



Foundations of banking excellence

*Practices and priorities to
accelerate digital transformation*

In collaboration with



How IBM can help

The modern financial institution needs to be agile, secure, responsive, efficient, and collaborative. We're here to help you create a superior customer experience, build agile core banking systems, offer innovative payment services, and optimize enterprise risk management. Learn more at ibm.com/industries/banking-financial-markets.

How BIAN can help

Established in 2008, the Banking Industry Architecture Network (BIAN) is a collaborative initiative that has delivered a standard semantic service definition of banking that can be used as a blueprint for standardization of banking services, and rationalization of supporting IT software. It delivers a domain model that describes consistent service definitions and their boundaries that make up the services that describe banking. It contains a service view, an information view, and a capability view that together describe the banking landscape. The primary aim of BIAN is to provide a standard that makes integration of software and services capabilities easier through a standard set of definitions.

Financial institutions use BIAN as a starting point to help define and organize their IT software and services needs in a standard rationalized way around the BIAN service landscape. The architectural materials provide a standard set of definitions to reduce ambiguity and increase the ability of a bank to create a plug-and-play software landscape, whether built or bought, that in turn increases the agility of the organization to deliver to the needs of its business. Learn more at bian.org.



Key takeaways

- Banks with healthier financial performances are characterized by six key practices that can *reimagine experiences* and digitally transform the organization.

They include engaging in partner ecosystems; implementing end-to-end digitalization; establishing data fabrics; deploying AI factories; creating small, operationally focused teams; and integrating early development process monitoring.

- 78% of banks are *modernizing platforms* by leveraging AI—but there's room to grow.

The modernization of customer care, credit risk evaluation, workforce engagement, and financial crime protection all help operational efficiency. Credit applications and loan management are two underexplored areas.

- 79% of banking executives are emphasizing four key building blocks toward a *resilient hybrid cloud*.

Banks have yet to unlock the full value of hybrid cloud as they are still prioritizing these building blocks: scalable data storage; the avoidance of vendor lock-in; a unified security control framework; and accessible data and services.

Embracing the digital landscape

A confluence of macroeconomic stressors paired with new competition from fintechs and nontraditional players presents an environment more challenging than ever for banks. The need to embrace continuous reinvention, augment business profitability, and reduce costs requires a substantial transformation of operations.

In response, CIOs and CTOs have shifted their focus from pure digital transformation to digital business transformation.¹ Consequently, the IBM Institute for Business Value (IBV), in collaboration with BIAN, made these executives the focus on this paper.

In cooperation with Oxford Economics, we surveyed 2,000 CIOs and CTOs of banks across 58 countries to explore the operational practices and capabilities characterizing banks that achieve higher Return on Equity (ROE) and/or lower Cost-Income Ratio (CIR)—a group we call Healthier Institutions.

We're finding that what banks need is a stable yet flexible infrastructure—founded on hybrid cloud technologies—that increases portability, interoperability, and consistency in the way data- and AI-driven insights are used and automated. A hybrid cloud strategy can serve as the pathway to achieving modernized processes and applications that generate value across businesses and beyond industry borders.

In fact, we see a multiplier effect on revenue growth from combining cloud investments with other transformative levers, such as:

- Enhanced data capabilities with AI and IoT for decision-making and robotic process automation
- Refined operating models with improved processes, skills, and cybersecurity
- Active involvement in ecosystems, platforms, and culture.

In banking and financial markets, the potential impact of cloud on business value, when integrated with transformative levers, is *20 times* greater than the potential economic realization of cloud as a standalone strategy.²

Searching for healthier financial performance

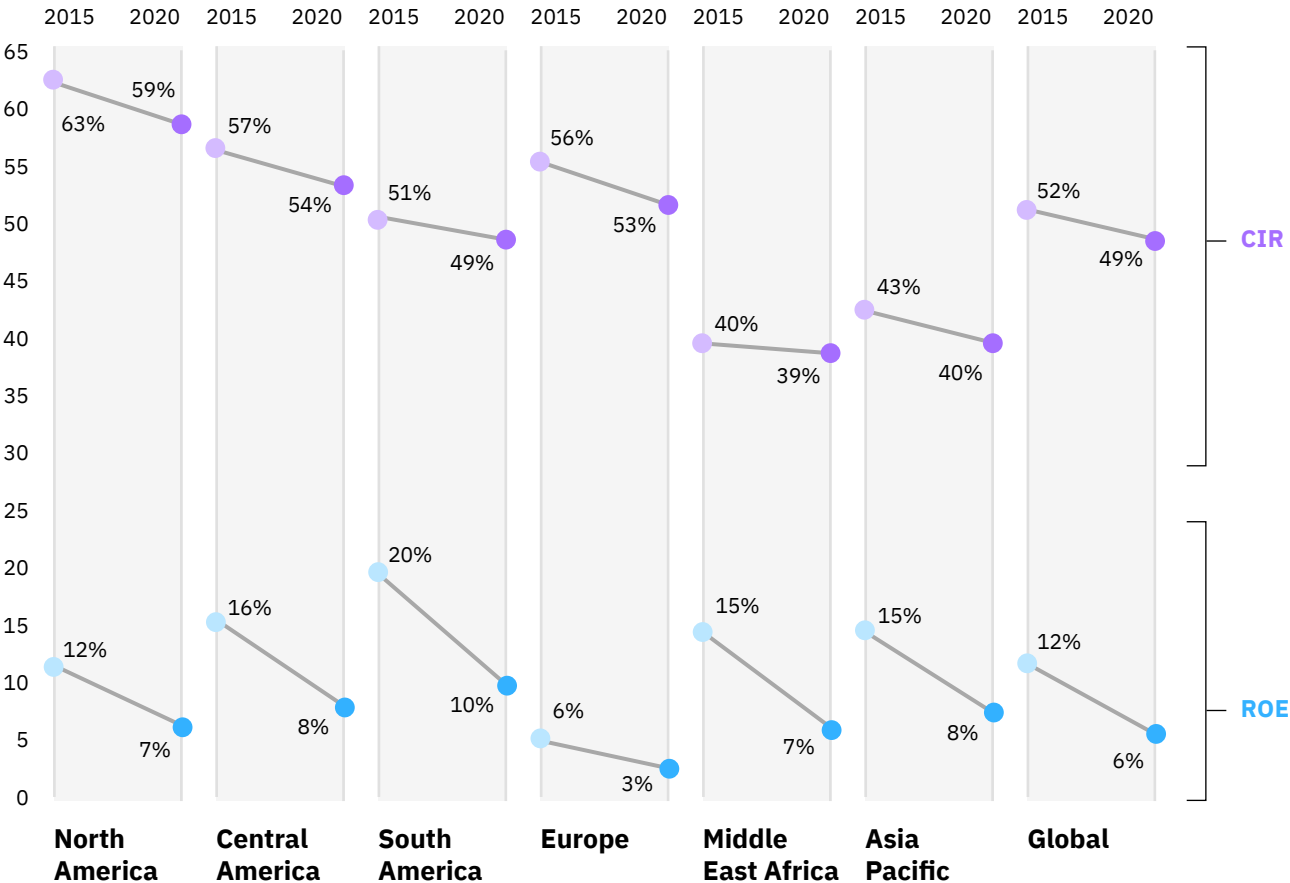
Banks are prioritizing technologies that can help them achieve an enhanced, sustainable level of financial performance. In particular, they look to ROE and CIR to gauge financial health.

Overall, average ROE remains well below banking industry metrics attained before the 2007 global financial crisis. CIR has improved on average but remains uncomfortably high (see Figure 1 and “Perspective: ROE and CIR—two metrics that matter”). Improving these metrics requires a new mindset, a willingness and readiness to embrace the evolving global digital landscape.

FIGURE 1

Banks face persistent challenges in improving financial metrics

Average ROE of banks has been declining globally since 2008; CIR remains uncomfortably high.



Source: IBM, using data from The Banker Database.

Perspective

ROE and CIR— Two metrics that matter

Return on Equity (ROE). ROE is a metric gauging a corporation's profitability and how efficiently it generates those profits. It is calculated as a bank's net income divided by shareholder equity. Relatively high or low ROE ratios vary significantly from one industry group or sector to another. The average ROE for the top 250 banks globally (by total asset) was 6.29% in 2020.³

Cost-Income Ratio (CIR). CIR is a metric gauging how efficiently a bank is functioning. It's calculated as the cost of running the operations divided by the operating income. Lower CIRs mean a bank is running more profitably. The average CIR for the top 250 banks globally (by total asset) was 48.75% in 2020.⁴

Our research identifies a core set of practices that can accelerate innovation and business model transformation to succeed in this landscape—better positioning banks in their pursuit of healthier income statements. We then explore how banking organizations overall prioritize their digitalization investments to address technical and business initiatives that can contribute to financial performance.

In terms of technology, understanding current state, challenges, opportunities for modernization, and best practices aligned with hybrid cloud adoption can help organizations move forward with clarity. Our research indicates that a hybrid cloud strategy has the potential to propel banks into a digitally sophisticated future.

The six key practices of Healthier Institutions

Digital transformation done well can unlock business value. Automation and application modernization have the potential to help banks radically reduce costs. Transformed business models can create new revenue streams. Evolving from monolithic to flexible hybrid cloud architectures can accelerate these financial performance benefits.

Rather than banks restricting themselves to a “lift and shift” of existing processes to cloud, they can embrace modernization of their operating models to empower new ways of working and innovation across both the bank and its ecosystem of partners.

We investigated the characteristics of Healthier Institutions and identified six practices and capabilities they share (see “Perspective: Mining for gold—Discovering what unites Healthier Institutions”). Together, they form a powerful roadmap that makes astute use of hybrid cloud technologies. In short, these six practices can enable the shift from business-as-usual to the more flexible business models of tomorrow—and surface practical growth opportunities:

Perspective

Mining for gold— Discovering what unites Healthier Institutions

How did we identify the key practices and capabilities that set apart the operations of Healthier Institutions? For this descriptive—not predictive—purpose, we ran a Probit model (see Appendix A) on the relationship between ROE and CIR of Healthier Institutions, as well as a set of 29 independent variables. These variables describe advancements in core practices and capabilities related to security, data access, trusted AI, and operating model agility. 23% of organizations met our ROE criteria for a Healthier Institution, and 30% of organizations met CIR criteria.

Create small teams that are responsible for identified end-to-end operational tasks.

Culture is the organizational glue that coalesces internal and external innovators to spark collaboration and value creation. Hybrid cloud technologies create a playground for cultural change that gives small teams responsibility for end-to-end operational tasks encompassing the entire ecosystem.

The opportunity: only 18% of respondents overall say small teams are always responsible for identified end-to-end operational tasks.

Integrate monitoring early in the development process to provide data, obtain user feedback, and prepare for deployment and maintenance activities.

Monitoring helps Healthier Institutions improve development processes and better prepare for production, especially when integration starts early. Done properly, application monitoring can contribute to DevOps shifts.

The opportunity: only 37% of respondents indicate development performance is always tracked and reported.

Establish a data fabric that allows data to flow through a broad network “on tap.”

The democratization of data—and the dramatically increased intelligence and insights driven by hybrid cloud technologies and open IT architectures—could redefine the economics of banking. As a result, data transportability and appropriate data governance are crucial to Healthier Institutions. What matters is not just appropriate data availability, but how that data drives disruptive business platforms that fuel open ecosystems and enable intelligent workflows. The ability to integrate clouds and shift data and workloads between environments becomes ever more essential.

The opportunity: in our survey, all banks reported data constraints, with 65% experiencing that data is often or always siloed inside the organization.

Deploy AI factories and transform data environments that put data into action.

By ethically adopting new deep analytics and AI tools, financial institutions can re-imagine processes and enhance operations, customer experiences, and cognitive products. Cloud deployment of sandboxes and fit-for-purpose environments allows continuous interactions with AI- and data-driven models, helping to lessen their bias and recalibrate with competitive timed-to-market insights.

The opportunity: only 30% of our respondents indicate test environments and sandboxes are always available on demand for AI modeling and calibration.

Embrace end-to-end extreme digitalization to streamline and automate complex operational workflows and drive innovation.

To win the digital race, Healthier Institutions are adopting new ways of exploring exponential technologies, such as automation, hybrid cloud, and AI. They drive digitalization across internal business units and their ecosystem of external partners while improving security and compliance.

The opportunity: only 23% of respondents overall indicate that complex workflows are always streamlined and automated leveraging AI.

Engage ecosystems of partners to fuel faster innovation and efficiency.

Healthier Institutions increasingly partner externally to deliver better functionality at structurally lower cost across operating models. The power of partner ecosystems is the action that characterizes Healthier Institutions most strongly. And by extension, partner ecosystems can help drive customer ecosystems that thrive on seamless experience and extreme digitalization.

The opportunity: only 26% of overall survey respondents indicate that an ecosystem of partners always actively participates in products and services innovation.

Perspective

Hybrid cloud and banks—
The potential to help improve the environment and drive business results⁵

We've established that a hybrid cloud strategy has the potential to propel banks into a digitally sophisticated future, one that's conducive to a healthier financial performance. As such, it's an essential business approach. But here's an even more critical benefit: As banking organizations establish and strive toward sustainability goals, hybrid cloud can be a key player.

Transforming how a workforce operates and collaborates with workflows on the hybrid cloud—in effect, transforming the operating model—allows for more energy-efficient usage of data centers and computing environments. In fact, according to IDC, cloud computing could eliminate a billion metric tons of CO2 emissions over the next four years.⁶

And a recent IBV study that included nearly 300 banking and financial market executives in 40 countries found they're feeling pressure from board members (76%) and the investor community (59%) who are calling for increased transparency around sustainability. But at the same time—and important to our focus on healthier financial performance—80% expect sustainability investments to improve business results in the next five years.⁷ In short, the possibility of a win-win.

A potent mix: Priorities, challenges, and opportunities

To embrace the digital landscape in a way that drives healthier financial performance, business and technology teams must evaluate a plethora of initiatives. We have identified three areas of focus:

- Opening to external participation and innovation—transforming banking engagement with ecosystems of clients and partners
- Modernizing business processes, professional practices, and applications—those that “run the bank efficiently”
- Modernizing technical infrastructure—beyond the initial stages, or building blocks, of hybrid cloud exploration.

Correspondingly, we investigated banking executive priorities within these three groupings. What initiatives are they focusing on? What do they expect to provide business value and enhanced financial performance? Understanding these perspectives provides context as to where banks are finding themselves in their evolution toward financially healthy organizations.

Opening to external participation and innovation: Transforming banking engagement with ecosystems of clients and partners

Surviving the pandemic has been of paramount focus for the financial services industry. But the industry is still not delivering returns anywhere near pre-financial-crisis levels—indicative of deeper issues long preceding COVID-19. Structural weaknesses can only be resolved by pairing radical cost-cutting with reinvented, more profitable, and competitive business models. Openness is key: ecosystem models need to dismantle barriers between internal business units and transcend institutional boundaries.

Accordingly, we asked executives which business reinvention initiatives they expect to deliver the greatest value in the next three years. 78% identify a combination of four frequent activities—all of which set the stage for more secure ecosystem development (see Figure 2 and “Perspectives: The benefits of ecosystems for banking”).

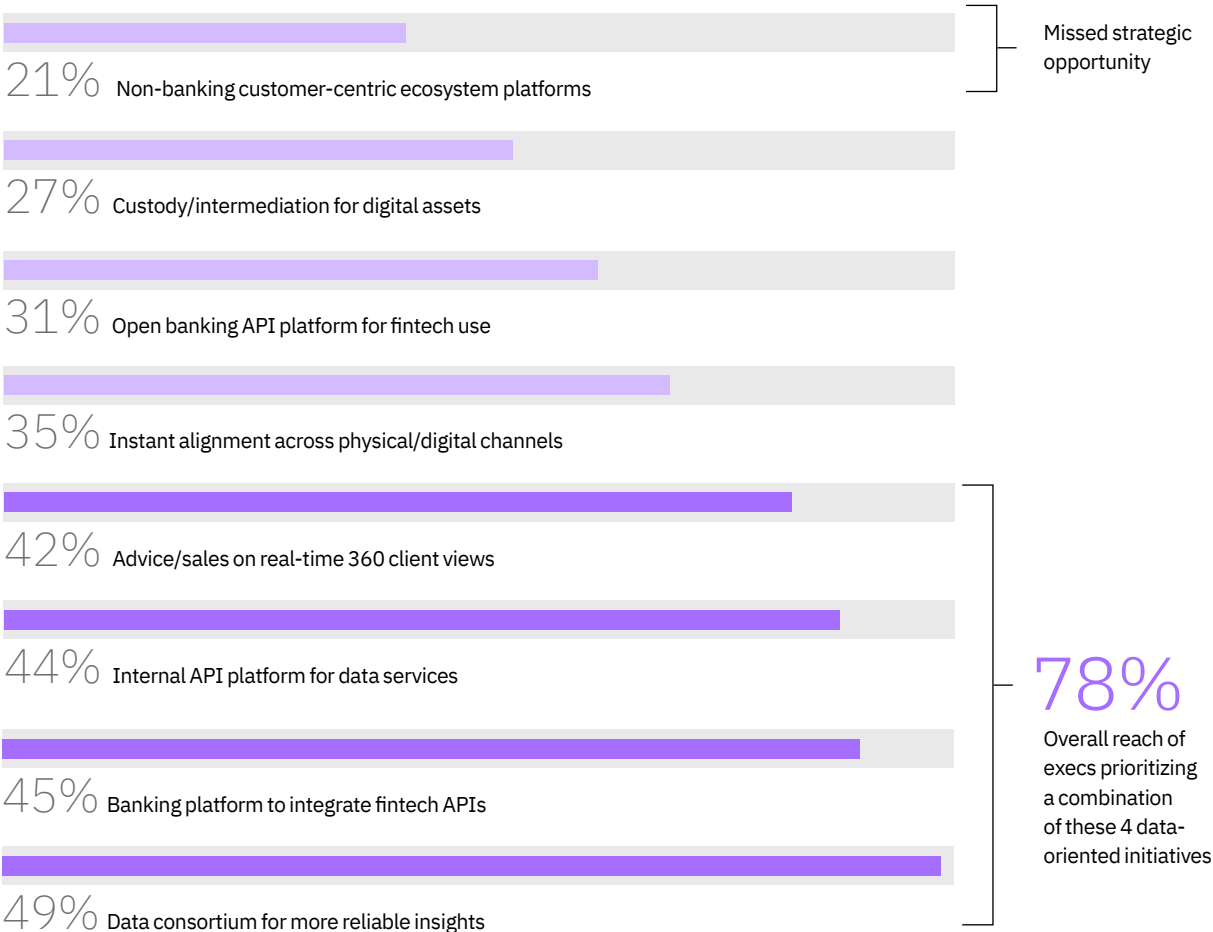
The extreme digitalization and instant fulfillment of client demands must be based on reliable data and insights. Opening the data model to enriched banking information through consortiums, a key emphasis, helps “pollinate” data throughout the ecosystem, earning client trust and engagement when and where they need frictionless access to financial services.

Correspondingly, most executives prioritize improving access and utilization of information by building API platforms to share data internally and integrate fintech solutions. This effort helps to augment advisory and sales activities, based on more reliable, time-critical, 360-views of clients.

FIGURE 2

A work in progress: Evolving toward the ecosystem era

Banks need to recognize the value in non-banking, customer-centric platforms



Q. In the next 3 years, which industry reinvention initiatives are expected to deliver the greatest and least value? Based on MaxDiff analysis.

State Bank of India

An intelligent platform puts State Bank of India customers first⁸

The State Bank of India (SBI), the largest public sector bank in the country for more than 200 years, wanted to create a single mobile app that merged services, products, and features while also integrating data across third-party products. So, SBI created something more than a digital bank. It envisioned a comprehensive online platform with four pillars: a convenient digital bank, a financial superstore featuring investments and other financial services, an online marketplace offering lifestyle products from partners, and an overall digital transformation with analytics that connected these options end-to-end.

Called You Only Need One (YONO), the new platform was created to meet the growing need for digital finance, as well as the preferences of SBI's increasingly young and wealthy customers. YONO boasts more than nine million daily logins and offers more than 100 digital customer journeys, offering an array of online banking, financial, and consumer options.

All initiatives listed in Figure 2 are instrumental to deeper industry reinvention—they are grounded on systematized use of data and its open consumption by the bank through API platforms. Still, the survey indicates that most executives focus on an engagement model that revolves around the bank and its customers.

But there's a disconnect: the way in which banks engage clients to deliver value-added services is shifting to open banking and open finance initiatives. Particularly, advanced financial institutions are proactively competing with Business-as-a-Service platforms for inclusion of their offers in non-banking engagement models, such as platform-led ecosystems for agriculture, retail, or real estate.⁹ Healthier Institutions can lead the way here, with their end-to-end digitalization, data fabrics, and partner engagement.

While only 21% of banking executives currently report prioritizing the orchestration of non-banking ecosystem platforms, 78% do emphasize data consortiums, APIs, and enhanced advisory/sales capabilities—setting the stage for expanded ecosystem involvement. In effect, a bank must efficiently master the internal generation and management of data before casting its net wider.

Perspective

Benefits of ecosystems for banking¹⁰

A well-orchestrated partner ecosystem can facilitate a bank's digital transformation by helping nonfinancial partners to co-create new business models and services. Unfortunately, the business value of partnerships has been constrained by a lack of easy, secure interactions—interactions that today's hybrid cloud architectures can make possible. For example, as banks unbundle and re-bundle services with new offerings, ecosystem collaborations on fit-for-purpose hybrid clouds can bypass reinventing compliance and security fixes.

Ecosystem thinking requires business and technical acumen as well as a cultural shift toward open organizations. Approaches that can help with ecosystem success include:

- A collaborative strategy that starts with partner engagement at inception
- Continuous investment in relationships, including customer relationships, which can yield value over time
- The sharing of risks and rewards proportionally
- Highly modular enabling platforms that strengthen partnerships and the customer experience.

It's worth the effort. Banks that master the art of partner ecosystems can rethink their strategies, positioning themselves to attract and retain customers based on value, immediacy, and above all, trust.

Modernizing business processes, professional practices, and applications—those that “run the bank efficiently”

Financial institutions need to uncover new efficiencies that can substantially and structurally reduce operating costs—all without compromising

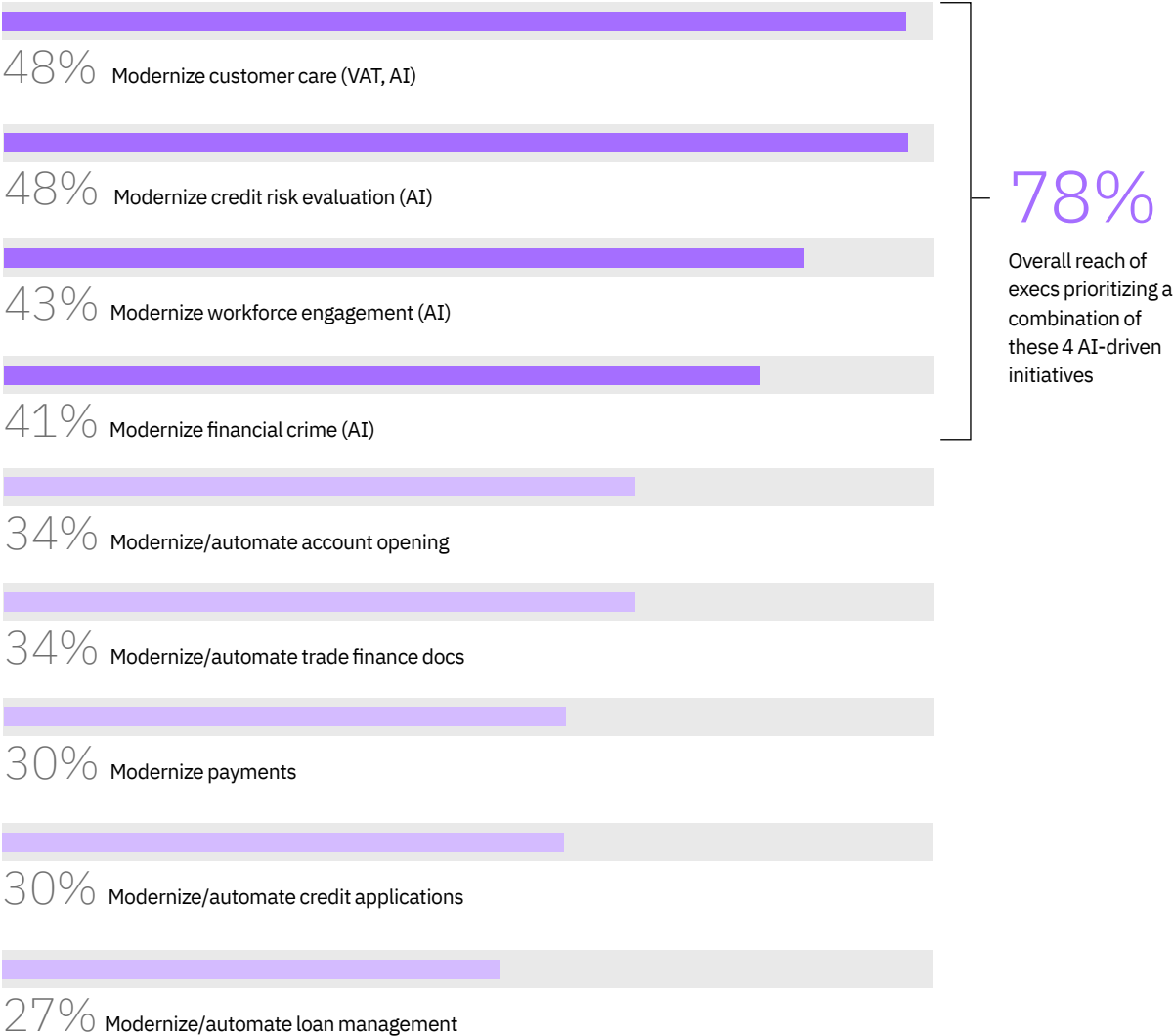
business objectives, compliance adherence, security, and resiliency.

They need to modernize existing client services, making them more accurate and frictionless by sharing core banking information and events in real time. Accordingly, we asked executives which efficiency-enhancing initiatives they expect to deliver the greatest value in the next three years. 78% cited a combination of four frequent activities (see Figure 3).

FIGURE 3

Modernization matters

But banks are missing strategic opportunities in the credit and loan realms



Q. In the next 3 years, which end-to-end banking initiatives are expected to deliver the greatest and least value? Based on MaxDiff analysis.

Notably, these top initiatives all depend on astute AI capabilities. Healthier Institutions, with their focus on deploying AI factories, can excel in these measures.

Virtual Assistant Technology (VAT), which can augment customer care and talent engagement, is cited as a key priority. During the pandemic, banks realized the strategic relevance of added-value proximity to clients and employees. This conversational technology can contribute to cost savings by reducing friction in both client interactions and employee effectiveness (one example: the role of conversational intelligence and robotic process automation [RPA] working alongside employees). Correspondingly, workforce engagement is another imperative, with attracting and retaining talent an ongoing existential crisis for financial institutions.

Executives also flagged modernizing credit risk evaluation with AI and machine learning. Banks are competing with fintech and big tech contenders that are winning clients with instant fulfillment by providing near- to real-time loan approval on digital.

At the same time, banks are also leveraging their capabilities by servicing a growing ecosystem of new players that act as primary originators for new loan applications, opening and automating business-critical processes beyond their traditional industry parameters. Intelligent automation of core banking credit processes can deliver needed efficiency by facilitating connections between new client interfaces and middle- and back-office applications, with particular focus on near real-time risk-based approvals. The result can be timely responses to clients within a risk-controlled framework.

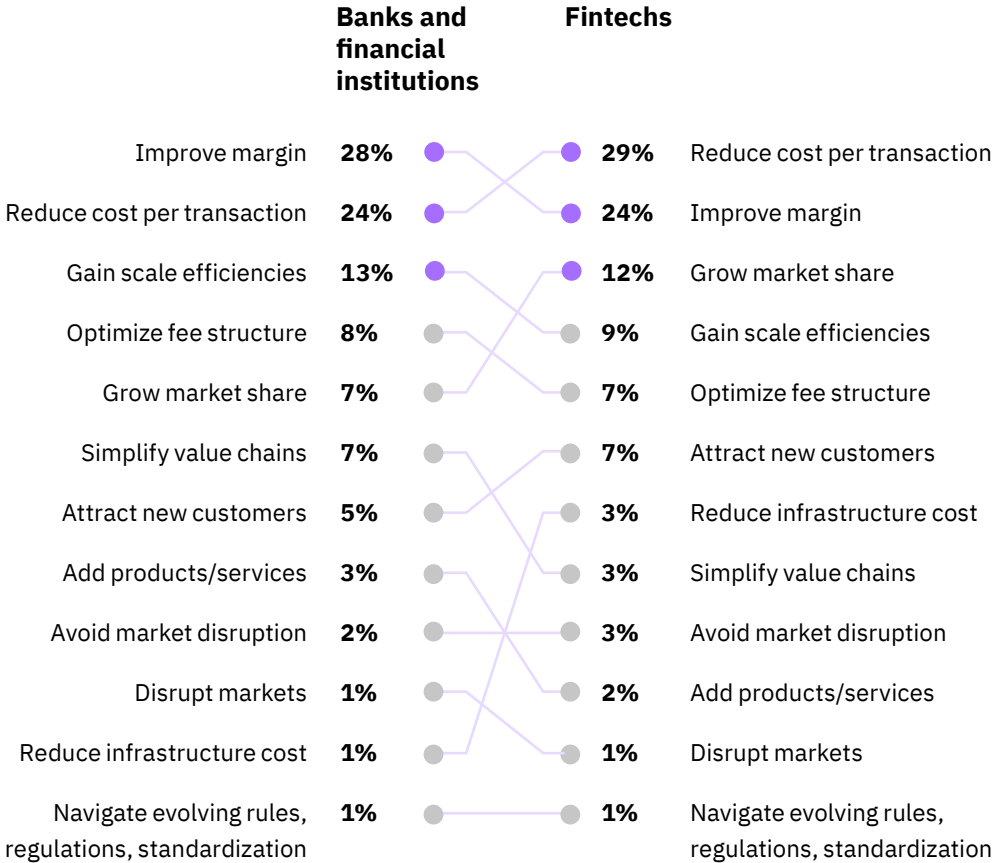
The modernization of financial crime assessment and compliance systems ranks high. The acceleration of cloud investments helped banks respond to changing customer expectations, not the least of which was 24x7 digital access. But the subsequent reconfiguration of computing environments has potentially weakened the security framework, increasing technical complexity and incident response efforts. Overall, the average cost of data breaches soared 10% year-over-year between 2020 and 2021, to almost \$4.24 million dollars. The cost increased further to \$4.35 million in 2022. And for financial services organizations, the average cost of a data breach was \$5.97 million, 37% higher than the global average.¹¹ More recently, geopolitical tensions have heightened concerns about cybersecurity.

All initiatives listed in Figure 3 are relevant—but consider the transformation of the payment landscape. Within banking organizations, payment verticals are shifting from profit centers to cost centers. However, in today’s digital world, the value of payments is about transforming insights generated by transactions into hyper-personalized services outside the payment vertical. This is where the fintech ecosystem heightens the competition with banks as they leverage modernized payments to grow new revenue streams (see Figure 4). This hyper-personalization can be a foundational connector to profitable engagement opportunities. In this regard, banks can create deeper collaborative interactions across new and evolving ecosystems—interactions that can share data and insights on a secure hybrid cloud.

FIGURE 4

Competitive priorities for payment providers

Fintechs and banks display some differences in objectives



Source: IBM IBV Performance Data and Benchmarking database. 2022.

M&T Bank

Achieving market agility with data- driven hybrid cloud applications¹²

M&T Bank, a large US financial institution, was searching for a faster, more efficient, and flexible way to share core banking information with hybrid cloud applications and provide accessibility to key personnel, such as business analysts and data scientists.

Embarking on an application modernization journey, M&T Bank improved the integration of mainframe core business applications with downstream systems, making relevant data easier to access in real time and reuse in a variety of scenarios. The bank reimagined how their core banking platforms shared information and events with consumers—whether for data analysis or application consumption.

This innovative approach of efficient real-time flow of information between their core banking systems and hybrid cloud applications provided the bank significant business value. Additionally, this approach resulted in accelerated development and time-to-value of data-driven hybrid cloud applications by 40% and enabled self-service for faster resolution to client issues.

Modernizing technical infrastructure—beyond the initial stages, or building blocks, of hybrid cloud exploration

Banks need flexible, cost-effective IT architectures to redesign processes and operations while retaining consistency, security, and control. We asked executives which technology-led initiatives they expect to deliver the greatest value in the next three years. Common themes emerged, with 79% identifying a combination of four frequent activities (see Figure 5).

First, running a unified security control framework is essential. As noted earlier, executives say they manage, on average, 20 environments among monolithic setups, public clouds, private clouds, and hybrid integrated architectures. This framework can help alleviate interoperability concerns.

As cloud consumption grows, generating huge volumes of data, access to fast and scalable data storage is an urgent priority. Also, the need to avoid vendor lock-in emerges as a key requirement for mitigating operational risk and responding to new regulatory requirements. Interoperability and portability are essential characteristics of a modernized architecture based on hybrid cloud technologies.

A major source of competitive advantage arises from the creation of self-service data access to accelerate developer productivity. Also, the flexibility to access data, insights, and services on demand and with enhanced security alleviates a critical pain point for a dispersed workforce.

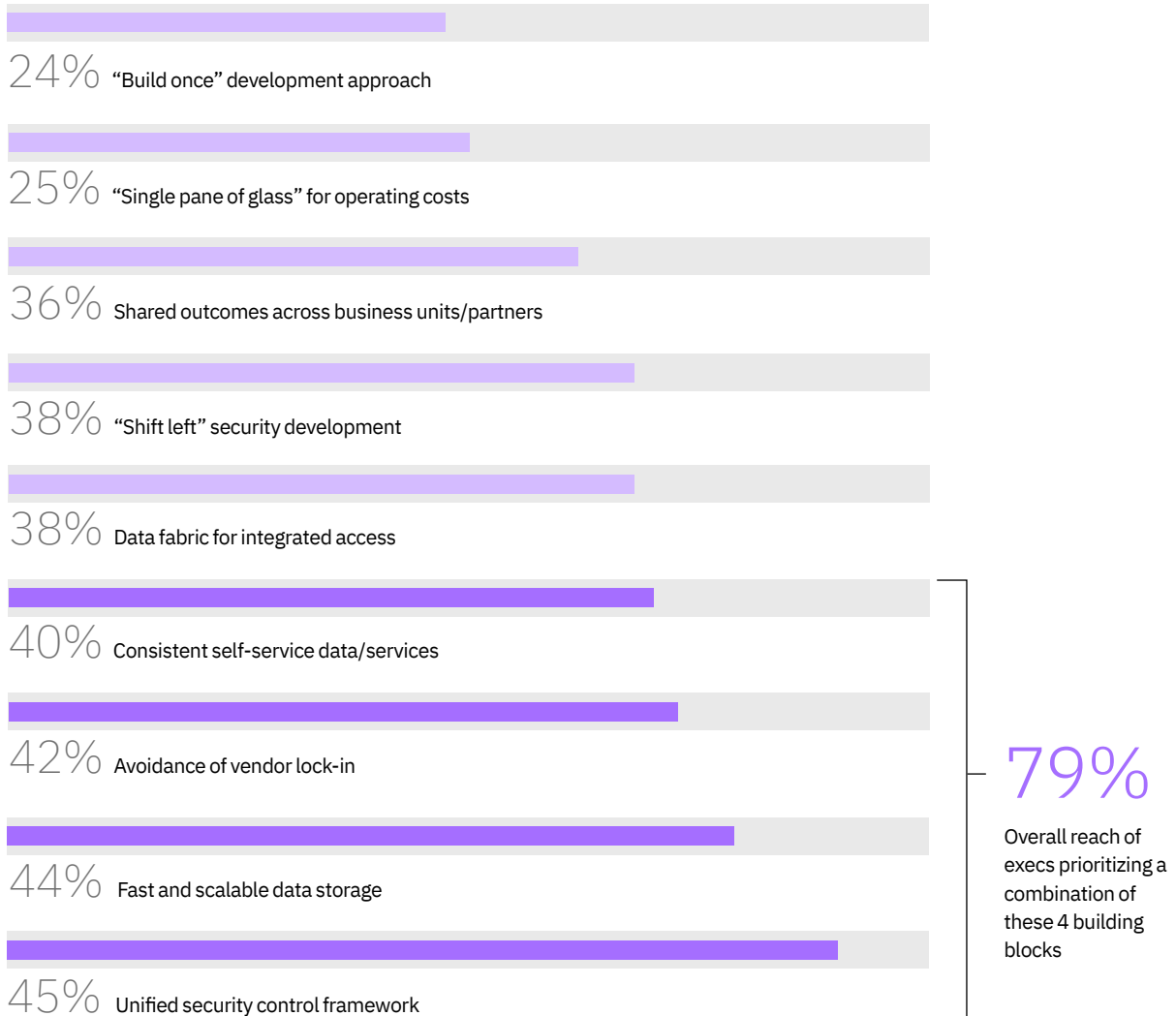
These executive priorities demonstrate a commitment to elements that build toward hybrid cloud realization, indicating that most banks are still making initial forays into fit-for-purpose cloud modernization. They're not yet leveraging the full potential of hybrid cloud. On the advanced end of the spectrum, Healthier Institutions report widespread adoption of end-to-end digitalization, data fabrics, operationally focused teams, and development process monitoring—enabling them to establish a robust foundation for running and innovating their business on hybrid cloud.

For example, only 24% prioritize the “build-once” development approach—a strategy that hybrid cloud can facilitate through portability of workflows and services. Yet, in the face of lagging financial metrics, “build-once” development can help improve financial performance through operational efficiencies, especially from cost and time-to-market perspectives.

FIGURE 5

Banks are focused on “building blocks” toward hybrid cloud

Foundational steps can advance banks toward “build once” development capabilities.



Q. In the next 3 years, which technology-led initiatives across computing environments will deliver the greatest value and the least value? Based on MaxDiff analysis.

PNC Bank

Reimagining the future of retail banking through digital transformation¹³

PNC, a US financial services organization, was looking for a flexible and agile approach to win new customers to realize its expansion strategy ambition. What they needed was an innovative way to reduce multiple systems complexity and attract new customers to PNC through streamlined experiences that build and maintain trust.

By strategically employing a data-first approach to an event-driven architecture where data is sourced in real time from across PNC's systems, they created a completely new application integration paradigm. In this new scenario, customer interactions stream into a platform, regardless of the channel. Whether customers engage through ATMs, mobile apps, online, a retail transaction, or in person at a branch, PNC's apps can tap into the platform and take action in real time.

As PNC looks to further fuel its expansion, this new next-generation, data-first architecture—made possible by a hybrid cloud approach based on a highly scalable, reliable Platform-as-a-Service—serves as a benchmark for the banking industry. This allows PNC to modernize its applications and create cloud-native development environments with its most critical data within a security-rich, private cloud.

Banks on the brink: Poised for the hybrid cloud adventure

Not every bank is a Healthier Institution—yet. This journey calls for an interlocking, iterative strategy—one that starts with hybrid cloud building blocks, such as security, scalability, and portability. From there, organizations can expand to building data fabrics for integrated access, a “single pane of glass” approach to managing operational costs, and a “build once” development approach to help make business innovation faster and cheaper.

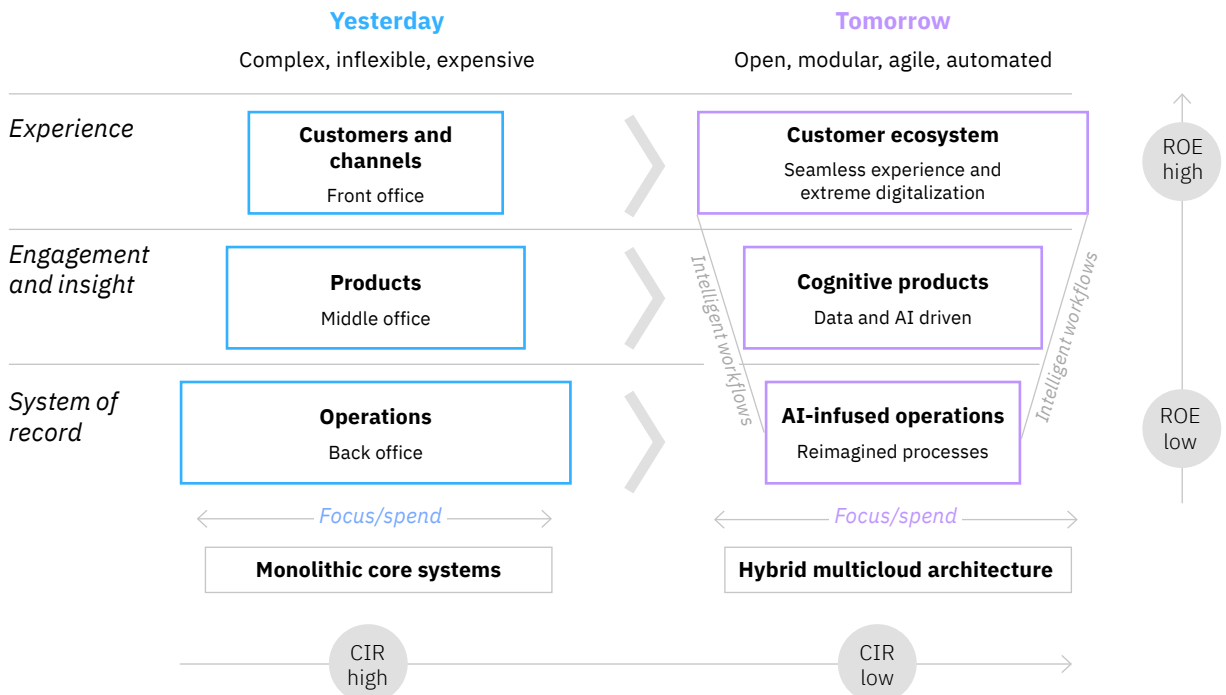
The potential benefits: less friction in business-technology collaboration, enhanced self-service capabilities for improved development clock speed, data sharing both inside and outside the bank throughout ecosystems, and AI at scale.

Moving toward hybrid cloud is a precondition. It’s a “must have” for accelerating the transformation of banks’ business architectures from monolithic, inflexible, complex, and expensive setups to open, modular, agile, and automated design (see Figure 6).

FIGURE 6

The future of banking

Exponential technology is inverting the traditional banking business model.



Source: IBM. ROE based on data from “Remaking the bank for an ecosystem world.” McKinsey & Company. October 25, 2017.

This shift can also help with the languishing financial measures that have long perplexed investors. Specifically, it can differentiate value by improving ROE and CIR metrics—two critical determinants of Healthier Institutions. These building block strategies have the potential to:

- Reduce CIR by resolving the complexity of inflexible architectures and leveraging flexible allocation of workforce and technical resources, creating leaner development cycles and cognitive products, and harvesting the benefits of AI-driven intelligent workflows internally and beyond through partner ecosystems.
- Increase ROE by intensifying the impact of innovation and intelligent automation across the full technology stack to better service customer ecosystems enriched by added-value contributions of innovative partners.

Case in point: Hybrid cloud can create more innovative, interactive dynamics with clients and partners—for example, embedding financial services into the user ecosystems of other industries. These new models depend on end-to-end digitalization across business processes and workflows—even extending beyond the boundaries of the institution. Increasingly, those boundaries are fluid. This makes open standards and flexible architectures increasingly critical.

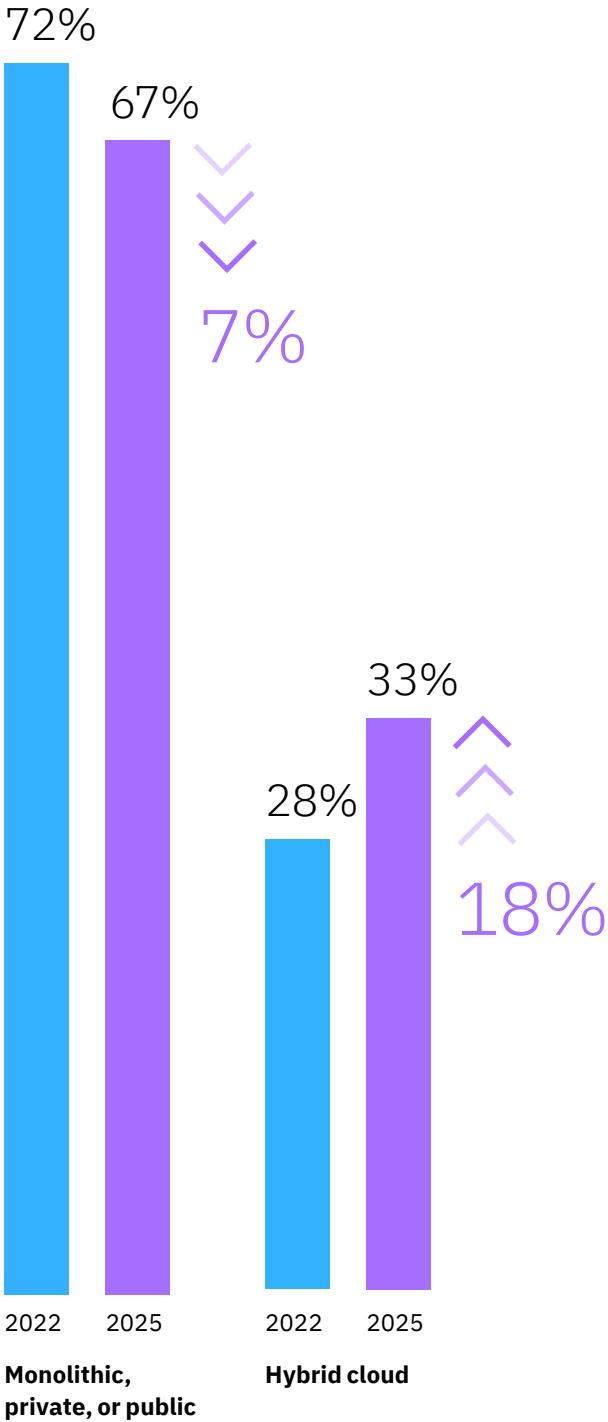
Furthermore, hybrid cloud can speed up the launch of customer-centric business models that support new forms of data-driven digital collaboration between business- and technology-focused employees.

Evaluating the extent of hybrid cloud opportunities for banks requires a full understanding of current practices. Our findings indicate that, on average, banks manage 20 different environments among monolithic and cloud architectures. Currently, 72% of workloads are not operated on hybrid clouds. However, workloads on hybrid cloud are expected to increase by 18% over the next three years (see Figure 7).

FIGURE 7

Bank executives anticipate an upward trend toward hybrid cloud

Mean percentage of hybrid cloud workloads expected to increase by 18% over the next 3 years.



Q. What percentage of your organization’s workloads operate in monolithic, private, public, and hybrid cloud environments?

Clearly, for most banks, it's early in the game. Take two hallmarks of hybrid cloud maturity: extensive containerization with advanced use of microservices, and automated deployment of containers and cloud-native applications. Our data reveals that, respectively, only 15% and 18% of organizations have adopted those practices. Banking organizations have "room to grow" as they progress from a "lift and shift" approach to migrating workloads to optimizing the benefits of moving from monolithic to cloud.

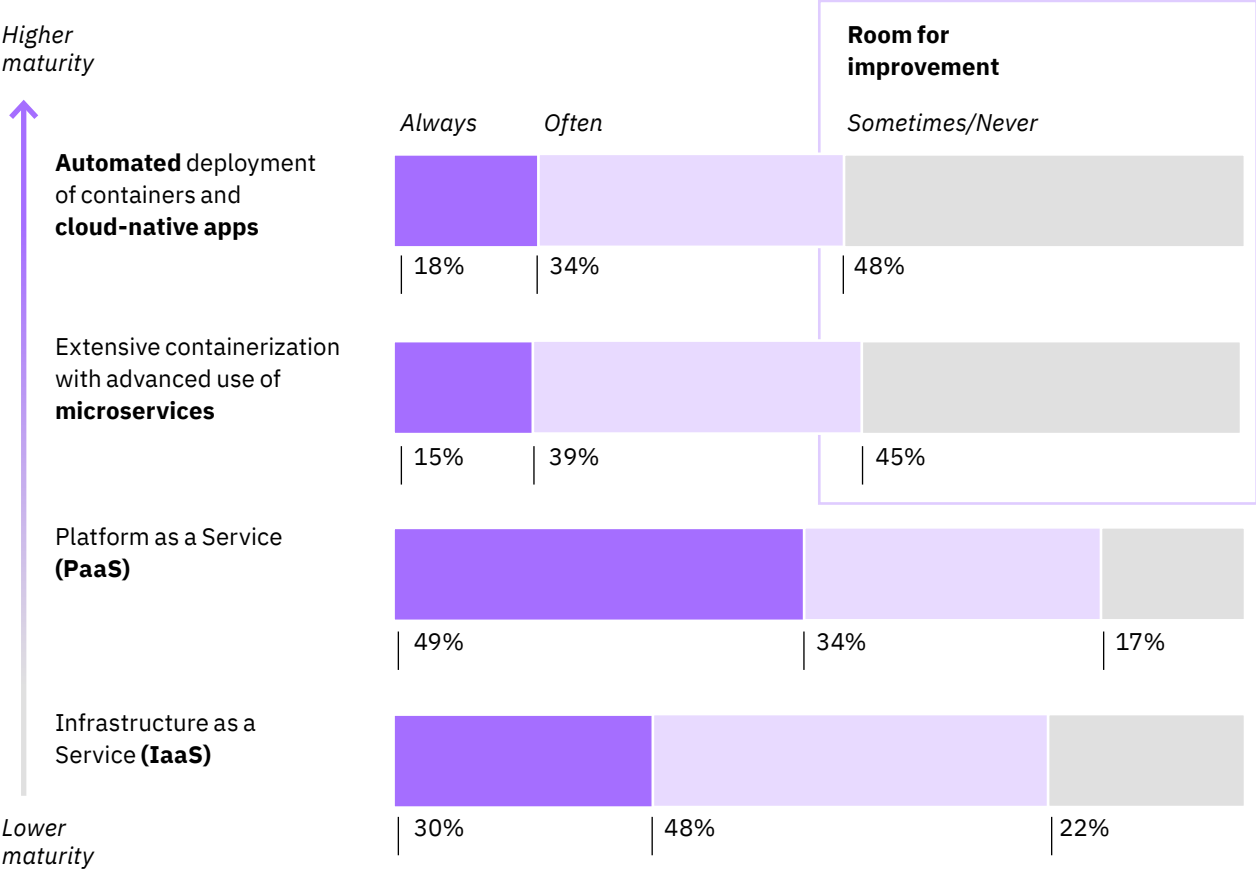
This evolution requires a more mature model based on modernizing platforms and applications. Banks are learning to decouple workloads into microservices, making them interoperable and portable on multiple environments for consistent consumption across a spectrum of business needs (see Figure 8). Leveraging a banking-specific industry standard and common framework is essential for banking interoperability and for overcoming obstacles with business and IT alignment.

But "room to grow" can also imply "room for challenges." In fact, 88% of executives cite a combination of three consistent issues that inhibit generating value from cloud strategy: obtaining commitment for multiyear projects; a lack of interoperability across environments; and the exfiltration, or theft, of sensitive data (see Figure 9).

FIGURE 8

Upward trajectory

Banks have opportunities to advance on hybrid cloud maturity measures.



Q. How often do you use the above services with cloud? Ranked on a 1-5 scale.

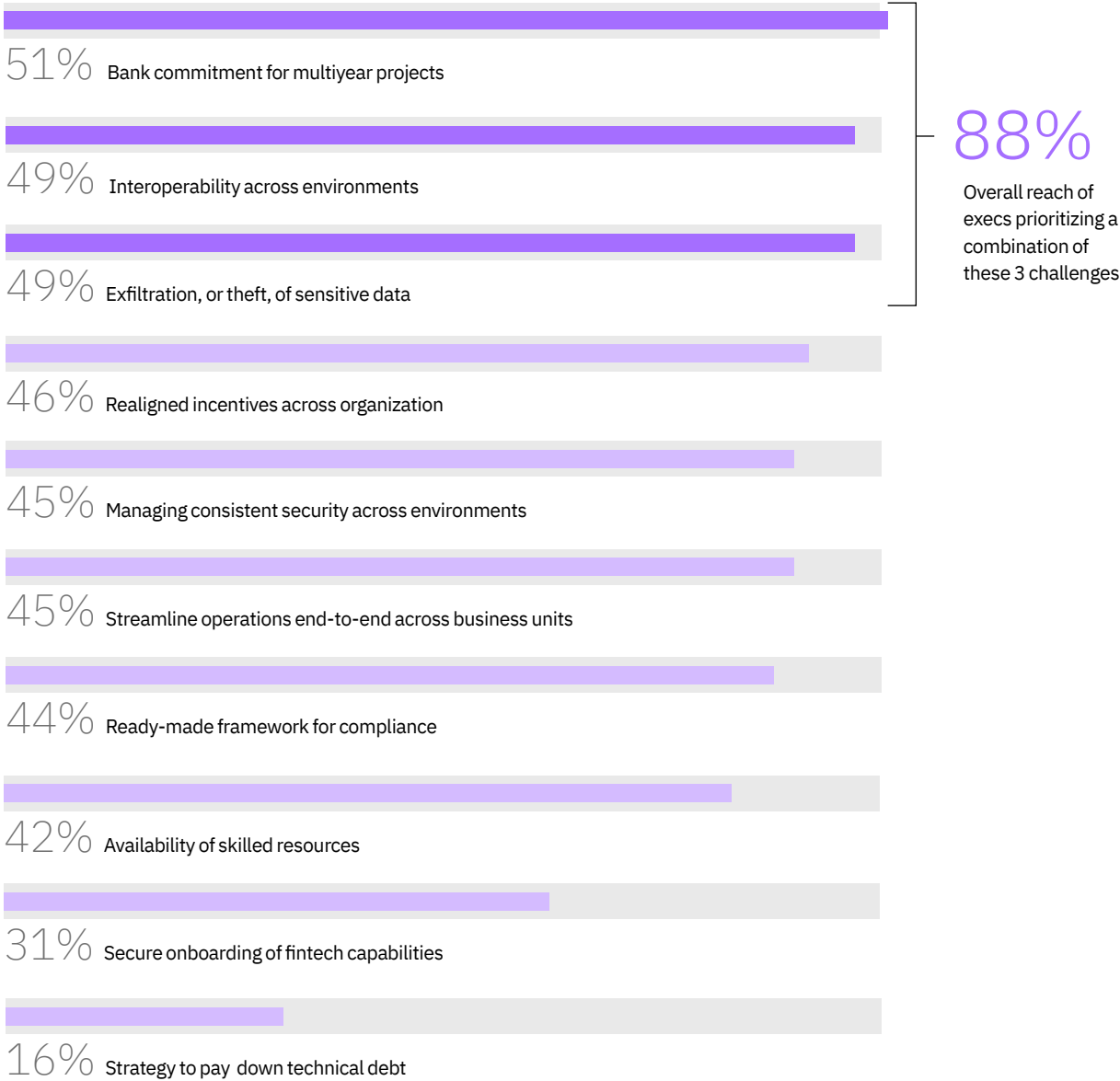
Talent is an ongoing concern as well, with 42% citing a lack of skilled resources as a hindrance. But our premise is that with the right strategies and an open, innovative mindset, these challenges can become catalysts for constructive initiatives.

Hybrid cloud can serve as a tour de force for healthier financial performance, propelling banks toward best practices, such as ecosystem development, digitalization, data fabrics, and AI factories—all key characteristics of Healthier Institutions. 79% of organizations in our research are at the foundational stages of hybrid cloud. These banks are on the brink of the hybrid cloud adventure—it’s their subsequent steps that could make all the difference.

FIGURE 9

Hurdles to hybrid cloud

Almost 9 in 10 banking executives report common challenges.



Q. Which are the main obstacles to generating value from your cloud strategy?

BIAN

The advantages of designing enterprise architectures with business-oriented perspectives¹⁴

Financial institutions are progressively co-innovating with a varied ecosystem of partners to accelerate business transformation and deliver beyond traditional industry definitions. For partners' services to be securely enabled, architectural readiness and plug-and-play integrations are required, helping financial institutions deliver time-to-market while meeting ever-changing client demand.

Adopting IT architectural models that correspond to industry-specific businesses—such as the Banking Industry Architecture Network (BIAN)—dictates that platform modernization must evolve to use a framework that simplifies banking architectures on common standards. This provides significant value and facilitates the interoperability of services within and outside the boundary of financial institutions.

Strengthening the development lifecycle

PNC recognized the benefits of using standard architectural frameworks across the development lifecycle to provide developers with a central repository for API discovery, promoting reuse and self-service for developing model services uniformly. The bank evaluated the feasibility and advantages of leveraging the BIAN framework to identify with clarity and structure all the components of target business processes and decided to focus on Account Opening and Corporate Lending. Using a compliance dashboard allows both management and development teams to monitor continuous adherence of PNC's approach to market standards.

Core transformation

A large North American bank recognized the need to resolve complexities with its highly customized core banking platform for consumer and commercial banking. Such a large-scale transformation program required the

bank to bring together stakeholders with varying business, strategic, IT, and financial considerations across multiple banking domains and drive a comprehensive understanding of digital banking and leading vendor platform capabilities.

By referencing a business-oriented architectural framework, the bank was able to align its transformation with the overall business strategy, helping ensure that the enterprise architecture can continuously adapt to new market and technology demands. The effort resulted in significant cost avoidance and risk reduction, as well as improvements in time-to-market for new product and feature releases.

The flexible foundation for coreless banking

South African ABSA recognized the imperative to refactor existing services by adopting a modular architecture based on microservices to integrate fintech services into new digital channels swiftly. ABSA unlocked value through a business-oriented architectural framework based on common, semantic language that simplifies the integration patterns to connect, compose, and reuse modular business functions.

ABSA's new digital foundations allow a streamlined development process for coreless banking, providing a consistent environment for containerized digital services to quickly meet the needs of the business as it evolves. Certified partners and third-party solutions can be incorporated to readily extend customer journeys on an open platform using cloud-native tooling.

Action guide

Determine—and demonstrate—where technology and architectural approaches create business differentiation.

- Where can hybrid cloud building blocks take your organization? Research tangible metrics and share them with executives and stakeholders. 51% of executives say procuring commitment for multiyear projects is among the top three challenges to realizing the full potential of their cloud strategy. Without agreement between technology and business team stakeholders on investment prioritization and new incentives aligned to an open digital world, initiatives stall out.

Emphasize AI—and then emphasize it even more.

- AI is fundamental to “the basics” of modernizing customer care, credit risk evaluation, workforce engagement, and financial crime protection. From there, develop AI capabilities to help you modernize and automate trade finance documents, credit applications, and loan management.

Collaborate faster and more seamlessly with business partners by leveraging banking-specific industry standards.

- Ease the movement of data and information across the banking services landscape using a common framework as a reference architecture. This helps facilitate business and IT alignment, increasing adaptability and speed for bringing new services to market.

Address interoperability and data accessibility concerns.

- The journey to hybrid cloud and open ecosystems is primarily one of data-driven insights—but you need to share and store them safely. Work toward fast, scalable, and secured data storage. And avoid vendor lock-in to mitigate operation risk and respond to regulatory requests.

Facilitate open innovation. Use secure platform interactions to enable collaboration across internal business units and the external partner ecosystem.

- Sharing data has benefits—and drawbacks. Almost 50% of executives say that exfiltration, or theft, of data is among the top three hindrances to achieving value through hybrid cloud. But establishing a unified security control framework can help alleviate those concerns, while also investing in “shift left” security on hybrid cloud operations.

Cultivate a flexible, iterative mindset—and learn from Healthier Institutions.

- Institutions that perform well financially, based on key banking financial metrics, emphasize engaging in partner ecosystems; implementing end-to-end digitalization; establishing data fabrics; deploying AI factories; creating small, operationally focused teams; and integrating early development process monitoring.

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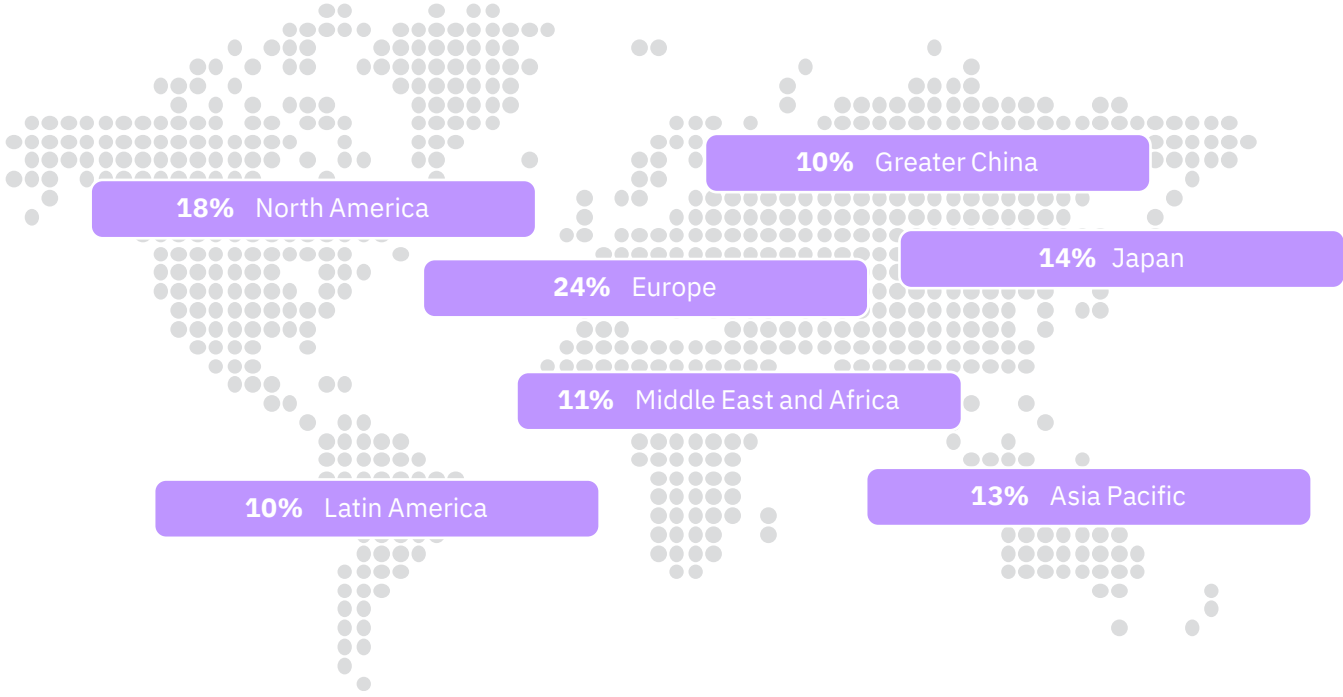
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Research methodology

The analysis is based on an extensive international survey of 2,000 CIOs and CTOs of banks conducted by IBV in cooperation with BIAN and Oxford Economics. Participating banks operate in 58 countries (see figure). Survey data has been complemented with actual financial metrics, such as the ROE and CIR reported in the annual reports of the surveyed institutions for 2018, 2019, and 2020.

IBV has employed a combination of analytical methods to understand how banks adjust their practices and operating models on hybrid cloud to address business change and address financial performance:

- Descriptive statistics and segmentation of data provide insights into the different practices, capabilities, and business trends across macro-region, size, and level of financial performance.
- Probit analysis (see Appendix A) provides insights into the relationship of financial performance with explanatory variables that relate to the adoption of hybrid cloud technologies and operations.



Appendix A: The probit model defined

A probit model is a type of regression used to model binary outcome variables. This method has been introduced to perform a signal analysis that helps identify which practices and core capabilities tend to characterize “Healthier Institutions” compared to their peers. Average ROE and average CIR (2018, 2019, 2020) are run as dependent variables, delineating “Healthier Institutions” from their peers—along with 29 independent variables describing each bank’s advancements in core practices related to security, data access, trusted AI, and operating model agility. The method has not been used for predictive analysis, but for descriptive relevance.

The Healthier Institutions are defined as banks whose ROE is “at or above ROE mean value + 0.50 ROE standard deviation” or whose CIR is “at or below CIR mean value - 0.50 CIR standard deviation.”

Related reports

Global Outlook for Banking and Financial Markets 2022

“Global Outlook for Banking and Financial Markets 2022.”
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Banking on open hybrid multicloud

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Own your impact

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