 57 bln on legacy payments technology in 2028;" June 15, 2023.
- 52 [Goldman Sachs](#), "How We Built our Digital Transaction Bank—in 2 Years;" Accessed July 14, 2023.
- 53 [Flow](#), "Doing more with less;" April 26, 2021.
- 54 [FinTech Futures](#), "HSBC launches new BaaS offering with NetSuite;" October 21, 2021.
- 55 [DBS RAPID](#), "Highly customisable business banking API solutions;" Accessed July 14, 2023.
- 56 [Finextra](#), "Deutsche Bank and FinLync enable real-time treasury for corporates;" May 20, 2022.
- 57 [Goldman Sachs](#), "The embedded finance journey: Innovation that differentiates the customer experience;" Accessed July 15, 2023.
- 58 [FinTech Futures](#), "Goldman Sachs and Modern Treasury partner for embedded payments initiative;" September 16, 2022.
- 59 [The Asset](#), "DBS teams up with FinLync on automated treasury functions;" September 21, 2022.
- 60 [Business Wire](#), "Citi Launches Citi@ Virtual Accounts;" September 25, 2018.
- 61 [Citi](#), "Citi's Institutional Virtual Accounts Usage Increases Significantly with Global Clients;" November 10, 2022.
- 62 [Swiss Bankers Association](#), "The Deposit Token;" March 14, 2023.
- 63 [Ledger Insights](#), "How banks are eyeing deposit tokens for B2B payments;" April 6, 2023.
- 64 [Kyriba](#), "Enterprise Liquidity Management;" November 2021.
- 65 [The Banker](#), "Standard Chartered launches B2B marketplace for SMEs;" June 30, 2023.
- 66 [FinTech Futures](#), "Societe Generale taps Lemonway for B2B marketplace payment services;" April 11, 2023.
- 67 [Deutsche Bank](#), "Deutsche Bank launches green deposits for its corporate clients;" March 31, 2021.
- 68 [Citi](#), "Citi Launches New Deposit Solutions to Support Clients' Sustainability Agenda;" May 25, 2022.
- 69 [WSJ](#), "New Green Deposit Programs Let Companies Bank on ESG;" July 17, 2023.
- 70 [ESG Today](#), "Societe Generale Rolls Out Sustainable Receivables Financing Solution to SMEs;" November 29, 2022.
- 71 [Bloomberg](#), "Sleeping' ESG Loans Are a Worrying Trend, BNP Says;" August 25, 2022.

Visit the report website



For more information, please contact:

payments@capgemini.com

For press inquiries, please contact:

Fahd Pasha

Capgemini Financial Services

Tel.: +1 647 860 3777

fahd.pasha@capgemini.com