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The 2023 McKinsey Global Payments Report

On the cusp of the next payments era: Future opportunities for banks

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Introduction

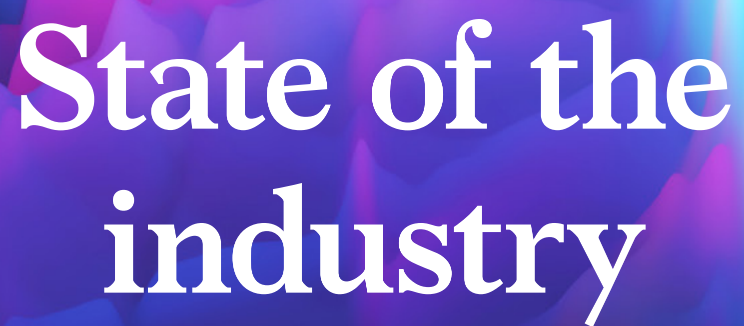
The 2023 McKinsey Global Payments Report shines a light on a changing industry and explains how banks and others can capitalize on new dynamics. The analysis is based on McKinsey's Global Payments Map, covering more than 25 payment products in 47 countries, accounting for 90 percent of global GDP.

We begin by assessing the state of the industry. A close look at the industry's revenues highlights emerging changes in geographies and products, as well as developments in instant payments and digital wallets. Next, we look at valuations and find that payments players have re-gained a degree of investment confidence. Among this year's findings are the following:

- Global payments revenue grew by double digits for the second year in a row.
- Sustained growth in India, fueled by cash displacement, moved it into the top five countries for payments revenues.
- For the first time in several years, interest-based revenue contributed nearly half of revenue growth.
- Cash usage declined by nearly four percentage points globally in 2022. Over the past five years, the growth rate for electronic transactions has been nearly triple the overall growth in payments revenue.

A historical view provides a picture of the progress the industry has made. From its early days to the present, the payments sector has already been through three distinct eras. The evidence suggests the industry may be on the verge of a fourth era, which we interpret as an era of "de-coupling."

The industry's transition from the Account Era to the Decoupled Era presents concrete opportunities for banks and other payments players to differentiate. In our final section, we offer perspectives on two distinct paths that banks and payments players more broadly can follow to solidify their competitive position in the payments industry: finding new opportunities to scale business impact and doubling down on improvements to productivity and risk management.



State of the industry

State of the industry

The payments industry's 2022 performance, in terms of revenues and valuations, shows ongoing change with opportunities for growth and margin improvement across geographies and products. A close look at revenues uncovers some structural changes, including new developments in instant payments and digital wallets. Also, recent public company returns suggest investors may be regaining confidence following the volatility of 2020–22.

Revenue results highlight the industry's resilience and future direction

Globally, payments revenues proved remarkably resilient, overcoming a variety of regional headwinds to grow at rates well above the established long-term trend. Payments revenues grew at 11 percent in 2022—a double-digit rate for the second consecutive year—reaching more than $2.2 trillion, an all-time high (Exhibit 1).

Revenues by geography: Broad-based gains

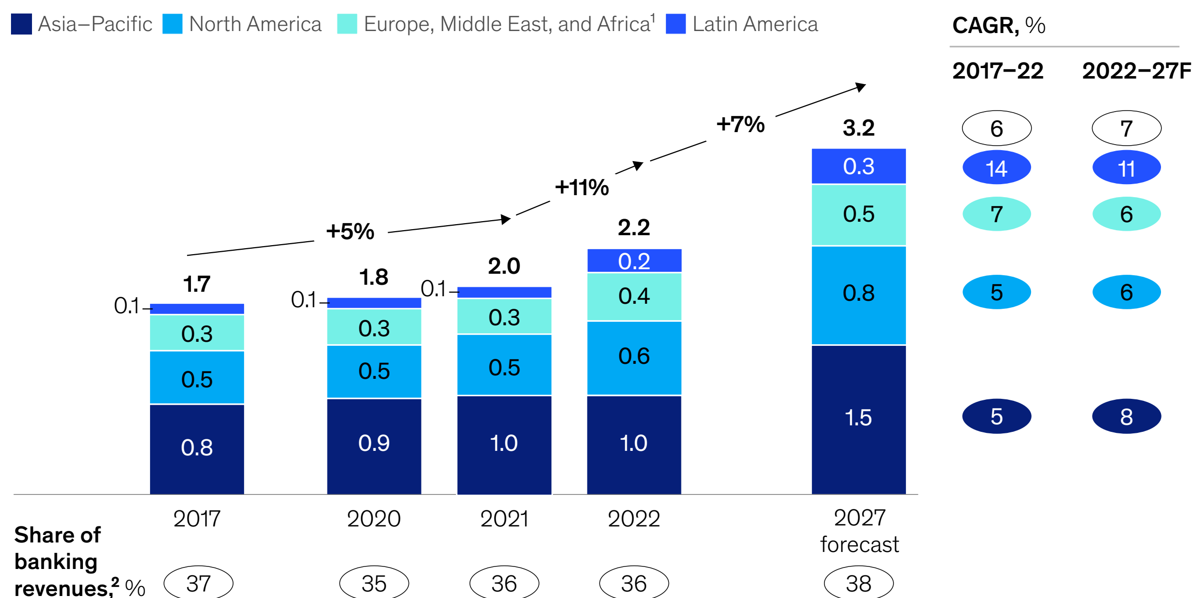
Revenue growth was broadly distributed geographically, with three of the four regions posting their strongest increases in a decade. North America; Latin America; and Europe, the Middle East, and Africa (EMEA) all grew at double-digit rates.

The exception to this trend is Asia–Pacific. In recent years, this region, which accounts for 47 percent of global payments revenues, has served as the primary growth vector. But in 2022, regional revenues rose just 4 percent,

Exhibit 1

Global payments revenues grew by 11 percent in 2022.

Global payments revenues, 2017–27F, $ trillion



Note: Figures may not sum to totals, because of rounding.
[1]Russia revenues kept flat after 2021.
[2]Total banking revenues excludes capital markets and investment banking (CMIB) revenues.
Source: McKinsey Global Payments Map

as a result of a 3 percent decline in payment revenues in China. Excluding China, however, the Asia–Pacific region grew at 25 percent—faster than in 2022.

Broadly speaking, the economies with the largest payments revenue pools delivered growth at or above the mean, contributing to 2022's strong result. This list, which includes Brazil, India, Japan, and the United States, posted solid results in both interest and fee-driven revenues.

A key factor in China's results was the 5 percent decline in transactional fee revenue. It fell to $255 billion as a result of smaller ticket sizes on card transactions and fee concessions implemented by payments providers to spur small and medium-size enterprise (SME) activity and counteract the COVID-19 macroeconomic shock.

By category, interest outpaced fees, and commercial maintained a lead over retail

In many markets, about half of 2022's revenue growth came from rising interest rates, interrupting a long-standing trend in which fees were the main source of growth. The shifting interest rate environment had the greatest impact on the EMEA region, where net interest margins jumped markedly, reversing a trend of the past decade. EMEA's transaction-based revenue continued to grow at a steady pace (5 percent in 2022), while net interest income's (NII) share of total revenues rose from 33 percent to 45 percent in a single year, bringing it closer in line with other regions.

Another way to understand payments revenues is by customer segment (commercial and consumers) and the products that the industry delivers to each (Exhibit 2). The mix has been subtly but persistently tilting toward commercial across all regions for some time. Overall, commercial now accounts for 53 percent of revenues and consumer 47 percent. This proportion varies from region to region. Commercial revenues have long predominated in Asia–Pacific and EMEA. Consumers still generate the majority in North America (63%) and Latin America (54%), where markets remain mostly card driven.

Cross-border payment dynamics were particularly robust. Flows reached about $150 trillion in 2022, a 13 percent increase in a single year. This money movement generated an even greater increase in cross-border revenues, which rose 17 percent to $240 billion. Revenues from cross-border consumer payments—both C2B and C2C—increased at double-digit rates, accelerating from high single digits in 2021. Conversely, both forms of commercial payments (B2B and B2C) grew by 10 percent, somewhat slower than 2021's postpandemic surge.

The United States–Latin America corridor remains the largest for C2C remittances, representing 11 percent of the total value of such flows. Central America has been an increasingly relevant destination for remittances and humanitarian aid from the United States.[1]

While B2B remains the primary driver of cross-border revenue (69 percent of the total), the consumer categories carry higher margins and are projected to grow more rapidly over the next five years. Much of the growth is expected to be in C2B, related to increased travel and e-commerce spending. We discuss this opportunity further in the last section.

Future revenue growth: Instant payments and digital wallets on the rise

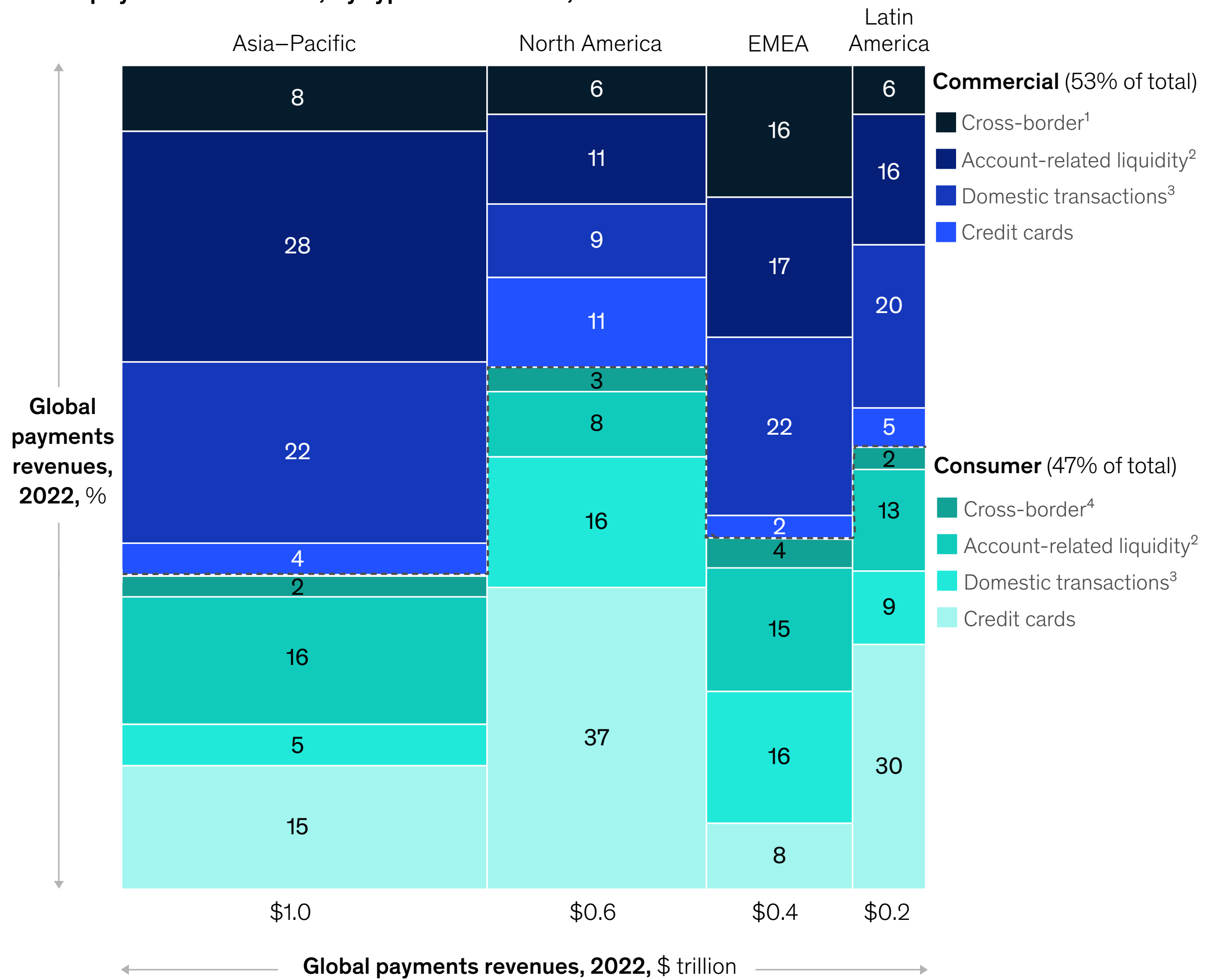
Our analysis suggests that future revenue growth will likely be stimulated by instant-payments innovations and the rise in digital wallets in certain geographies. The increase in electronic payments transaction volumes has consistently outpaced payments revenue growth (17 percent versus 6 percent) over the past five years. This is indicative of the continuing evolution in payments preferences, a general migration toward lower-fee instruments, and the gradually declining margins that accompany scale.

[1] "Fact sheet: Update on the US strategy for addressing the root causes of migration in South America," The White House, February 2023.

Exhibit 2

Liquidity revenues in 2022 accounted for $750 billion globally, largely driven by Asia–Pacific.

Global payments revenues, by type and location, 2022



Note: Figures may not sum to 100%, because of rounding.
[1]Cross-border payment services (B2B, B2C).
[2]Net interest income on current accounts and overdrafts.
[3]Fee revenues on domestic payment transactions and account maintenance (excluding credit cards).
[4]Remittance services and C2B cross-border payment services.
Source: McKinsey Global Payments Map

These dynamics are also evident in cash displacement. Cash usage declined by nearly four percentage points globally in 2022. Worldwide, the decline in cash usage during the pandemic shows no evidence of being reversed, led downward by the cash-reliant economies of India and Brazil, where the share of cash transactions fell by seven to ten percentage points. Brazil's cash declines are concurrent with the rapid uptake of the country's Pix instant-payments network.

A similar transformation is taking place on a smaller scale in Nigeria, where instant-payments capabilities are being built into point-of-sale devices to facilitate merchant enablement. Nigeria's share of cash transactions fell from 95 percent in 2019 to 80 percent in 2022. Over the same period, instant payments' share quadrupled to 8 percent.

Instant payments are playing a key role in this transition out of cash. In Brazil, almost half of the transactional revenue growth through 2027 is expected to come from instant payments. Yet in other places, revenue growth from instant payments could be meager. Instant payments in India are expected to contribute less than 10 percent of future revenue growth because no fees are currently charged for the Unified Payments Interface (UPI). Conversely, in several European countries such as Germany, instant payments are perceived as a premium option, resulting in relatively strong potential for revenue growth.

By 2027, cash-heavy developing economies to make further significant shifts toward instant payments, bringing these transactions' share to roughly half of overall payment transactions—nearly two-and-a-half to three times greater than in 2022. By contrast, our analysis indicates that near-term impact in mature markets such as the United States and United Kingdom will be nominal. Instant payments remain in a nascent stage in the United States, where 2022's cash decline was more muted following 2021's pandemic lockdown-related reduction. July 2023's launch of the Federal Reserve's FedNow real-time payment rails may prove to be an inflection point, but the effect will be gradual.

Our sidebar on the Indian market ("India's embrace of digital payments") offers a valuable case study of payments evolution and its role in a strongly growing economy, with particular lessons for cash displacement and instant payments adoption.

India's embrace of digital payments

The volume of India's digital payments has grown tenfold over the past five years and is projected to grow at roughly 35 percent per year over the next five. The vast majority of these new digital transactions are the result of cash displacement and, in recent years, have migrated directly to instant payments on the Unified Payments Interface (UPI) network. UPI's share of digital transactions has risen from 8 percent in 2017 to nearly 75 percent in 2022. Notably, credit cards also contributed to the growth of digital payments, registering double-digit growth.

Although UPI generates minimal transaction fees, these revenues still represent an uplift from no-fee cash events, and the paperless process eliminates the hidden costs of managing cash transactions. Additionally, the associated change in consumer behavior has enhanced security and increased access to digital commerce channels. Arguably, the shift to a digital-payment mindset with credit-led benefits may help explain increases in India's credit card usage as well.

India payments revenues have risen by an average of 12 percent over the past five years, reaching $64 billion in 2022, when they grew by 38 percent. India has pulled even with Japan as the fourth-largest payments-revenue-generating country—behind only China, the United States, and Brazil, and ahead of mature economies including the United Kingdom, Germany, Canada, and Italy.

Looking forward, the Indian payments ecosystem faces headwinds similar to those in other markets. Regulatory mandates may result in increased costs, and fintech players are opening new competitive battlefronts through adjacent payment propositions such as credit offers at the point of sale.

Despite all this, India has a unique opportunity among large payments economies to continue digitizing a significant cash base. The share of cash transactions is projected to fall from 82 percent in 2022 to 34 percent in 2027. The solid majority of these will migrate to UPI's instant-payment rails, which—assuming a continuation of current government policy—will drive minimal direct revenue uplift. However, continued gains in credit card penetration and usage, as well as even stronger growth in digital commerce, offer significant untapped pockets of revenue, particularly given the volumes involved.

We see India's ongoing payments revenue growth, which exceeds global averages, concentrated in a handful of cash-rich, high-friction pockets (exhibit). The majority of these are consumer initiated to businesses (where point-of-sale transactions show healthy growth along with digital) as well as to other consumers. The sheer volume and digitization opportunity in the B2B space is too large to overlook. There is ample room for banks to pursue various use cases depending on their specific core competencies and strategic priorities.

Exhibit

India's payments market has several cash-rich pockets.

Number of payment transactions, 2022 and 2027F, billions

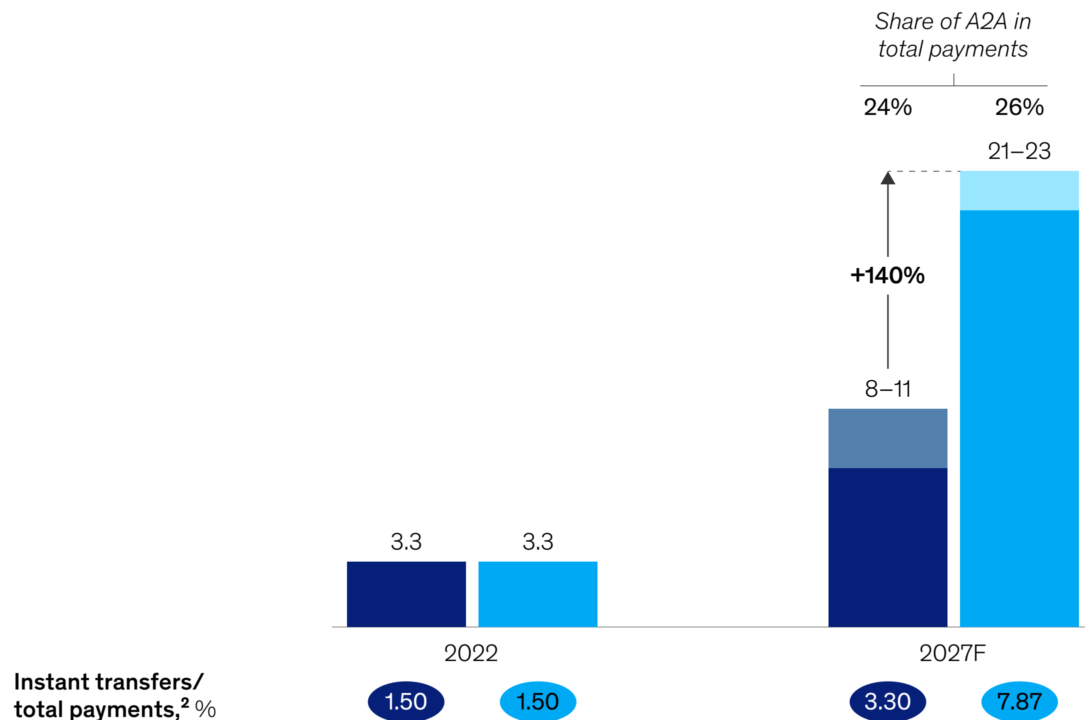
Source: McKinsey Global Payments Map

The story varies from country to country, but the developments in Europe are worth a second glance. Today, instant payments currently constitute 12 percent of the credit transfer volume in the Single Euro Payments Area (SEPA) (Exhibit 3). Absent regulatory intervention, this share could double by 2027; however, if regulators proceed with anticipated actions to encourage adoption, this share could rise to 45 percent of SEPA's 23 billion annual transactions and a far higher share of account-to-account (A2A) payments, including transfers done through automated clearing house (ACH), real-time gross settlement (RTGS), and instant payments.

Digital wallets, the source and destination of much of the flow in instant payments, are similarly booming. Several business models are taking shape in different parts of the world. In several African countries (Kenya, Ghana, and Tanzania, for instance), mobile-wallet infrastructure is ubiquitous and interoperable. Nigeria's Central Bank spurred uptake by pushing a "cashless economy" during a note-change process in early 2023. Demand for digital payment solutions has spiked among Nigerian merchants of all sizes. One acquirer reports that 70 percent of the new merchant customers haven't previously accepted digital payments—a clear indicator of expanding network effects.

Exhibit 3

If new favourable regulations are issued, as anticipated, instant payments volumes could double the current forecast for 2027.



[1]Estimate for selected countries: Austria, Belgium, Finland, France, Germany, Greece, Italy, Netherlands, Portugal, Slovakia, Slovenia, and Spain.
[2]Total payments includes transactions made through cash, checks, cards, and A2A in the Eurozone.
Source: McKinsey Global Payments Map; McKinsey estimates

Valuations: Signs of stabilization, with differentiated performance by sector

Following strong performances in 2020 and the first half of 2021, during which time payments companies delivered more than 50 percent total shareholder returns, and the "capital market reset" spanning the second half of 2021 and first half of 2022, when the same companies delivered a 60 percent negative TSR,[2] recent market valuations suggest that payments players have regained a degree of investor confidence.

Publicly traded payments companies overall delivered 13 percent TSR from September 2022 to August 2023, in line with the overall market and above the broader banking industry's 6 percent,[3] despite the shifting interest rate environment, which primarily benefits banks.

Our analysis of 33 listed payments companies globally is divided into incumbents (20 companies) and newer "attacker"[4] firms (13 companies). Attackers' valuations took the larger hit in 2022 (–62 percent TSR for the year) but performed on par with incumbents for the 12 months through August 2023. Notably, the attacker group's recovery had exceeded 20 percent until mid-August when adverse market news reversed some of those gains.

Recent market valuations suggest that payments players have regained a degree of investor confidence.

Despite the rebound, payments companies' share prices remain well off the highs established in 2021. Investors may be expecting both groups to continue refocusing on fundamentals in order to align with the changed macroeconomic environment. While investors' revenue growth expectations for payments companies moderated to 10 percent for 2022–24 (versus 17 percent for 2020–22), EBITDA margin expectations increased from 35 percent in 2022 to 41 percent in 2024, reflecting the greater focus on profitability. Meanwhile, the average EBITDA multiple of 18 times is the same as measured in August 2022.

Incumbents' performance has varied by segment over the past 12 months. Payment scheme providers fared best of the four segments tracked, producing TSR of 25 percent. B2B payments specialists (companies specializing in fuel cards, accounts-receivable financing, and similar offerings) also delivered positive returns (9 percent TSR), driven by double-digit revenue growth expectations and margins anticipated to significantly improve to 47 percent in 2024. By contrast, infrastructure providers (such as processors and merchant acquirers) produced the lowest returns (–17 percent), driven by a reduction in revenue growth expectations. Traditional cross-border specialists (essentially money-transfer operators) were also in negative territory (–9 percent TSR), reflecting shrinking revenues and low margins.[5]

[2] Please refer to the 2022 Global Payments Report for a deep dive on the capital markets performance by payments companies between 2020 and the first half of 2022.
[3] "Overall market" includes the top 5,000 companies globally by market capitalization. "Broader banking industry" includes banks within this overall market.
[4] Attacker payments players defined as businesses established less than 15 years ago and with a business and operating model characterized by "disruptive" attributes either in terms of products (for example, e-commerce acquiring only, issuing of non-physical cards, payments as a service), distribution channels (for instance, partnerships with e-commerce/tech players), or technological infrastructure (for example, cloud-based data centers). Thirteen companies included in sample.
[5] Data in this paragraph is based on analyst consensus figures taken from McKinsey Corporate Performance Analytics.

Positioned for growth

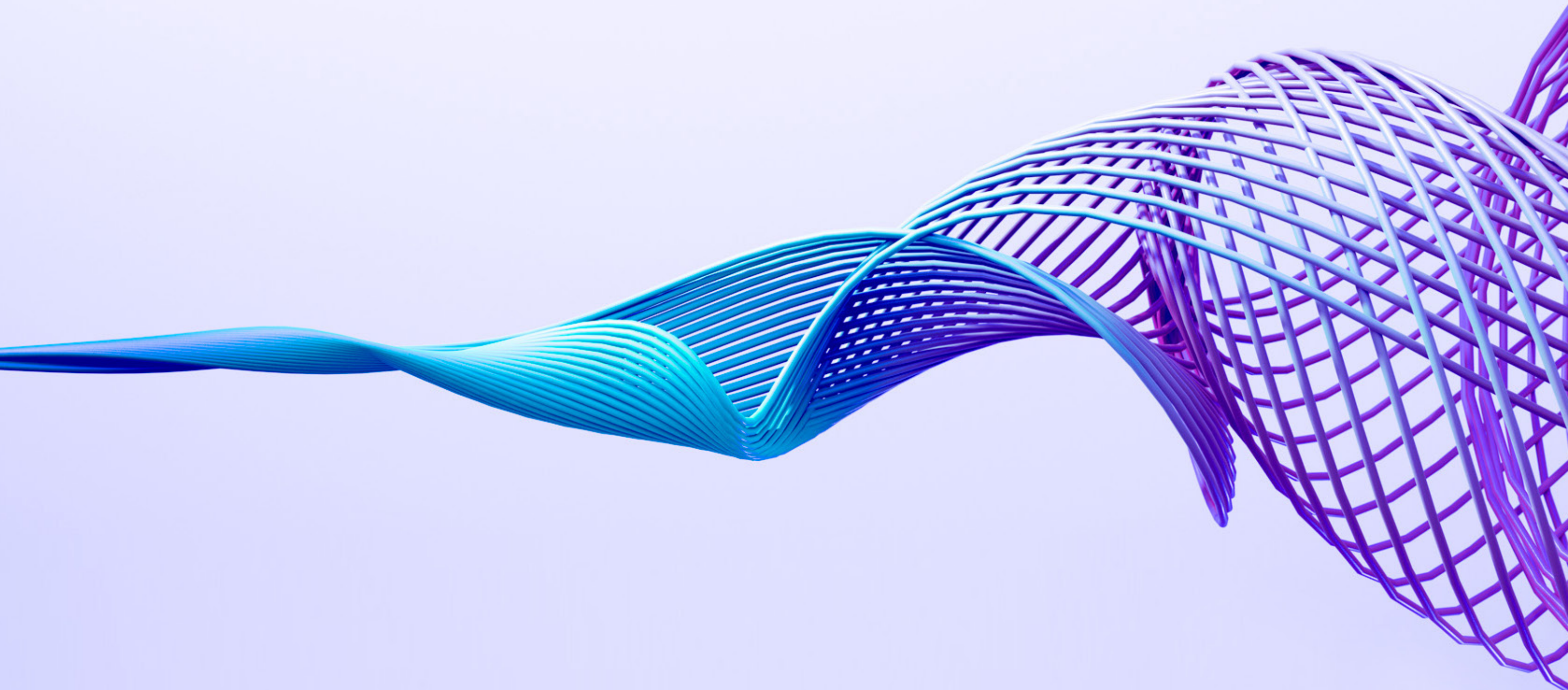
Overall, the payments industry's 2022 revenue and valuation growth are consistent with optimism about the future. Our analysis indicates that the five-year outlook is strong, with likely revenue growth of 6 to 8 percent. The opportunities will likely be widespread: all four regions are projected to expand at an annual average of 6 percent or higher. Fee-based revenue growth is forecast to return to slightly exceed interest-based contributions, and global electronic transaction volumes may continue to grow (15 percent in this case) at rates exceeding revenue. Although these interest rate effects may moderate in the coming years, the market remains on pace to exceed $3 trillion in payments revenue by 2027.

Last year was a good one for the payments industry worldwide, and the five-year outlook is strong, with significant opportunities in all four regions. However, while growth expectations remain positive, investors are still reassessing their view of the sector in the capital markets, following the ups and downs of 2020–22. To withstand the scrutiny, companies will benefit from keeping up with the technological transformation sweeping payments, as described in the next section, to enhance the profitable nature of the projected revenue growth.

The market remains on pace to exceed

$3 trillion

in payments revenue by 2027.



Entering a new payments era

Entering a new payments era

During the past few decades, the payments industry has rapidly embraced new technologies, in the process opening new avenues to serve customers. The industry has already been through three distinct eras dominated, in turn, by paper, plastic, and account transactions. Signs point to a fourth era starting in the present decade: we call it the Decoupled Era.

How we got here

The $3.2 trillion in revenue that McKinsey Global Payments Map projects for 2027 is aligned with the projection we made in last year's edition of this report[6] ($3.0 trillion in 2026). However, the mix of revenue sources is evolving. Cash usage has been declining rapidly, losing 20 percentage points in the share of global payments over the past five years. Net interest margin is driving a greater share of growth, and companies are moving into less penetrated areas of the payments value chain—for instance, low-value cross-border payments, business payments, and instant domestic transfers.

All of this suggests the industry may be on the cusp of a new payments era[7]—and not for the first time (Exhibit 4). People have seemingly always needed technologies to make payments. For the longest time—arguably since bills

[6] *The 2022 McKinsey Global Payments Report*, McKinsey, October 2022
[7] For more, see "On the cusp of a new era?," McKinsey Global Institute, October 20, 2022.

Exhibit 4

Changes in the payments ecosystem have ushered in four eras of payments business models.

Timeline

1960 1970 1980 1990 2000 2010 2020

	Paper Era: Pre-1960s	Plastic Era: 1960s–90s	Account Era: 1990s–2020s	Decoupled Era: 2020s
Transactions	Cash, checks, and wire transfers	Cash, checks, wire transfers, and physical cards	Instant transfers, A2A, and virtual cards	Interoperable and open, platform, and decentralized
Sources of economic differentiation	Balances and deposits	Transaction fees	Relationships and transfer fees	Convenience, security, and low fraud incidence
Distribution channels	Physical (eg, branches)	Physical and ATMs	Physical, ATMs, online, mobile, and digital wallets	Physical, ATMs, online, mobile, embedded, and metaverse
Technology	Telegram	Automated clearing house (ACH)	Applications and instant payments	Platform as a service (PaaS), tokenization, generative AI, and open/API banking

Source: McKinsey analysis

of trade were used in the Middle Ages or even earlier, when Chinese emperors introduced notes—transactions were made on paper.

Modern payments began roughly in 1950 with a cardboard Diners Club card accepted by 28 restaurants in New York City and two hotels. Card issuers soon ditched the cardboard; the Plastic Era took off in earnest starting in the 1960s. Cards spawned new payments opportunities and new sources of revenue from transaction fees, such as ATM and guarantee cards.

The Plastic Era then gave way to the Account Era, where we find ourselves today, when plastic is no longer required to access funds or transfer money between accounts. We peg the start of the Account Era to the emergence of the online world at the end of the last century. Internet and mobile technologies made it possible for users to direct funds from their accounts, repurposing infrastructure such as automated clearing houses.

Another notable shift in the account era has been the emergence of new players in the form of fintechs and telcos (as wallet providers), which provide easier, cheaper, and instant transfers, driving transaction volumes in both consumer and commercial segments. However, fintechs recently have had to adjust to lower valuations and an equity market less willing to fund growth at the expense of margins, leading traditional banks to reassert their role in the payments ecosystem. Bank response strategies have ranged from payments carve-outs, as when banks have established merchant payments businesses, to the building of defensible propositions from within.

As the world has moved from paper to plastic to accounts, a few observations warrant highlighting. For one, older payment mechanisms don't disappear but simply decline in usage. For another, each successive era has leaned harder into technology, requiring established institutions to undertake extensive retooling and creating openings for disruptive competition. Third, payments have become more embedded into customer shopping journeys and business activities, which makes payments increasingly important to users as they search for convenience and utility. Finally, each era has seen more companies entering the market, including banks, infrastructure and payment schemes, and today's specialists and fintechs.

The Decoupled Era

Today, the industry may be on the verge of a new era. We call it the Decoupled Era because payments may be increasingly disconnected from accounts and other fixed repositories of value. Users will have an even greater voice than in the Account Era as they seek convenience, affordability, and security. The Decoupled Era is also shaping up to be even more reliant on technology—but with the winning technologies yet to be determined. Contenders include models that will transition to platform as a service (PaaS), serving smaller providers unable to build across the value chain and providing a seamless transition across products and services for clients; generative AI, which will further personalize client experiences, streamline payments processes, and protect against fraud; and decentralized and highly interoperable technologies such as tokenization, further reducing the need for a central agent.

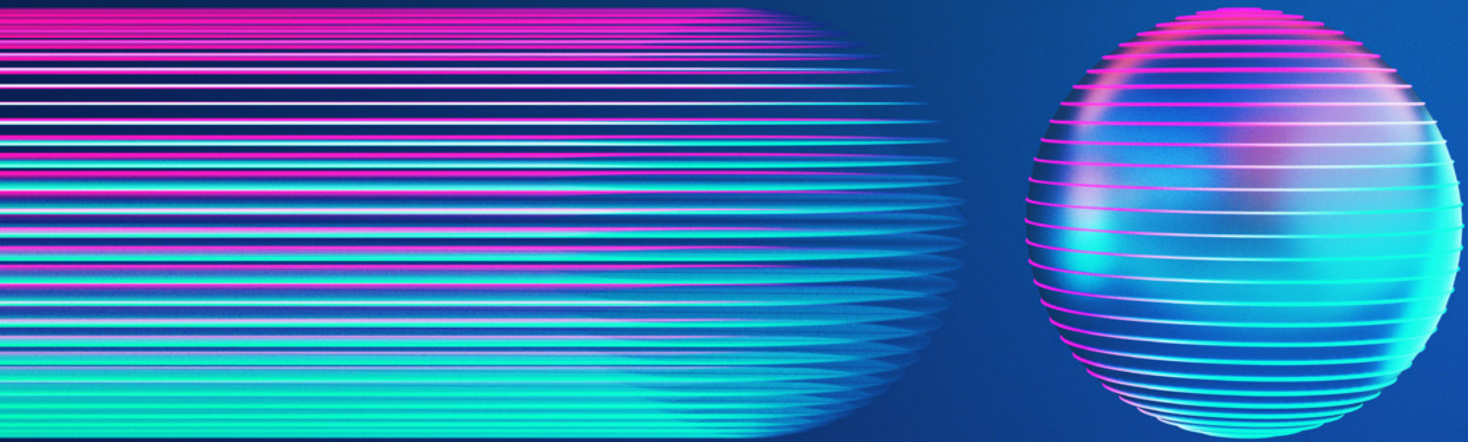
Some new players may emerge in the Decoupled Era, and archetypes of existing players will morph as well. Fintechs, having pivoted their business models toward sustainability, will likely either move further into traditional financial services or aggressively pursue partnerships to fulfill client needs. Banks in turn will likely seek more independence and control across the value chain, which may take the form of partnerships or M&A activities. Payments infrastructure players could take a proactive approach to portfolio strategy to secure positions in the higher-value businesses, and telco players could diversify from traditional mobile money offerings to become broader platform-based digital finance enablers. As a result, competition for client deposits and balances will likely intensify in the Decoupled Era in tandem with heightened pursuit of client relationships. Returns may accrue to players able to seamlessly integrate payments into client lifestyles and behaviors. Embedded finance will become the standard.

As the Decoupled Era begins, the business models, solutions, and firms of the Account Era remain relevant, but new opportunities are emerging for actors willing to explore fresh areas of growth. As we saw earlier, equity markets are treating banks and nonbanks more evenly than in recent years, affording banks a renewed opportunity to invest in growth. We expect the shift from a "grow at all costs" to a "resilience" mindset to continue for the near to medium term. Emerging trends point to an acceleration of M&A activities, especially of smaller rivals or of carved-out operations of incumbents, as well as strategic partnerships and expansions to take place. In particular, payments infrastructure operators may be willing to adopt a proactive corporate portfolio strategy in order to maximize scale in high-value businesses (such as merchant acquiring) while shedding underperforming or value-diluting activities.

In the Decoupled Era, banks will no longer be able to rely solely on the account ownership paradigm. They will need to build new businesses to keep clients within their service ecosystem. The transformation will require technology changes in the form of core modernization and the application of generative AI. Furthermore, because the independent actors in decentralized systems pull toward their advantage, banks and nonbanks will experience a heightened need for security as avenues for fraud and financial crimes increase. We explore some of these issues in our next section.

In the Decoupled Era, banks will no longer be able to rely solely on the account ownership paradigm. They will need to build new businesses to keep customers within their service ecosystem.

Emerging opportunities for banks



Emerging opportunities for banks

The transition from the Account Era presents concrete opportunities for banks to differentiate. These fall into two distinct categories in which banks can solidify their competitive position in the payments industry. The first involves finding new opportunities to scale business impact, including new digital businesses and the opportunity in deposits. The second concerns ways that banks can double down on productivity through generative AI, the modernization of technology, and the ongoing battle to prevent financial crime.

Building new digital businesses

Given that payments has become a technology business, building new digital businesses is a logical path to growth for incumbents and new entrants alike. Opportunities are especially appealing in B2B markets because retail markets are already relatively well served by digital payments platforms. In the past, building new B2B digital payments platforms hasn't been easy (corporate and commercial clients have been reluctant to pay for such services in the past), but banks have offered them as a vital lifeline to these valuable customers. Today, macroeconomic changes might offer new hope for digital B2B payments platforms that can stand on their own two feet.

For those seeking new business opportunities, three areas stand out for their growth potential: cross-border payments, financial supply chain alternatives for SMEs, and embedded finance. As leaders consider their options, a pragmatic approach is to stay close to the customer and to focus on existing strengths,[8] rather than acting like a start-up.

Cross-border payments

Traditional cross-border specialists (specifically money-transfer operators) performed well below the market average between 2017 and 2022. Yet, while their business model is under stress, opportunities exist in key segments. B2B trade continues to fuel two-thirds of cross-border payments revenues and has grown at a healthy clip, but the C2B category ($35 billion revenue) is growing most rapidly (by 70 percent in 2022) and offering several promising use cases.

Another clear trend includes B2B: growing lower-value cross-border payments, which are generating new revenue dynamics. SWIFT reports that for its SWIFT gpi solution, transactions with ticket sizes less than $1,000 have been increasing at a rate of nearly 300 percent since the platform's 2017 inception,[9] at least double that of other value categories. Even among the typically higher-value B2B payments flowing over SWIFT, 80 percent of those transactions are less than $100,000.

This makes low-value payments—those with ticket sizes less than $100,000 in consumer and SME segments—a significant opportunity for banks and nonbanks. Although low-value payments comprise 8 percent of cross-border payment flows, they account for roughly one-third of revenue because of extensive retail networks and higher margins. The majority of the low-value payments involve either B2B (still the lion's share via SME trade and one-off corporate payments), C2B use cases (travel; verticals such as healthcare, real estate, and education; and general e-commerce spending), or B2C (marketplace payouts, salaries, and social benefits) (Exhibit 5).

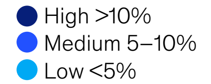
While banks are incumbent leaders in this space, a growing number of attacker fintechs are steadily progressing their positions. Additionally, banks and fintechs have formed partnerships to serve this market. With emergent

[8] Tomas Beerthuis, Ralf Dreischmeier, Tomas Laboutka, and Nimal Manuel, "A practical guide to new-business building for incumbents," McKinsey, June 21, 2023.
[9] Swift GPI: Driving a payments revolution, Swift, October 7, 2020.

Exhibit 5

Low-value payments use cases collectively account for about $12 trillion in global cross-border payment outflows.

2022 global low-value payments use cases, $ trillion



Counter-party	Use case	Average ticket size, 2022, $	Principal, 2022, $ trillion	CAGR, 2022–27F, low–high
B2B	SME trade	5,000–10,000	~6	Low
	SME nontrade payments	15,000–50,000	~2	Low
	All B2B	**7,000–12,000**	**~8**	Low
B2C	Dividends and interest payments[1]	500	~0.6	Low
	Marketplace payouts	1,500	~0.3	High
	Payroll	1,000–2,000	~0.2	Low
	Claims and 1-time disbursements	250	<0.1	Low
	Refunds	200	<0.1	Low
	Social benefits	350	<0.1	Low
	High-touch vertical payouts[2]	300	<0.1	Low
	All B2C	**500–1,000**	**~1.3**	Medium
C2B	Travel	~100	~0.8	High
	E-commerce	~100	~0.5	High
	Education	5,000–10,000	~0.2	Medium
	Healthcare	~5,000	~0.1	High
	Bill payments[3]	100	<0.1	Medium
	Loan repayments[4]	500	<0.1	High
	All C2B	**~1,000**	**~1.6**	High
C2C	**Remittances**	**300–1,000**	**~0.8**	Low

[1]Including only low-value payouts to individuals.
[2]Eg, legal, NGO.
[3]Eg, utilities, telco.
[4]Excluding real estate and including microloans via platforms.
Source: McKinsey analysis

action across full-stack players like Visa, Mastercard, and cloud- and API-based and clearing providers, as well as alternatives leveraging existing rails, the chessboards are sure to be rearranged over the coming years.

Financial supply chain alternatives

Pressure to digitize extends throughout the enterprise. With an uncertain economic environment and companies keeping less excess cash in operating accounts to maximize interest yield, leaders need better visibility into real-time account positions and access to efficient financing. Many of these needs reside in the office of the CFO. Banks have an opportunity to extend valuable automation and digitization services, embedding new functionality into their suite of financial offerings.

Start with the basics. Invoice standardization is a prerequisite to payables and receivables automation. The Factur X e-invoice initiative championed by France and Germany is one development. The steady growth occurring in the volume and complexity of invoices merely adds to the imperative. Cloud computing and the increasing acceptance of software-as-a-service (SaaS) alternatives are creating a path forward.

Banks, factoring specialists, and SME financing fintechs should assess their options. Some banks may consider partnering with others that can provide credit expertise; banks can bring their balance sheet to the table. Others can build their own solutions—for example, by using their merchant networks and current underwriting capabilities.

New moves in embedded finance

Embedded finance[10] is taking off, fueled by technology, especially by the possibility of exposing APIs that simplify the integration of payments products into any type of consumer journey. Nonfinancial firms with a history of creating strong digital experiences are becoming gateways to financial services for millions of consumers and businesses, while their bank partners enjoy expanded, low-cost distribution for their financial products.

How can banks break into the business? And how can those already in the game improve their position? We see four basic postures. Global and international banks might seek to build a **bank-owned embedded-finance business**, replicating and trying to outcompete challenger models to win business in segments where the legacy approach falls short or cannibalization seems a threat. Examples include installment repayment plans for standard credit card purchases such as American Express's Pay It, Plan It and Citi's Flex Loans.

Big banks can go another way and become **strategic partners** to retailers and other distributors. Banks choosing this stance typically have strengths in risk and regulatory management that distributors lack. They can contribute these skills and a fit-for-purpose embedded financial structure; distribution partners can focus on the digital experiences at which they excel.

Banks can also tap an area of expertise and become **specialists in a given product**, such as loans. Their vast experience in certain credit products and serving specific industry verticals can help them partner with distribution companies that have neither the licensing nor infrastructure to address these needs at scale.

Some smaller banks might choose a fourth path: becoming **providers of balance sheet and risk services**. Such banks might use banking-as-a-service (BaaS) platforms like Treasury Prime, Unit, and Bond to provide distribution partners with deposit and lending products. In this way, banks can gain access to new revenue streams while BaaS platforms expand their networks' deposit and lending capacity.

Deposits: A changed environment calls for new strategies

Deposits represent one of the most critical resources of any bank and one of the most important revenue streams for corporate transaction banks around the globe. However, several financial institutions have experienced significant deposit withdrawals and increasing market volatility in response to rising interest rates, credit restrictions, and liquidity gaps. As the banks attempt to capture and maintain their deposit base, investors are closely monitoring their resilience.

For several years, businesses and consumers have faced very little opportunity cost for retaining excess funds in current accounts. This changed rapidly as interest rates began to increase in late 2022 and further accelerated in 2023. North America saw money market rate increases of more than 2 percent, and balances migrated out of current accounts. Across other markets (for example, Singapore), consumers shifted idle money into savings accounts as central banks increased rates, causing declines in current-account deposits. In economies such as India and Indonesia, however, money market rates rose less dramatically, and current-account balances moderated but did not decline.

[10] Andy Dresner, Albion Murati, Brian Pike, and Jonathan Zell, "Embedded finance: Who will lead the next payments revolution?," October 13, 2022.

Deposits represent one of the most critical resources of any bank and one of the most important revenue streams for corporate transaction banks around the globe.

Corporate deposits generate 40 to 45 percent ($500 billion to $550 billion) of transactional bank revenues globally. Recent market events (with bank deposits falling by over $700 billion during the latter half of 2022[11]) and continuous pressure on banks to reduce fees have made deposits a primary area of competition for many banks. The shakeup of the financial market in March 2023, when Fed data shows that almost $100 billion in deposits were withdrawn during the week up to March 15,[12] has reignited the debate on how banks can maximize one of their most valuable resources.

In today's uncertain environment, where deposit growth has slowed and interest rates have risen significantly, achieving deposit growth requires challenging many of the traditional approaches. A current McKinsey analysis outlines how to achieve such growth:

— **Increasing client visibility into their liquidity** position using data lakes, dashboards, and key performance indicators

— **Establishing a Deposit Command Center** to coordinate, execute, and monitor the deposit growth effort

— **Mobilizing a specific deposit growth sales approach**, including resetting the focus of relationship managers and training staff to address evolving market realities

— **Enhancing value propositions for 'cash rich' client sectors**, identifying and pursuing pockets of excess liquidity

— **Leveraging advanced analytics** given the wealth of available records, both internal and external

— **Reinvigorating payments and liquidity management products** directly tied to operating accounts

— **Designing optimal pricing strategies** based on segments data and rapidly evolving analytic tools

Additionally, retail deposits continue to comprise 43 percent of current account balances and are therefore another important source of both liquidity and revenue—although the funds are, of course, spread across many more accounts and it is therefore difficult to apply the same granular approach. Both retail and corporate deposit balances grew nominally during 2022 in all regions but North America, and are projected to continue to do so over the near to midterm, even as net-interest margins drive the greater share of liquidity revenue growth. It does not follow, however, that all institutions will be affected equally. There will undoubtedly be banks registering deposit share gains and others enduring absolute deposit losses. Strategies taken today will help determine those who gain and those who don't gain.

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[11] Damian J. Troise, "Bank failures highlight declining deposits," Associated Press, March 30, 2023.
[12] Jeff Cox, "Nearly $100 billion in deposits pulled from banks; officials call system 'sound and resilient'," CNBC, March 26, 2023.

Three avenues toward better productivity

Banks can double down on productivity with strategic use of technology. Three measures relevant to the current state of technology are: identifying valuable applications of generative artificial intelligence, modernizing the bank's technology, and applying technology to the ongoing battle against fraud and crime.

Deploying generative AI in payments

Generative AI is taking the world by storm, and banks and other financial service providers can benefit significantly, as several emerging gen AI use cases seem particularly fitting. For instance, banking is stringently regulated, with thousands of pages of rules and documentation to sort through annually. Also, the industry has a huge number of customer-facing workers who must answer questions and generate ideas. Finally, the industry is already well embarked on digitization and could significantly benefit from gen AI's impact on software development. McKinsey Global Institute estimates that generative AI could further increase productivity in banking by 2.8 to 4.7 percent, equivalent to $200 billion to $340 billion in annual revenues.[13]

As regards the payments industry, we see four applications with the greatest potential:

— **Automating client operations.** Payments processes involve significant middle-office activity, much of which are quite complex in nature as they require some form of client interaction. Gen AI applications in this field span multiple areas of the payments business. For instance, it can draft technical documents such as account plans, commercial contracts, and requests for proposal that are key in the enterprise payments sales cycle. Gen AI can further automate recurrent activities in payments workflows, such as conducting regulatory checks for cross-border payments, analyzing terms in trade-finance contracts, and matching invoices to purchase orders. It can also be deployed in more sophisticated workflows, such as streamlining merchant onboarding by automating analysis of application documents and flagging merchants for human review where necessary. Massive deployment of gen AI applications is also expected on the retail payments front, as banks and PSPs can use the technology in post-sale customer care for card and digital wallet businesses. Gen AI also has a major potential role in combating fraud as we discuss below. For instance, it can optimize fraud-detection rules, identify high-priority incidents, and improve human analysts' efficiency by highlighting relevant information and recommending next best actions for case handlers.

— **Accelerating code development.** Despite efforts to modernize their technology in response to the ecommerce boom, many traditional payments companies still heavily rely on legacy systems written in COBOL. The 1960s–70s programming language remains the foundation for many bank systems yet is difficult to update for much-needed advancements such as migration to cloud. GenAI-based "code assistants" can facilitate bug detection, repair as well as user acceptance testing. They can also interpret legacy code, documenting the results and even rewriting it to make it more readable and testable. Indeed, gen AI is proving to be particularly effective in improving software engineering across the board and could represent a once-in-a-lifetime opportunity for banks payments companies to fill the technology gap against digital players.

— **Generating content.** Gen AI can improve marketing and promotional effectiveness by drafting and personalizing outbound customer communications—for example, in credit card marketing. It can also be useful in multimedia content generation, including prospect profiling, where the new tools can use public and internal information to identify and prioritize customers and targets for outreach.

— **Providing virtual expertise.** An always-on support bot can augment employee performance by supporting technical work and customer service. One leading player has built a virtual assistant based on GPT-4 which takes natural language queries from developers, reads detailed documentation, and provides answers based on relevant documents.

[13] "Industry impacts," *The economic potential of generative AI: The next productivity frontier*, McKinsey, June 14, 2023.

Companies' success will depend on a coherent strategy, documented in a value-based "road map" to use cases, and careful implementation. Differentiation will come from proprietary data and the ability to execute. Gen AI can be the catalyst to a larger transformation in AI and machine learning, but to do that successfully and capture the potential value, payments companies will need a multi-disciplinary digital transformation approach grounded in capability building, change management, and risk management. Given the potential of gen AI to alter the scope of jobs in key functions such as research, quality assurance, and engineering, new capabilities and talent will likely be required.

As we discuss next, deploying gen AI will require modernization of many pieces of the tech stack (including cloud platforms, model hubs, and apps), work that to this point may have seemed optional. In addition, a hybrid approach to infrastructure will be required given many actors in the space. Further, gen AI requires proactive risk management and organizations should be focused on how risks evolve. Gen AI is accelerating risk discussions around data privacy, IP protection, data security, bias, and so on. The ability to roll out gen AI at scale, while avoiding the trap of "pilot purgatory," cannot be overemphasized.

Technology modernization

Generative AI is one example of how, as the new era unfolds, companies' reliance on technology will only deepen. Incumbent payments players, who for decades faced little external pressure to evolve, now universally acknowledge the need to modernize tech stacks to keep up with the rapid pace of innovation and ecosystem disruption driven by cloud-based fintechs.

Payments tech modernization can reduce operating costs by 20 to 30 percent and halve time to market for new products. According to McKinsey's Operating Model Index, compiled from research across 150 leading financial institutions, those scoring higher on operating-model maturity tend to be faster growing (20 percent faster revenue growth) and more profitable (69 percent higher TSR) than the others.

Payments tech modernization can reduce operating costs by 20 to 30 percent and halve time to market for new products.

To achieve these gains, incumbents should strongly consider re-architecting complex, monolithic technology stacks to microservices-based, cloud-native platforms that are flexible, consumable, and scalable. Payments attackers use such platforms to achieve low cost-to-income ratios. For instance, ClearBank would be unable to pursue its modular BaaS strategy without cloud technology.

Modernizing complex payments tech stacks is no small undertaking. As the technology gap to fintechs and native digital players continues to widen, incumbents can no longer afford to wait three to five years to transform. Instead, companies will need to take an agile approach, focusing modernization investments on strategic, high-development-intensity products where paying down technical debt and modularizing legacy code into micro-services will deliver the most benefit. Companies should also consider partnerships to integrate innovative products and services that may be too lengthy or costly to develop in-house.

As companies rebuild their platforms, they can look to best-in-class tech companies for inspiration on structure and working practices for modern product delivery. Payments companies will also need to attract, retain, and upskill future-ready tech talent well versed in modern technologies and skill sets, such as cloud, generative AI, and user interface and user experience (UI/UX).

Payments companies must also look to improve speed to market and reduce engineering toil by deploying modern software engineering practices. We have found that typical software development organizations (in payments and other industries) spend more time on outer-loop activities[14]—tasks such as security, compliance, configuration, and integration testing that are not directly related to building new features and shipping product (the inner loop). Automation—including generative AI—and modern practices in agile and DevSecOps[15] can enable firms to redeploy people and resources to the inner loop, lifting productivity by 15 percent or more (Exhibit 6) and improving speed to market by more than two times. Generative AI is proving to be a powerful speed and efficiency lever as well, with especially promising results in code generation, legacy code refactoring, and test automation.

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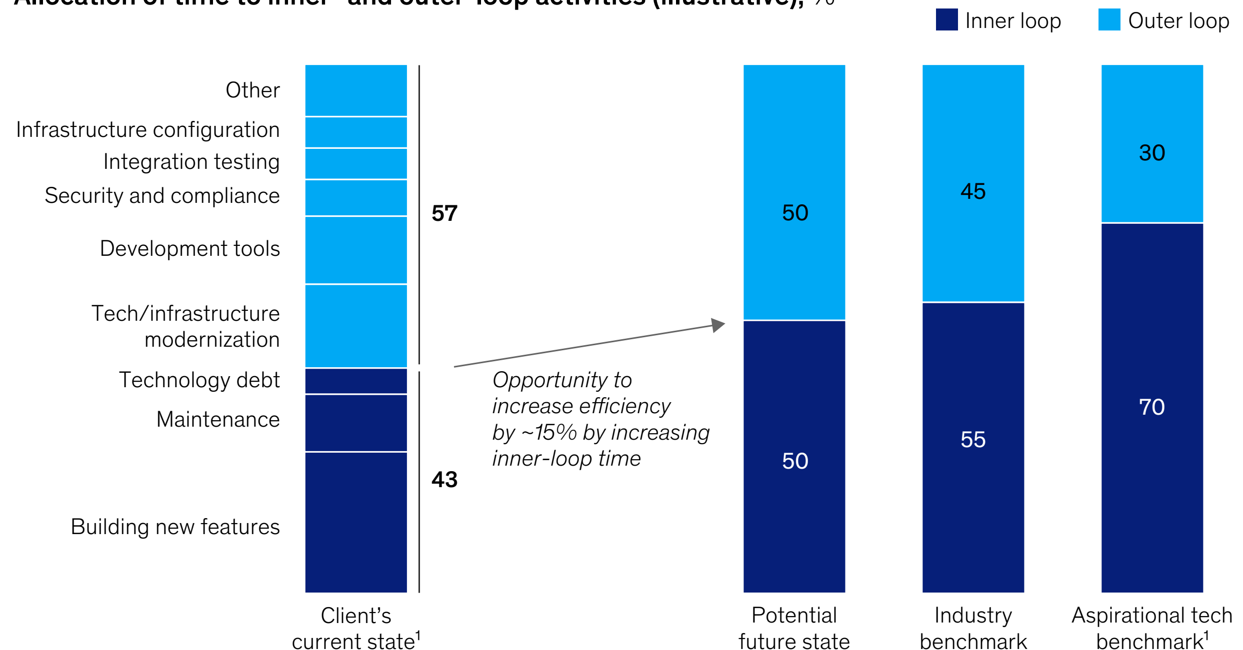
[14] "Yes, you can measure software developer productivity," McKinsey, August 17, 2023.
[15] Santiago Comella-Dorda, James Kaplan, Ling Lau, and Nick McNamara, "Agile, reliable, secure, compliant IT: Fulfilling the promise of DevSecOps," McKinsey, May 21, 2020.

Exhibit 6

Improving time utilization in inner-loop processes has potential to increase developer productivity by roughly 15 percent.

Allocation of time to inner- and outer-loop activities (illustrative), %



[1]Example assumes a high-tech company with mature application of elevated automation tools.
Source: McKinsey analysis

Incumbents' technology gap with fintechs and native digital players continues to widen; for some, modernizing technology won't be enough. These firms may want to consider partnerships with others and more generally think through the areas where paying down technical debt[16] will deliver the most benefit. Some tech work can be outsourced; looking ahead, industry utilities could simplify internal operations for many firms in one go.

Staying ahead of financial crime

A final way to lower costs is by updating how the organization limits risks and costs related to fraud. The face of financial fraud has changed. Today's financial criminals are sophisticated, coordinating borderless attacks simultaneously and globally by using low-cost tools that exploit recent technological advancements. Although unauthorized card-not-present (CNP) fraud is declining in SEPA (2.8 basis points of transacted card value in 2021, compared with 3.66 basis points in 2020), the introduction of faster payments has opened new fronts for authorized push payment (APP) scams. In APP scams, fraudsters trick victims, often through social engineering, into initiating payments to an account posing as a genuine payee. In the United Kingdom, APP scams accounted for 44 percent of the £583 million lost to financial fraud in 2021.[17] Of the $6.9 billion lost to internet scams in the United States in 2021, 98 percent began with social engineering, according to the FBI Internet Crime Center.[18]

Worse may be in store. It's easy to envision how generative AI could aid fraudsters in producing fake videos or spoofing voices, exploiting vulnerabilities of common identity recognition routines, say, through synthetic identities. But generative AI and other new technologies also offer new avenues for those defending against fraud. Early examples indicate that generative AI could boost productivity by 30 to 50 percent in fraud detection by automating some currently manual activities and accelerating others. Its proven ability to process unstructured data could optimize detection rules, identify high-priority incidents, and foster improved efficiencies for human analysts by displaying relevant information and checklists for case handlers and recommending next best actions during investigations. It could also pre-compile suspicious-activity reports for vetting and regulatory submission.

To get the most out of the new technologies, payments companies will likely need to upgrade their fraud operations from back-office functions to an actively managed competence center. Companies can incorporate what has worked for them and their own advanced technology skills to design strategies that both counter financial crime and enhance the customer experience.

The transition from the Account Era to the Decoupled Era presents opportunities for banks and other payments players to capitalize on the resulting tailwinds. Many of these are driven by technology advancements, generative AI being the clearest example. The need to modernize tech stacks has been recognized for some time; market dynamics give the imperative added urgency while cloud-native platforms and refined API connections offer a new path forward. Technology empowers both sides of the financial crime battle, making it both an offensive and defensive maneuver. The shifting interest rate environment has reset deposit dynamics to a state many current leaders have no experience navigating, with the added twist of technology enabling faster balance movement than in past cycles.

The outlook for the payments sector remains strong, with five-year growth projected at or above the long-term average. The vectors of growth are evolving, however, and banks must take steps to optimize the profitability of such growth. This requires a detailed evaluation of their business, making clear and difficult investment decisions in building an efficient payments operating core that delivers a share of that growth to both the top and bottom lines.

[16] Aamer Baig, Sven Blumberg, Arun Gundurao, and Basel Kayyali, "Breaking technical debt's vicious cycle to modernize your business," McKinsey, April 25, 2023.
[17] "Over £1.2 billion stolen through fraud in 2022, with nearly 80 per cent of app fraud cases starting online," UK Finance press release, May 11, 2023.
[18] FBI internet crime report 2021, US Department of Justice/Federal Bureau of Investigation, March 2022.

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