2023 Global Outlook for Banking and Financial Markets

Creating digital advantage for uncertain times

IBM

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Foreword

Folksy wisdom abounds about how hard it is to change the tires on a moving car. Some would say it's an impossible feat. And yet, financial institutions have been trying to do the corporate equivalent over the past several years.

It's not been easy. It's still not easy. Geopolitical uncertainty causes market shocks and calibrations. Client demands grow. Sustainability requires higher transparency based on real world data. All the while, financial services' C-suites are investing to respond rather than react.

Many are moving to digital foundations and transformations, but not just to keep pace with competitors. They recognize that modern banking and financial markets require digital capabilities for the resilience that leads to healthier financial performance. A measured, fast business response requires business agility and access to real-time data, grounded on strong hybrid cloud foundations and fueled by artificial intelligence and automation. Traditional business models—just like traditional monolithic legacy architectures—were not designed for highly digital economies and consumers.

The IBM experts in banking and financial markets reflect each year on the global industry environment, as well as emerging banking strategies. They ponder the investments made by key institutions in every jurisdiction, on client lessons learned, and on new ways forward. All of this rich thinking and debate is baked into the 2023 Global Outlook for Banking and Financial Markets by the IBM Institute for Business Value.

This year's report unpacks the uncertainty that is sure to remain globally in 2023. We discuss new impacts and strategies for growth and performance, risk and compliance, and cost and efficiency. Financial institutions can weather the storm, and emerge stronger, serving as the beacon for other industries that also must navigate under challenging economic conditions.

We trust it provides the basis for a strategic discussion within your organization throughout a year that brings certain change.

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Executive summary

In any business or digital transformation, an essential question to consider is: do customers and employees have better experiences as a result?

An uncertain world demands financial services institutions that can flex as needed.

Digital business models and architectures enable this flex on hybrid cloud. Traditional business models and monolithic legacy architectures constrain the use of data and AI.

Healthier financial performance depends, in part, on business and technology leaders who function as coequals.

When business strategy is set, technology leaders need to be active participants in the process. Profitability faltered industry-wide in the last decade. Shifting ways of working can help.

The next systemic crisis could be an operational one.

As organizations become more digitally interconnected with each other and their customers, a secure digital foundation is more essential than ever.

The only certainty is uncertainty

Change and uncertainty have made a dramatic entrance after more than a decade of relative stability in the world economy and capital markets—and it appears they may remain center stage for some time. As a result, we expect the financial services landscape will continue to transform rapidly in 2023.

Stress to the world economy in 2022 stemmed from many factors, including geopolitical conflicts, supply chain disruptions, a swift rise in inflation, and layoffs. The financial services industry sits near or at the epicenter of many of these disruptions. Whether dealing with shocks to the core or ripple effects, financial institutions must resolve structural weaknesses and find a way to steady ground—fast—even as the world continues to change.

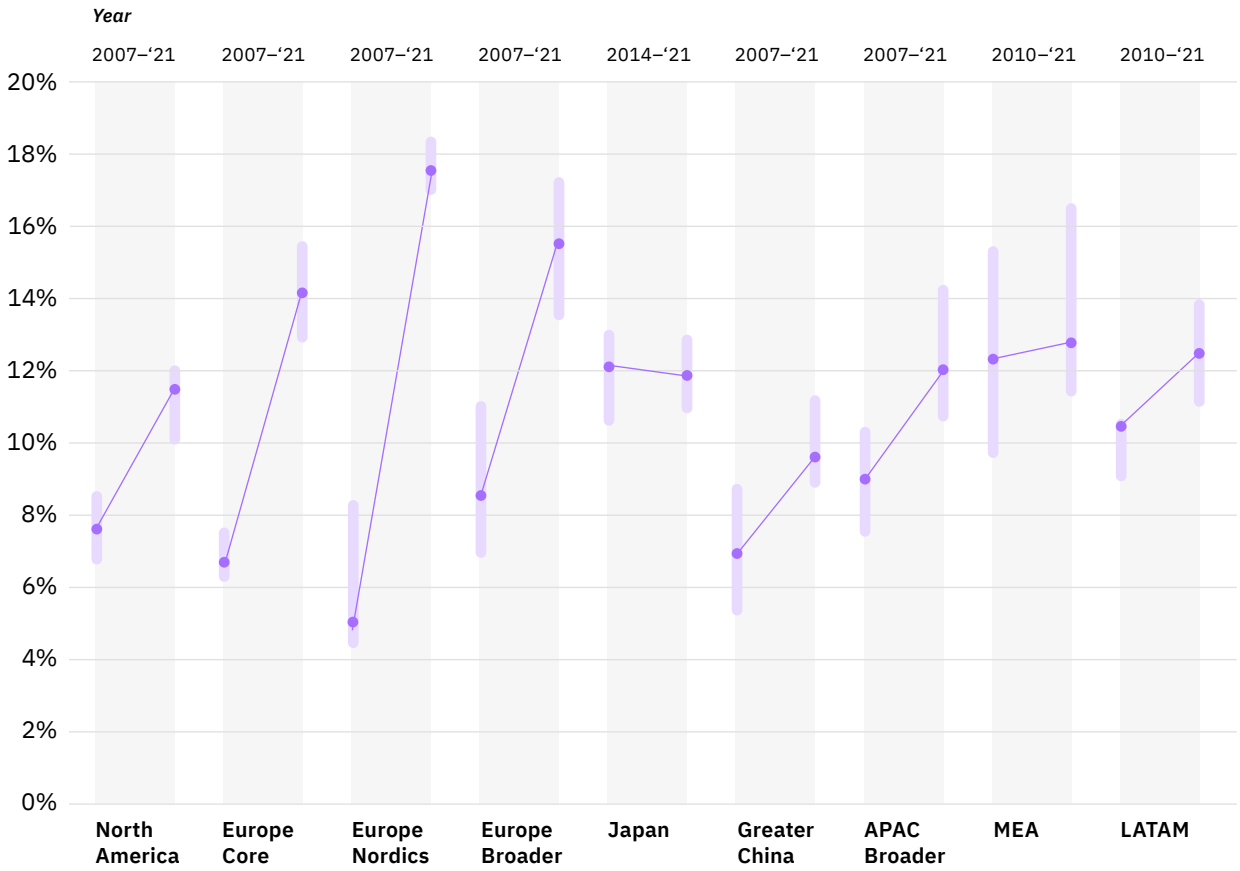
Four key market conditions to address in 2023

Financial institutions' C-suites are faced with a challenge: how to preserve increasingly expensive capital (see Figure 1) while investing in transformation to better combat uncertainty and emerge stronger.

FIGURE 1

Common Equity Tier 1 capital (CET1) has increased globally, spurred by regulatory requirements

The ratio compares a bank's core equity assets against its risk-weighted assets.



CET1 5-year averages of the median, 1st and 3rd quartile calculated in each region across the top 25 banks by total assets.

Note: Single year when different than 2007.
Source: S&P Global, IBM Institute for Business Value.

Leaders will be expected to adapt and respond to four key market conditions:

1. Macroeconomic tensions.

Increasing macroeconomic tensions are epitomized by spiking inflation, which called for major central banks to raise interest rates (except in China and Japan).[1] Facing recessionary environments, the sudden reversal in monetary policies may prove untenable for central bankers, adding more uncertainty in future decisions. At the same time, price volatility has returned to financial markets.

2. Geopolitical uncertainties.

Economic decoupling, among other factors, is testing the resilience of value chains while heightening financial risk across geographies and economic sectors. As globalization helped reduce costs, deglobalization will drive up costs, further fuel inflation, and change financial clients' needs.

3. New competitors.

Clients' digital adoption is accelerating, which exposes the shortcomings of traditional financial services. This creates an opening for new, digital-savvy competitors to capture and engage clients, resulting in potential revenue loss for incumbents. Large traditional institutions are hindered by legacy business and operating models that are not proving agile enough. Many of these models were designed in another era for another era, long before the speed enabled by exponential technologies.

4. Sustainability.

Environmental concerns have led to new, albeit necessary, restrictions on business and economic activities. While banks can be an integral part of the sustainability solution and find new revenue opportunities, they are also exposed to new risks and complex compliance requirements. They will need to navigate this area with great care, not only for their business but for the planet.

Let's delve deeper into each of these four market conditions.

Macroeconomic tensions spur change

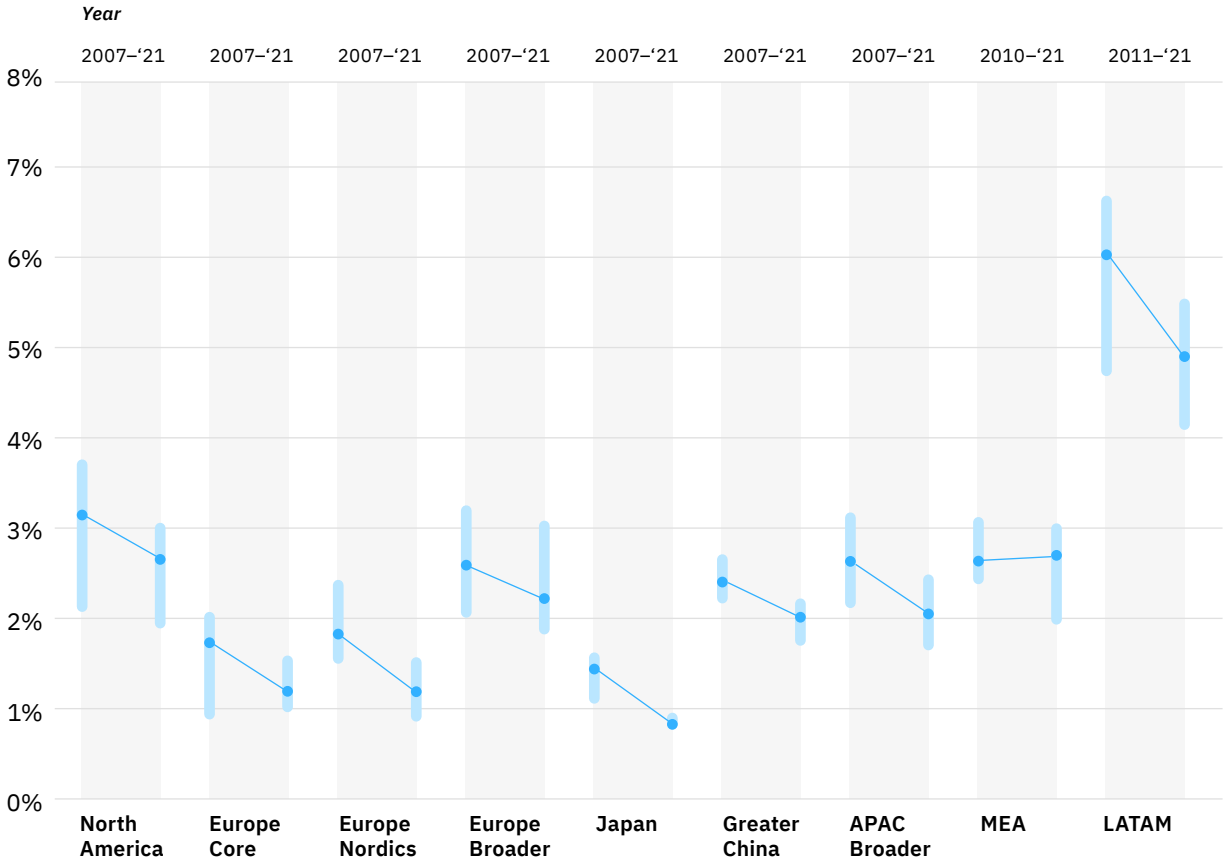
Central bankers were late to realize inflation spikes would be more than temporary in 2022. The US Federal Reserve Board was first to act, raising interest rates, certainly aware of the potential drawbacks in an economy with stagnant real GDP. The European Central Bank followed, despite the recessionary effects of energy supply challenges caused by the war in Ukraine. On the other end of the spectrum, the People's Bank of China further reduced rates as part of an effort to stabilize the ailing housing market while they shift from a manufacturing-led boom to a more services-oriented economy.

Will central banks reconsider raising interest rate targets, as their economies are likely to become recessionary in 2023? From a banking perspective, higher interest rates should favor interest rate margins which have declined steadily over the last decade (see Figure 2), especially for institutions centered on retail and wholesale lending. Recessionary expectations, however, are also resulting in growing credit risk appraisal and a significant increase in the cost of operations, which might offset most economic benefits for financial intermediaries.

FIGURE 2

Net Interest Margin (NIM) declined globally amidst lowering interest rates, while growth of non-interest deposits increased

The ratio measures bank profitability from credit operations as a percentage of net income to total assets.



NIM 5-year averages of the median, 1st and 3rd quartile calculated in each region across the top 25 banks by total assets.

Note: Single year when different than 2007.
Source: S&P Global, IBM Institute for Business Value.

New competitors have taken advantage of a key change brought by the pandemic: clients are more accustomed to consuming financial services on digital.

Geopolitical risk brings economic headwinds

Geopolitical tensions are rising, impacting social freedoms and cross-border economic interactions. A few factors come to the fore:

Deglobalization. As governments face mounting anxiety from their constituents and look to protect their economies from geopolitical risks, they have raised antitrust measures and custom duties on strategic technology. Deglobalization is expected to make labor more expensive and supply chains less efficient. AI and automation can remove costs from how banks—and corporations at large—serve their clients. A confluence of stresses demands continued resilience and investment in security.

Military escalation. The war in Ukraine may continue for an extended period. Even if a resolution is found in the near term, the European energy agenda will be largely at the mercy of suppliers and scarce resources, forced to accept prevailing prices for the time being.

As a result, the prices of goods and services will likely increase, impacting the economic competitiveness of the whole continent and beyond. Sovereignty and supply chain resilience concerns warrant a new secured approach to manage cloud and on-premises environments.

Economic rivalry. The two largest global economic powers—the US and China—could continue to compete for dominance on a range of topics from manufacturing industrial components to deploying artificial intelligence at scale and transforming money supply with central bank digital currencies (CBDCs). The shift from collaboration to open competition has been recognized worldwide and is causing the delicate repositioning of established strategies.

Regulators are responding to geopolitical risk in a variety of ways, from scrutinizing the sovereignty of cloud to demanding higher protection of citizens' data and privacy. Banks' 2023 profitability will be further constrained due to the growing cost of geopolitical instability; they may have to reconsider investments because of it.

New competitors bring new challenges

Non-traditional competitors are challenging incumbent institutions, wooing clients with a better client experience at a lower cost. These new competitors are a mix of fintech startups and "techfin" companies (technology companies that have entered the financial arena). This heightened competition is accelerating the contraction of financial services margins, steering new revenue opportunities away from established institutions.

New competitors have taken advantage of a key change brought by the pandemic: clients are more accustomed to consuming financial services on digital. Yet traditional financial institutions have struggled to move as quickly as needed with digital transformations. They are navigating technology, business, and people issues, hampered by legacy architectures and operating models. In contrast, digital competitors have the advantage of a greenfield.

While digital technology continues to shape consumption behavior, clients vary in their willingness to make financial decisions without the intermediation of human relationships (for example, the elderly and wealthier clients may not always self-direct). All sides of the equation—financial institutions, fintech, and techfin—are finding their way to the right hybrid service model for their clients, determining the correct mix of human versus digital interaction.

"Uncertainty is the new normal."[4]

Kristallina Georgieva,
IMF Managing Director

New competitors also increase pressure on traditional financial organizations in terms of talent. Post-pandemic, people's expectations about where they work and how work gets done have changed. As banks continue to look for ways to transform their business and operating models around customers, ensuring a better employee experience will be essential. Offering a better client experience is inextricably linked with offering a better employee experience. With more digital competitors wooing top talent, banks will need to address the human side of operating models sooner than later.

Sustainability pressures mount

Companies, their stakeholders, and society at large have focused more attention on climate change, thrusting sustainability requirements even more firmly into the spotlight. Sustainability strategies must be impactful and realistic.

More than 8 out of 10 CEOs (83%) expect sustainability investments to produce improved business results in the next five years.[2] Yet, 57% of CEOs identify unclear ROI and economic benefits as a leading challenge, while 44% cite a lack of insights from data.[3]

Financial institutions closely monitor and rely on other industries' transparency regarding their ESG initiatives. In this regard, they are instrumental in informing executive decisions in all industries, granting short- and medium-term value in terms of financial levers. The banking C-suite grapples with the same issues as those they serve.

The orchestration of sustainability-oriented data platforms allows financial ecosystems to participate transparently in a standard exchange of information. Doing so not only provides value for their individual sustainability efforts, but for the entire planet.

Meet uncertainty with a strong digital foundation

Technology is a deflationary force against today's uncertainties and conduit to new revenue opportunities. But there is not much low-hanging fruit with digital transformations.

Cloud has been the primary technology attracting the strategic investments of financial institutions. However, overly simplified economic assumptions about public cloud billing have often erased any value gained. The concentration of cloud providers has also raised regulatory scrutiny, growing awareness about systemic risks, while exposing concerns about data sovereignty. Financial institutions' C-level have come to realize that hybrid cloud is the essential approach to redefine the economic model of technology investments.

Together with data and AI, this hybrid cloud strategy uses a combination of new ways of thinking, new ways of working, and new tools to simplify and accelerate development. This enables institutions to weather a variety of disruptions with speed and flexibility. Remaining mired in legacy constraints is no longer a viable option.

To face uncertainty in 2023 and beyond requires holistic changes. CEOs and boards of directors taking an active role in this endeavor is essential to success. The next sections are intended to aid the banking C-suite in formulating their strategies and implementing them, reflecting on how to:

- Innovate on the business model to fuel growth and performance, by meeting or exceeding more competitive customer needs and expectations
- Rethink cost and efficiency to spur growth and innovation, using the power of digital technologies
- Resolve the gaps in risk and compliance to address evolving regulatory dynamics
- Invert the banking business architecture to gain competitiveness.

Perspective

Why hybrid cloud matters

Adopting hybrid cloud techniques and practices—such as application programming interfaces (APIs), microservices, containers, DevOps, and site reliability engineering (SRE)—enables financial institutions to manage integrated operations realizing four distinctive levers of value:

- Simplify and accelerate application development.
- Deploy application components to any compatible platform in any connected data center, including on-premises, public cloud, and at the edge.
- Secure, govern, and operate consistently across deployment locations with resilience.
- Standardize using open technologies and ecosystems, simplifying skill requirements.

The result is that business ideas can be engineered at the speed of thought and operated automatically. The pivot is that the realization of value shifts from cloud as infrastructure to hybrid cloud as an operating model.

On average, a typical institution deploys major platforms between four and 12 times a year. A hybrid approach shifts the innovation flywheel by enabling multiple controlled software releases per day. Innovating at the speed of thought translates into meaningful competitive advantage.

Strong foundations unlock the competitive advantage of secure access to data. On this hybrid architecture, trusted AI can be deployed at scale for evidence-based decision making. Operations can be simplified via workload automation.

Growth and performance hinge upon business model innovation

Regulations and central banks not only address macroeconomic factors but also try to buffer financial services from severe distress. The unintended consequences of this mediation, however, typically are constrained business performance and inhibited growth.

Traditionally, core banking operations drove revenues through profitability measured by *interest rate margins*. But recently, low to negative interest rates—coupled with the inflexible cost structure of banking architectures and operating models—have had a negative impact. The current trajectory of increasing interest rates might not provide sufficient oxygen for suffocating margins because sustained realized inflation can fuel credit risks in weak economies.

Increasingly, *banks see stronger revenue opportunities in fee income from client services*, particularly in Europe, Japan, and North America. However, fee income is also under stress. On the one side, transaction fees from payments are exposed to price competition due to digital intermediation. On the other side, the progressive simplification of financial products has reduced once lucrative embedded fees. Furthermore, technology is commoditizing access to trading venues in a race to zero-margin pricing.

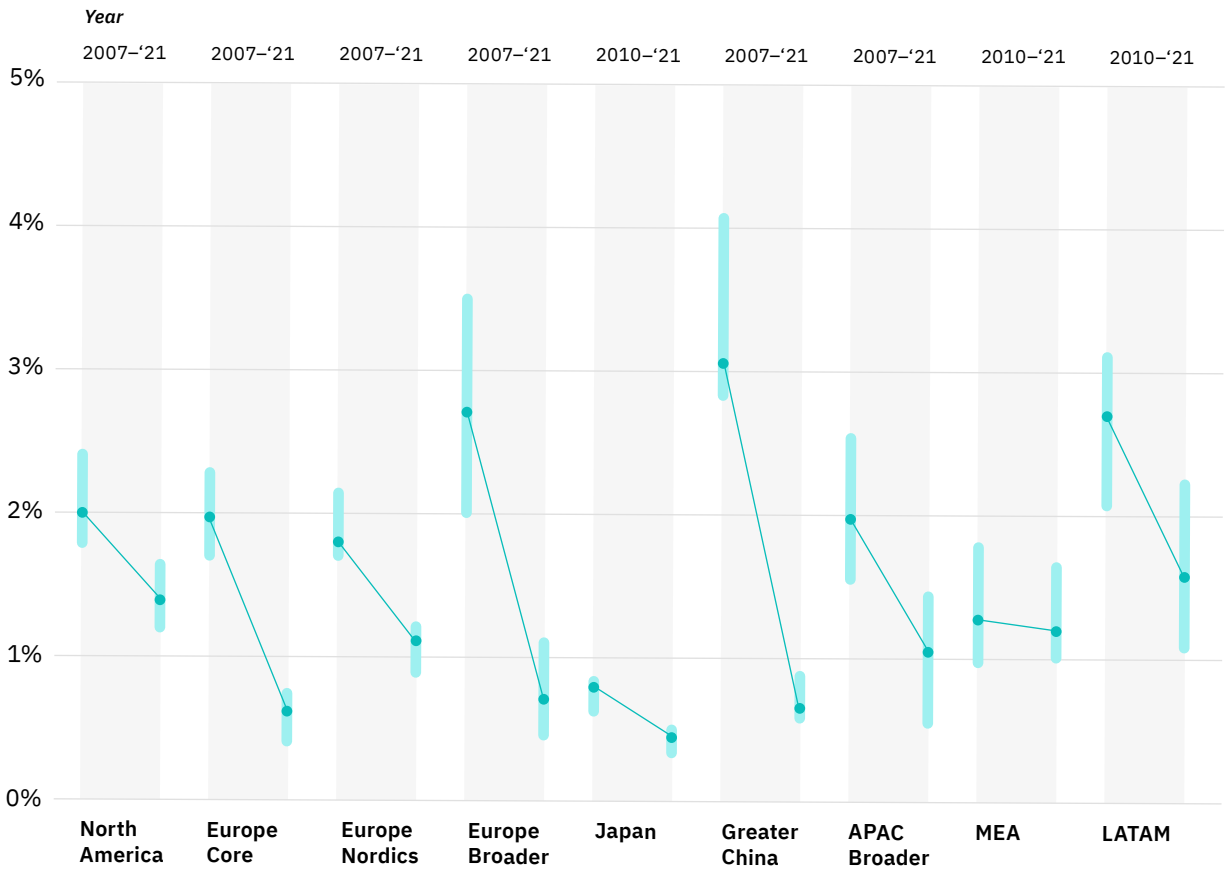
In such a competitive—yet regulated—environment, most banks find it hard to demonstrate the entrepreneurial mindset that can fuel growth and performance. Innovation is limited to narrow domains and within the confines of traditional industry definitions. The distance between current business models and unexploited digital opportunities is reflected in weak price-to-book ratios (see Figure 3).

But delivering technology-based innovation is more than a challenge; it's an opportunity to differentiate. Incumbents need to drive growth and performance in a sector rife with new, nimble, digital competitors who are rewriting the rules of engagement.

FIGURE 3

Price-to-book ratio (PBR) remains under significant pressure, reflecting low margin expectations in a capital-intensive industry

The ratio measures the market value of a bank's equity to its book value.



PBR 5-year averages of the median, 1st and 3rd quartile calculated in each region across the top 25 banks by total assets.

Note: Single year when different than 2007.
Source: S&P Global, IBM Institute for Business Value.

Advanced technology can unlock value and innovation in new ways

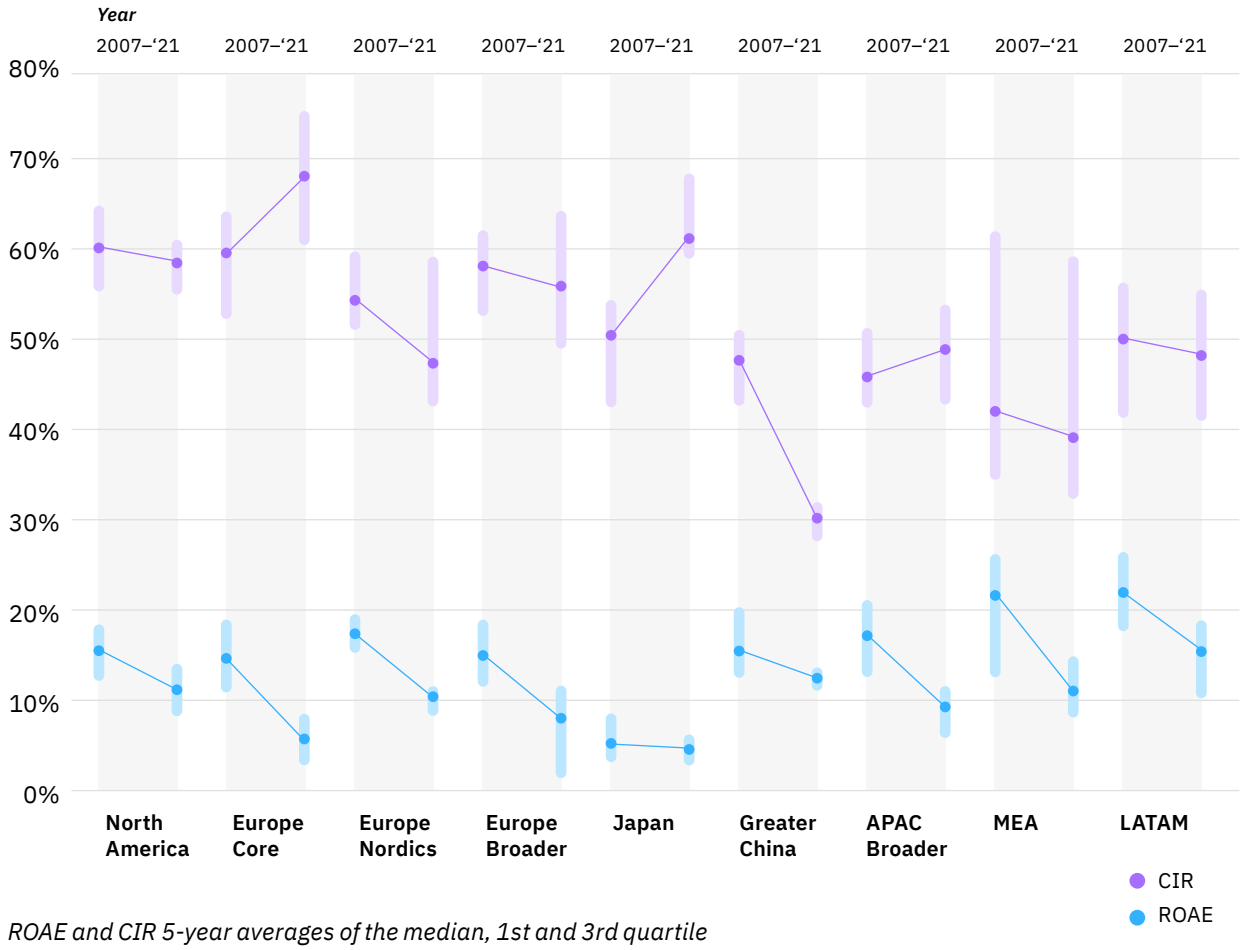
According to 2022 mid-year analysis, total technology spending in retail banking bounced back from the pandemic, and was on target to grow by 4.3% to reach $250 billion in 2022.[5] Although many banks made headlines for their innovation efforts, sustained financial performance has not materialized; return on average equity (ROAE) faltered industry-wide in the last decade (see Figure 4).

Financial institutions set up innovation centers, which were often configured as siloed experimentations rather than real transformation engines. As a result, innovation initiatives often missed the mark for achieving key ambitions as part of an enterprise strategy.

FIGURE 4

Cost-to income ratio (CIR) remains excessively high. Return on average equity (ROAE) has declined globally since the global financial crisis of 2007-2009.

CIR measures a banks efficiency; ROAE measures performance based on average shareholder equity.



ROAE and CIR 5-year averages of the median, 1st and 3rd quartile calculated in each region across the top 25 banks by total assets.

Note: CIR from 2010 MEA only.
Note: Single year when different than 2007.
Source: S&P Global, IBM Institute for Business Value.

Without business model innovation, banks cannot capture growth and performance. Infusing advanced technology throughout a business model not just for increased efficiencies, but also enhanced value, is essential. AI can be of a game changer in both areas—efficiency and value. IBV research across industries shows that AI value drivers are increasingly centered on customers and their perceived value, rather than on efficiency or direct revenues (see Figure 5). Crédit Mutuel, for example, used AI to help customers get faster, better answers to their inquiries—reducing average resolution time from 3 minutes to 1 minute. (See "Crédit Mutuel uses AI to get the right information to customer advisors" on page 17.)

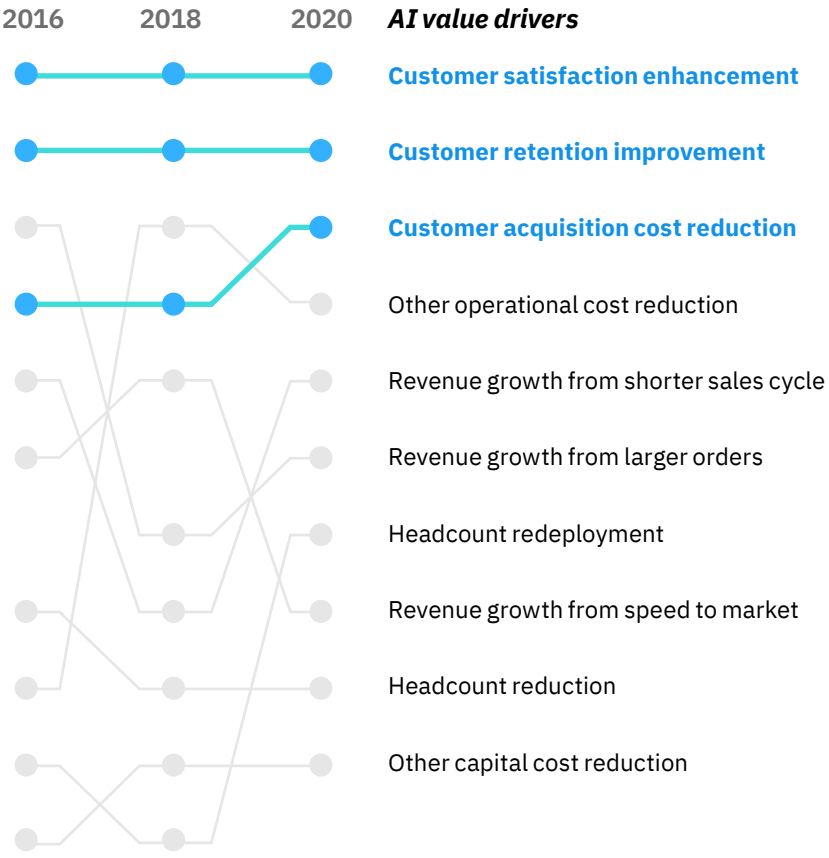
Also, many firms lacked a holistic strategy to rapidly integrate fintech services on a secure platform, which hampered their ability to succeed. Most attempted to digitize existing business models without changing the foundations of client engagement, continuing to replicate what worked traditionally, but on mobile interfaces. In reality, the client engagement strategy and approach needed to change when the platform was introduced.

Business models need to reflect the digitalization of financial services to help drive growth and performance.[6] The shift to digital prompts financial firms to search for new value-based approaches to customer relationships that can change the institution at its core. Adjusting the business model goes hand-in-hand with changing the operating model, infusing technology to better deliver on the promise of innovation.

FIGURE 5

AI value drivers 2016–2020

Companies are focused on top-line, customer-centered growth.



Source: "How to create business value with AI: 12 stories from the field," IBM Institute for Business Value. August 2022.

Case study

Crédit Mutuel uses AI to get the right information to customer advisors[7]

At Crédit Mutuel, each customer has a dedicated advisor. The advisor acts as a first point of contact, helping customers navigate their relationship with Crédit Mutuel across various products in areas like checking, savings, mortgages, and investments. The quicker and easier it is for advisors to access relevant information, the faster they can respond to customer requests (and the more time available to serve other customers). With approximately 3 million incoming calls and 7 million emails received per month, improvements in resolution time can have a significant impact.

The company's challenge was inconsistent documentation across products and groups. Having a single advisor across many products means an advisor must have the necessary information at their fingertips across these areas. To resolve a customer query, advisers (who are typically generalists) use internal search engines or phone calls to source answers about specific products. But individual banks in the Crédit Mutual network organize their information differently, which complicates the search. Moreover, the language and terminology can also differ. This means that typical, off-the-shelf language models are insufficient for prioritizing the information presented to these advisors.

Using AI and improved language models, the company improved answer quality and resolved customer inquiries faster. The Virtual Assistant is now able to provide good answers to 85% of customer cases (and 2 million additional answers to customers each year), while also reducing the time to resolution from 3 minutes to 1 minute on average. The overall time savings (for customers and advisers) was in the order of tens of thousands of hours each month.

The distance between current business models and unexploited digital opportunities is reflected in weak price-to-book ratios.

Scaling requires foundational business and technology changes. Trying to scale using monolithic, inflexible architectures not designed for digital needs doesn't just limit value—it inhibits positive outcomes, in most cases.

Fit-for purpose foundations are crucial for success. Creating a strong digital foundation for the business allows banks to move forward on multiple fronts—innovating, while protecting interest rate margins and requalifying fee income.

Ecosystem platforms can multiply value

As we write this outlook, financial institutions are learning to create new value with ecosystem platforms. Not only do these platforms remove friction from client and employee journeys, but they also allow sharing data, insights, and capabilities with trusted partners—multiplying the potential value that can be achieved. As an increasing number of financial organizations build essential data-driven architectures, these ecosystems become even more powerful. As firms can better understand, anticipate, and serve evolving client expectations, they become more adept at proactively delivering on them.

Common roadblocks to value

The organizations moving toward these positive changes must overcome four main—and exceedingly common—constraints:

- A strategy that does not map digital technologies to business opportunities
- Inadequate operating models on inflexible architectures
- Imperfect alignment of organizational incentives, limiting an entrepreneurial mindset
- Lack of experience in hybrid cloud adoption.

Let's look more deeply at these challenges and how financial institutions can approach them.

Link digital and business strategies

Currently, most banks are intermediaries in product distribution channels, connecting proprietary or third-party manufacturers to final clients needing access to their money, credit facilities, investment risks and returns, and potential hedges for their liabilities.

But digital economies create an opportunity for banks to generate value beyond product placements. Banks can become enablers, if not active orchestrators, of ecosystem platforms. Platforms allow engineering of frictionless user journeys beyond banking, or trusted advice at scale. Linking banking profitability to the value consumed by clients across ecosystems redefines the revenue stream—from fees embedded inside products to fees for accessing the platform.

This is just one example—there are many opportunities for banks to gain greater clarity on digital business strategies that can bring value.

New forms of client engagement require agile operating models on modernized architectures

Current operating models supporting client engagement are often limiting, based on traditional architectures' shortcomings—namely, IT implementation and business logic. Some institutions approach this with a lift-and-shift to cloud, where workflows and workforce interactions remain largely unchanged. This won't provide the same economic legs that a significant modernization of the application landscape does.

For example, PNC embraced domain driven design (DDD) when deploying a new retail banking solution. It was able to resolve system complexity, reducing operational risk and accelerating time to market (see "Reimagining the future of retail banking through digital transformation" on page 20).[8] DDD helps bridge the divide between code and business reality. How? With software that reflects the mental model of the people who know the business best, using a single language and shared model that is reflected in the project code.

Incentivizing an entrepreneurial mindset

Non-traditional competitors are changing how customers consume financial services, with fresh approaches. To meet or exceed customers' new expectations, banks need a new operating model that allows for greater agility, tailored customer engagement, and speed. CEOs are challenged with infusing an entrepreneurial mindset into institutions that must balance innovation-fueled growth with risk and compliance. New ways of funding and incentivizing can help speed the cause. But they will not be enough—a heavy focus on innovation is necessary.

Case study

Reimagining the future of retail banking through digital transformation[9]

PNC Bank was looking for a flexible and agile approach to win new customers as part of its expansion strategy. Teams needed an innovative way to reduce the complexity in multiple systems so it could better attract new customers to PNC through streamlined experiences that build and maintain trust.

They were able to have customer interactions stream into a platform, regardless of the originating channel. Whether customers engage through ATMs, mobile apps, retail transactions, or online or in person at a branch, PNC's apps can tap into the platform and take action in real time.

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.

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. PNC can modernize its applications and create cloud-native development environments with its most critical data within a security-rich, private cloud.

"If you can embrace agile setups, experiments and constantly nurture a learning culture... you can respond a lot more quickly to opportunity and changes in the environment."[11]

Piyush Gupta,
CEO, DBS Bank

Many financial institutions have funded innovation experiments periodically, as a discretionary spend, but they lack the authority to enforce change on operations. Rather than siloed experiments, leaders should consider a more broad-based approach, either centralizing holistically or—at a minimum—addressing innovation across multiple lines of business at once.

Becoming an innovation culture, though, means accepting—and even celebrating—failure as essential to the experimentation that brings success. Business models will have to be tested and adjusted in real time, in the "fail fast, learn fast" culture endemic to entrepreneurial companies.

What we very often see in large financial institutions instead is the opposite. Several legacy institutions built their "digital bank" leveraging existing infrastructure and client relationships, in an attempt to reduce the entrepreneurial risk of innovation. The side effects of that approach were technical dependencies and overlapping client segments, with unclear mandates about open competition in the marketplace. Once live, this can lead to significant costs and limits the upside—which, in turn, hinders business success.

For financial firms to achieve their desired business outcomes and achieve healthier financial performance, they need to move on multiple fronts. Baking digital technology throughout the business, infusing innovation with entrepreneurial mindsets and ecosystems, modernizing enterprise architectures and operating models—these are all worthy of focus in 2023 in the quest for growth and performance.

Innovate anywhere and everywhere on hybrid cloud

Today, competition invites banks to innovate continuously. In order to innovate anywhere and everywhere, hybrid cloud is instrumental. Yet, most banks are still early in their journey to hybrid cloud. 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.[10] Banking organizations have "room to grow" as they progress from a "lift-and-shift" approach to migrating workloads for cloud optimization.

Rethinking cost and efficiency to fund growth and innovation

While return on average equity (ROAE) weakened in the last decade, cost-to-income ratio (CIR) improved but remains uncomfortably high (see Figure 4). Although financial institutions invested in multiple cost reduction programs, the relative stickiness of CIR can be attributed to myopic attempts on cost takeout for select non-business-critical workloads rather than holistic strategies to transform core operations.

Pervasive cost reduction is crucial to free capital for investments in new products and services. Cost reduction initiatives have typically been managed top-down by senior executives and funded through profit from as-is businesses. However, to fully address CIR stickiness, executives are now seriously considering integrating cost reduction into bottom-up business reinvention, which can help by:

- Redefining the strategic scope of cost cutting
- Conducting a reality check about changing business culture and skill gaps
- Review overall strategy in light of geopolitical developments
- Employing deep cloud (see sidebar on page 27) to business-critical value streams for material performance improvement

Only 43%

of IT executives in the US say they have visibility today into costs and consumption across their cloud environment.

Redefining the strategic scope of cost cutting

Chasing cost reduction tactically, isolated from business strategy, tends to lead to narrow *outputs*. Instead, healthier CIR is the ongoing outcome of a multiyear commitment to reduce overall operating complexity and enhance the quality of client services. Financial institutions should consider three major areas where business strategy intersects with cost-oriented initiatives:

1. Replace a quick-win mindset with an "it's-safe-to-transform" mindset.

Margins steadily declined over the last decade (see Figure 2), punctuated by systemic crises. Financial institutions historically have reacted to unsatisfactory performance with a series of urgent cost-cutting projects. This approach generally could not address—and sometimes worsened—the root causes. Sustained performance can only be achieved when executives are freed from "quick-win syndrome." Leaders can unlock the value of a proactive "it's-safe-to-transform" mindset when they involve and incentivize the entire organization over the long term. Technology can also help support a transformation mindset, leading to greater value. In today's business environment, that means reducing complexity—from eliminating products that no longer align with overarching strategy, to redesigning business processes with an automation and AI lens. Both bring cost efficiency and reduce operational risk.

2. Remember: Economies of scale vanish when operating on the quicksand of monolithic architectures.

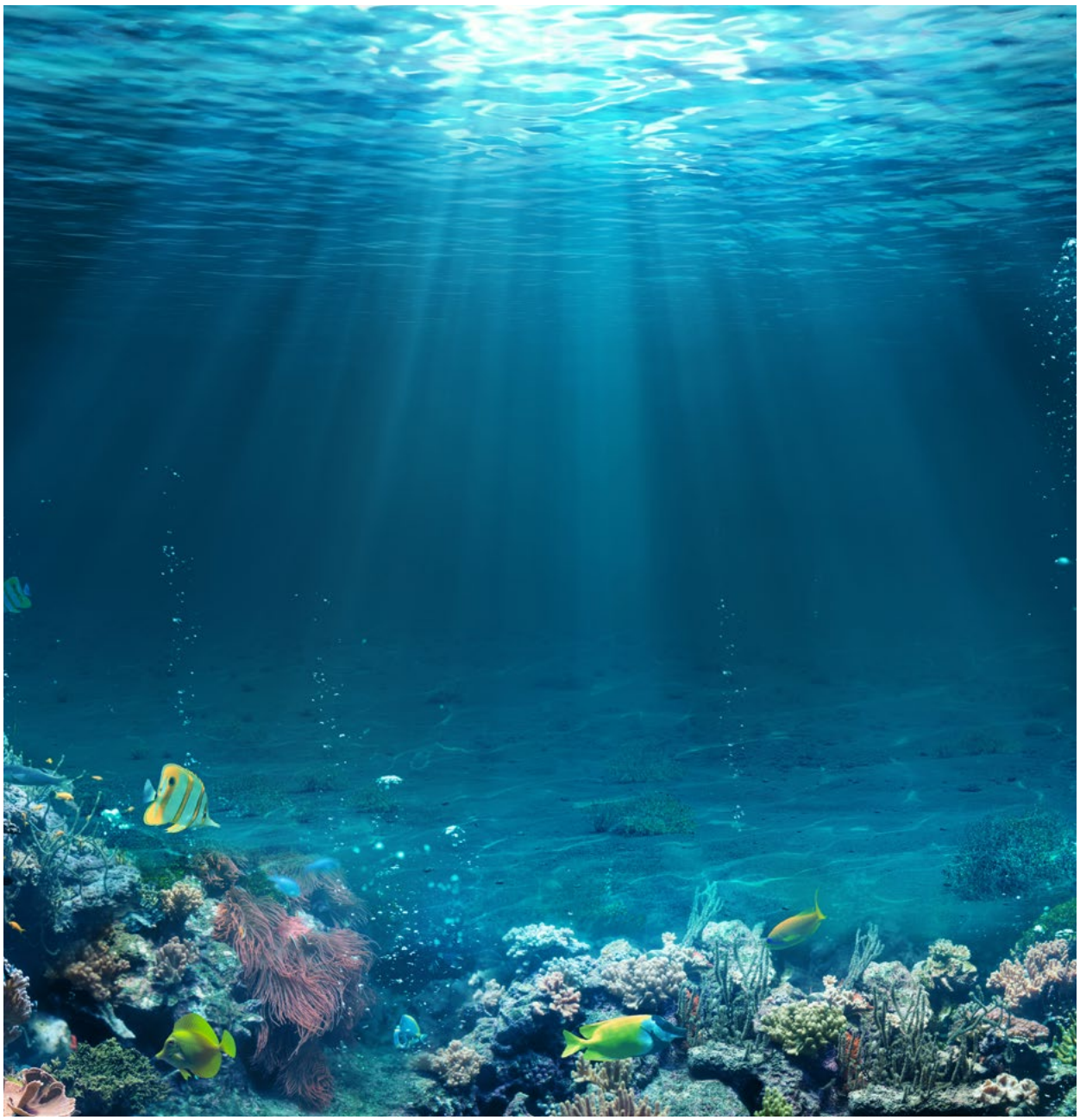
Industry consolidation has often been a common route in the search for economies of scale. However, recent mergers were primarily executed to resolve distressed institutions, with bounded commercial upside. Failure to secure economies of scale in these deals is not surprising, as many are performing integration with pre-existing monolithic architectures that do not meet modern banking needs. As a result, the competitive posture of post-merger banks can easily worsen, delaying the digitalization that could bring value.

3. Manage total cost of ownership (TCO) across channels.

The promise of digital is to make individual transactions easier and less expensive. However, total cost can still increase with rapidly expanding overall transaction volume. Banks must think more broadly about the full economic model around client interactions. When client interactions change modality, banks need to revise their cloud cost variability assumptions (for example, shifting from branches and ATMs to mobile). Banks must consider more than cost. A balance of digital and human touch is, many times, the better route because more complex financial decisions still benefit from human relationships.

"The pandemic, we had a lot of work to do to help our clients through. But you had to keep investing in technology that would provide efficiencies and effectiveness going forward. And that's how you run the company."[12]

Brian Moynihan, CEO of Bank of America



Reality checks on culture and workforce experiences

Top-down change mandated from the C-suite works when front-line workers are committed to it. And that generally means they are helping to shape it. In the same way, technology delivers more value when bottom-up workforce contributions are embraced. To get to healthy cost reduction and resilient operating models, leaders must address business culture. The workforce is typically hesitant to embrace change even if not directly impacted by headcount reduction. Ongoing, transparent communication when moving to more efficient operating models is essential. Rather than "telling" employees, involve them in the change from the beginning so they can help shape it; doing so usually results in a far better employee experience.

Review overall strategy in light of geopolitical developments.

While globalization boosted operational efficiency, resilience concerns have mounted in the face of growing geopolitical risks. They impact entire economic sectors. Institutions are currently in full review of their configurations. For example, some European banks chose to wind down their Russian operations because of the war in Ukraine. Pondering on near-shoring or geographical reallocation of operations, many institutions need to refresh all economic assumptions while revising the most appropriate mix of strategic changes.

Employing deep cloud for business-critical value streams

While technology transformation is essential to deliver healthier operating costs, re-platforming existing workloads with a "lift-and-shift" approach delivers only limited benefits. Attempting to harvest immediate cost savings from hurried cloud migrations largely means missed strategic targets. Usually, this is due to faulty assumptions on cloud-related costs and lack of visibility on the target platform that deals with security and containerization of complex environments. More than half (53%) of IT executives in the US say they've been hit with more unexpected cloud bills than what they planned for in the first half of 2022. And only 43% say they have visibility today into costs and consumption across their cloud environment.[13] Using domain-driven design within hybrid cloud can help alleviate some of these issues because it simplifies the cloud journey and helps speed cost savings. Simplification pays, as data reveals that cloud migrations are a cost-amplifying factor in case of data breaches.[14]

As financial institutions embark on new initiatives to remain competitive, cost and efficiency efforts will remain high on the list in 2023. While it's tempting to approach this endeavor incrementally—and that is a viable approach—the strategy itself must be more holistic to increase the depth and speed of success.

Perspective

What is deep cloud and how can it help banks?

When it comes to technology-driven performance improvement, business leaders should heed the wisdom of commercial fishing: if you want to catch bigger fish, go fishing in the deeper waters where big fish live.

If your organization has been investing in technology with expectations of meaningful business value—but it hasn't yet realized that value—it could be because you're fishing in the wrong places, in the wrong way, and for the wrong kinds of fish.

Is your organization stuck in the shallows? Indeed, infrastructure-centric adoption of cloud computing, data, software, and artificial intelligence (CDSAI) technologies and practices is like fishing for small fish in shallow water. There's nothing wrong with small fish. Adopting cloud to make enterprise IT more efficient is a good thing, and adopting software as a service (SaaS) to reduce the cost of HR, finance, CRM, and systems of record can be a very productive investment.

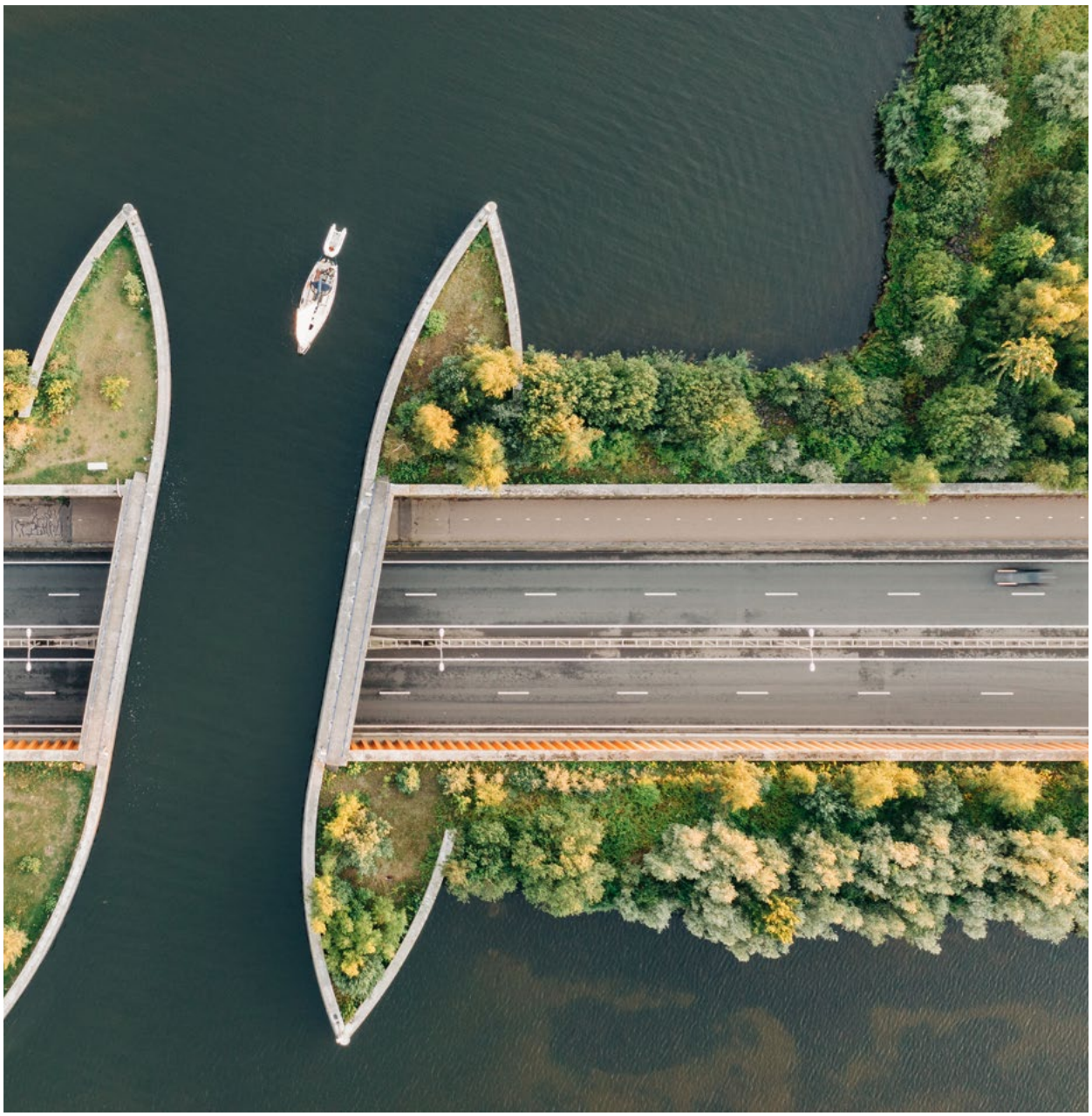
But those standardized functions don't generate revenue and can't differentiate the enterprise's core value propositions. If your business is still dragging nets through the shallow, near-shore waters of back-office cost optimization, it's not going to catch a bigger, more lucrative fish. Ever.

Deep cloud proposes that if you want to catch bigger fish—to make material improvements in how your core business performs—you must go fishing in the deeper waters where those big fish swim by taking on the most business-critical value streams and use cases in your enterprise.[12]

Two key principles are at the core of the deep cloud proposal. The first is that financial organizations must focus CDSAI investments directly on improving the performance of their most business-critical operations—the way they go about creating and keeping customers; the way they deliver fundamental value propositions; the way they orchestrate the front, middle, and back office; and the way they respond to changes in the global business environment.

Deep cloud's second key principle is that banks must visualize, design, and operate their business-critical operations as value streams. By doing so, they can model the current performance of those value streams in terms of velocity, flow, quality, cost, contribution to income, and so on. Then, with that current state as a baseline, they can establish a performance improvement target and begin to redesign the value stream using elements of the deep cloud toolkit, including CDSAI and related methods and practices.

Excerpted and adapted from "The deep cloud alternative: Getting to the heart of business performance." IBM Institute for Business Value. August 2022.



Evolving risk, compliance, and regulatory dynamics

The next systemic crisis might not be about finance. While operational risk has always existed, the chances of it causing the next crisis are higher than they've ever been. Why? New digital channels and ecosystems, while designed to be good for business, also bring increased risk—cyber risk particularly.

Traditional best practices for risk will not suffice in a digital, ecosystem-based world

Institutions increasingly rely on the availability of third-party technology providers to support business-critical operations. They are shifting from on-premises to hybrid cloud consumption of workloads and services. As a result, aggregation of operational risks now expands well beyond internal monitoring and risk management capacities. And it is virtually impossible to fully monitor vulnerability, even for close business partners, despite thorough contracting arrangements, standards, and regulations.

The average cost of data breaches has been rising in recent years, heightened by the accelerated digital adaptation from clients and banking workforces. Although financial services are at the forefront of cybersecurity investments, their cost of data breaches was 37% higher than the global average in 2022, second only to healthcare.[16] Facing uncertainty and rogue actors in a digitally interconnected world, cyber resilience needs to become a top priority across entire ecosystems.

In addition, fintech innovation and business transformation are challenging risk and compliance practices. Exponential technologies like AI and cloud reshape the very definition of the industry. For example, embedded finance extends the scope of open banking, and decentralized finance (DeFi) attempts to create a world virtually without banks. Traditional best practices for risk and compliance are not sufficient to address the digital future.

Key action areas

Financial firms can address risk and compliance while pursuing digital transformation and business model innovation. They are not mutually exclusive. With this in mind, institutions are prioritizing a few key things:

- Manage business and system complexity with full visibility of security and compliance.
- Prioritize cyber risk investments as rogue actors become more insidious.
- Share and integrate data to counter fraud and money laundering.
- Bake operational resilience into the business.
- Refresh policies and governance for hybrid cloud as the use of AI expands.
- Help ensure transparency on sustainability.

Manage business and system complexity

The global financial crisis caused banks to simplify their products, as regulation attempted to deleverage the financial system (for example, central clearing of plain vanilla OTC derivatives). Yet, financial institutions remain complex in their products and business services. And now, ecosystems have added to the technological complexity. Financial services are no longer contained within four walls. They operate as ecosystems of internal and external contributors who interact with users accessing on-premises systems, hybrid cloud configurations, and a network of third- and fourth-party providers.

Adding to complexity, institutions face unexplored areas of risk that invite a refresh of regulatory frameworks and expand the need for oversight and governance. Financial innovation has transformed from advanced quantitative modelling to coding of tech-enabled digital assets. Access to DeFi platforms increases institutions' reliance on third parties operating outside the regulated perimeter. Regulatory scrutiny is intensifying in the identification and management of risk in these outsourcing relationships, including the level of the institution's visibility into third parties' security, data protection, and use of cloud services.

The complexity inherent in managing a multicloud environment with full visibility is making new infrastructure difficult to manage. In 2022, only 27% of IT executives across industries in the US said they have adequate visibility into migrations; just 55% confirmed having it for security and incident response.[17]

Prioritize cyber risk investments

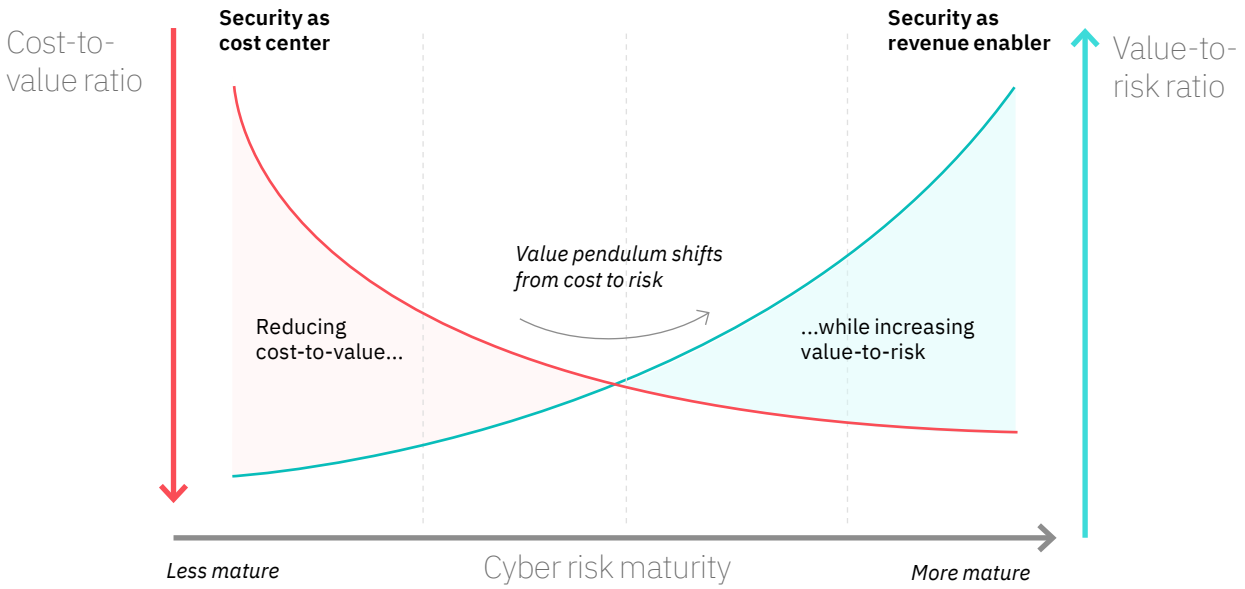
Over the next four years, the costs associated with cybercrime ($10.5 trillion annually by 2025) are estimated to exceed worldwide cybersecurity spending ($267.3 billion annually by 2026) by 40 times.[18] Rather than living in a state of perennial defense, where attention is focused on mitigating threats and surviving to fight another day, Chief Risk Officers (CRO) are recognizing security as an essential common thread that ties together the organization's business and technology strategies. They're using it to unlock larger pools of value, aligning operations for greater efficiencies and collaborating more effectively to deliver better business outcomes. According to 2022 IBV research,[19] 2,000 CIOs and CTOs of financial institutions globally defined "unified security frameworks"—spanning cyber risk to compliance postures—as their top priority to generate greater business value in the next three years.

How can business and technology leaders use risk management to prioritize security investments going forward? One recommendation is the use of risk quantification and related measures such as return on security investment (ROSI), which supplements traditional ROI calculations with the financial benefits gained from risks avoided or mitigated. Understanding the shift from cost-to-risk toward value-to-risk is critical to supporting decisions across the cyber risk and cybersecurity lifecycles. If an organization can gain efficiencies, mitigate financial impacts, and avoid the loss of revenue, it can significantly improve its bottom line. In addition, when an organization is less susceptible to risks, it can be more resilient and less vulnerable to disruptions that impede the execution of its long-term strategy. This can enable growth and top-line improvement (see Figure 7).[20]

FIGURE 7

Risk awareness pays off

A better understanding and avoidance of security risks power performance.



Share and integrate data to counter fraud and money laundering

Fraud, anti-money laundering, and cybersecurity programs protect the same customers, but often information is not well connected or shared between institutions. While each program analyzes a portion of an incident, they may not see all the relationships between behaviors and interactions, increasing the likelihood that bad behavior goes undetected and the bank's business is compromised. It is no longer economically viable to defend the enterprise using isolated risk management and compliance techniques. What is needed are holistic strategies that combine data across security functions, to predict and respond proactively. To combat this trend and tie together suspicious webs and patterns, leading financial institutions are developing unique AI models that fuse together criminal patterns across organizations.

Bake operational resilience into the business

Investing comprehensively in operational resilience drives positive outcomes across multiple dimensions. For example, customer value stems from digital access to money they know is protected from systems failure. Banks can drive competitive value with more efficient and effective compliance. Solid foundations that integrate fintech and ecosystem partners create innovation value. Society reaps value from a resilient technical infrastructure that allows people digital access at work or at play, wherever they are.

Cyber resilience is a critical component of overall operational resilience. More financial institutions are recognizing this and are shifting their focus from risk exposure to cyber resilience (see Figure 8).[21] The result is an organization less reliant on fixed boundaries, more integrated with partners, and more resilient to the unknowns characterizing today's operating environment.

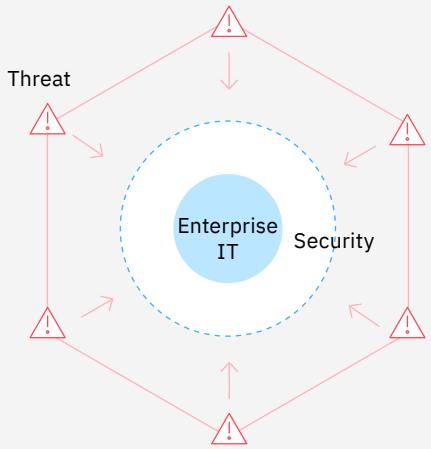
FIGURE 8

Security for the public good

Ecosystem partnerships based on shared responsibility, shared resilience, and shared value are transforming security operations.

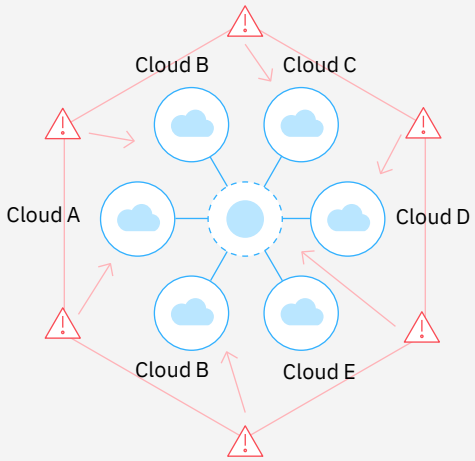
Traditional security (pre-cloud era)

- Enterprise builds own defense against cyber attackers
- Emphasis on security perimeter
- High cost, low effectiveness
- Limits collaboration



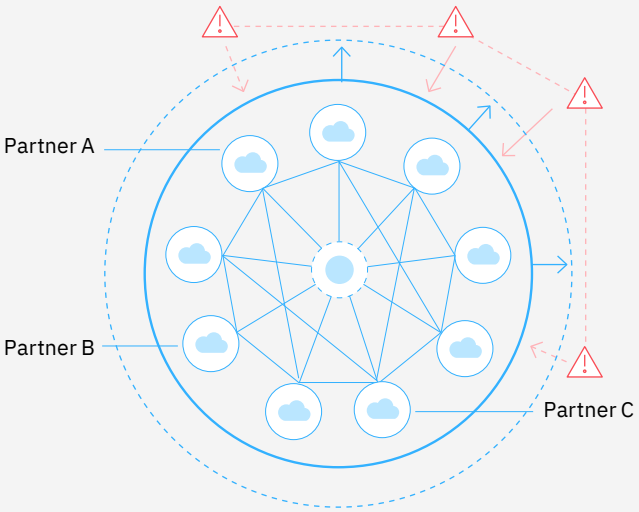
Shared responsibility (shallow cloud era)

- Some IT moves to different clouds, each with own security posture (stronger than enterprise IT)
- Bilateral security coordination
- Higher efficiency, improved security posture
- Bilateral approach and “lock-in” impede transformational value



Shared resilience (deep cloud era)

- Multilateral coordination among ecosystem partners
- Strong collective security posture proactively reduces attackers’ capabilities
- Security as shared public good
- Reduces risk; enables openness, value creation, and transformation



This newfound—and more mature—security posture will manifest itself differently within specific industries as well as within each organization's transformation journey. The shift is also mirrored by new regulatory requirements such as the upcoming Digital Operational Resilience Act (DORA) in the European Union.[22]

Refresh governance for hybrid cloud and trusted AI

A single public cloud is rarely adequate because of data gravity, security and regulatory requirements, and the complexity of mission-critical applications. Regulated institutions can leverage hybrid cloud approaches that span conventional data centers, mainframes, multiple clouds (private and public), software as a service (SaaS) applications, and applications and data running at the edge. As financial institutions demand near to real-time data and open innovation to expand business value, a holistic approach to hybrid cloud governance is required to remain compliant during digital transformation.

From the identification and management of regulatory changes to the collection of data for risk reporting, many institutions have been investing in AI-driven techniques for continuous monitoring of regulatory compliance. Risk and compliance managers need AI support to free them to focus on the higher value risk activities rather than being reactive to delayed manual reporting. But AI also introduces new risks associated with the use of new algorithms, which can bring ethical and other concerns. To address this, most organizations are establishing a governance structure, including policies and standards, to help ensure the safe use of AI in their risk management approach. Today, there are few regulations regarding the use of AI in financial services, but risk and compliance professionals can leverage their existing risk management principles for establishing policies and standards in this new area of risk.

Foster sustainability and transparency

While financial institutions expand their offering around sustainability, such as ESG lending and investment products, global standards are still emerging for reporting on underlying promises and associated risks. As the approaches continue to evolve, reputational damage may materialize. In the absence of complete regulations and clear market standards, risk management and compliance officers face accountability challenges because realistic metrics are hard to establish. The data they need is either not available or the quality is not reliable. Unlike other risks that control functions oversee, financial institutions and their clients do not have historical ESG data to draw from, so establishing best practices and thresholds is difficult. Investments to connect all parties operating in the sustainable finance ecosystem can help resolve compliance and risk management gaps.

Rather than living in a state of perennial defense, where attention is focused on mitigating threats and surviving to fight another day, Chief Risk Officers (CROs) are recognizing security as an essential common thread that ties together the organization's business and technology strategies.

Case study

Global Bank uses AI to improve internal audits[23]

A bank's internal audit department relies on good documentation to replicate controls and assess their effectiveness. This should, at a minimum, contain sufficient information to identify what needs to be done, how it should be done, and what the expected outcomes are. If any of this information is missing, then the auditor may need to talk to the control owners/documenters on revisions, and this increases the effort required for the audit. Further, the documentation is critical to support regulators' understanding of the controls being applied, and as such, it should also highlight responsibilities, timings, and other process-level information

Global bank's audit process represented a significant manual effort. It conducts approximately 1,000 audits per year, each of which looks at around 10 controls and takes three hours on average to complete. Global bank continues to increase its capacity (the number of auditors will grow by 30%), and already has one of the largest internal audit departments in the world, so it's important to optimize the productivity of those resources.

The bank developed a natural language processing (NLP) model to automatically flag any important information that might be missing from control documentation based on a 5W's test—What, Why, Who, When, Where. Global bank could use the system when the document was initially written, or could scan across existing documents to identify those where issues may exist.

Within just four months, rapid adoption of the system had already yielded results. Fifty active users had collectively input 12,000 entries (custom annotations) across 5,000+ controls and were adding an additional couple hundred entries each week. The increased efficiency of the review process enabled global bank to release an estimated 30,000 hours of effort and deploy it towards additional assurance that would not otherwise have been possible.

"[Open finance] makes the provision of financial services even more important. We want to feel in control, and we want to feel safe and secure. If you get back to what open banking promises, it is absolutely that!"[25]

Charlotte Hogg, CEO of Visa Europe

The evolving digital focus of Chief Risk, Security, and Compliance Officers

Banks are aware of the importance of adapting governance, systems, and procedures to stay ahead of the risks introduced by transformative initiatives. According to IBV research, 45% of 2,000 CIOs and CTOs surveyed in 2022 recognize the need to invest in a unified security and control framework to help CROs, CCOs and CISOs protect CIR and contribute to ROAE with trusted and resilient digital operations.[24] The role of risk and compliance functions is evolving to adjust to these new challenges, as they are increasingly instrumental in unlocking business value. Teams are making risk and compliance simpler to manage, while facing the uncertainty of an ever-expanding risk landscape.

As environments have become more diversified, the need for skilled risk and compliance resources continues to grow. These professionals need to be more well-versed in a broader range of topics than ever before. They must gain deeper expertise in identifying risk and providing sufficient oversight across the organization. And they must do so in a short-staffed environment. The pace of change makes it nearly impossible to develop deep in-house knowledge of all technologies, new ecosystem relationships, and associated risks.

Ultimately, boards are accountable for the risk and compliance posture of a financial institution in front of shareholders, regulators, and the clients they serve. Facing higher economic uncertainty, they demand greater collaboration among CEOs, CROs, CCOs, and CISOs. Higher transparency can help them evaluate the strategic assumptions and the progress of business change and technology transformation.

In response to changing customer expectations and heightened competition, banks are turning their business model on its head.

Transform operations on modern business architectures

In response to changing customer expectations and heightened competition, banks are turning their business model on its head. In the historical banking model, most operating expenses (human capital, processes, and technology) support the middle and back office. As exponential technologies drive cost efficiencies in middle and back offices, focus shifts.

Institutions are placing greater focus on differentiation with clients, changing their ways of working to better serve today's client needs (see Figure 9). This change is essential for banks to become nimble and thrive, engaging customers much earlier in their journey, at the time and place when financial needs must be met.

The combination of heightened competition, regulatory changes, and exponential technologies like cloud, AI, and automation are forcing financial institutions to invest in their business—at a time when that can be difficult to do. Freeing funds by decreasing costs while increasing efficiency, fueling innovation with the help of transformed business architectures, and emphasizing front-office technology and capabilities in a mobile world, are essential actions.

The equation comes down to growth, controls, and cost. *Growth* will be fueled by differentiating around the customer experience. *Controls* involves using the best of AI and cloud to better handle risk and compliance. And *cost* is about doing all the above as efficiently as possible.

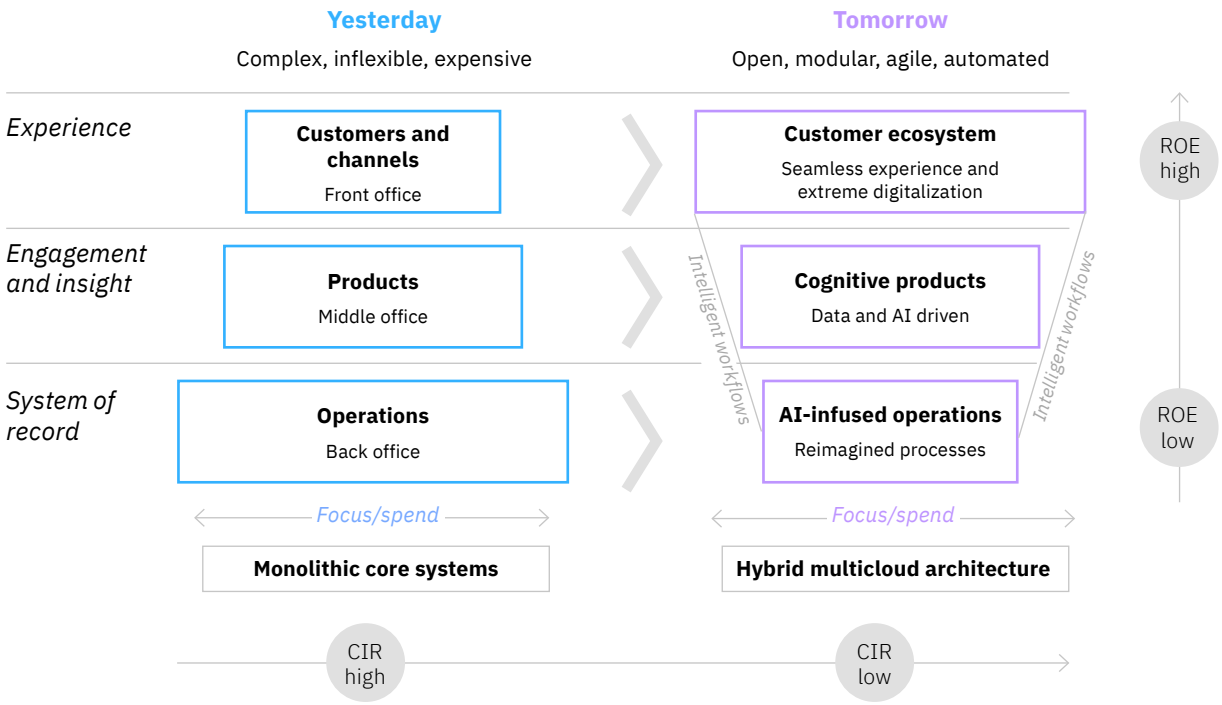
"Ambidextrous collaboration" between business and technology teams

Business needs drive strategy, but technology is required to enable the business strategy. Technology leaders should be more than just the recipients of business requests; they need to have a seat at the table when business strategy is created. A consistent vision and continuous feedback loop between business and technology leaders and teams unlocks healthier financial performance.

FIGURE 9

The future of banking

Exponential technology helps to invert the traditional business architecture.



Source: IBM.

Looking ahead: better experiences are the thread that stitches it all together

In any business or digital transformation, an essential question to consider is: do customers and employees have better experiences as a result? Transformations that empower the workforce help them better serve highly dynamic customer needs. Workforces need access to data and AI platforms for optimal performance—combining the best of human and digital intelligence. Transformations that enable better experiences help the enterprise move from reactive to responsive across the entire value chain.

What sits at the heart of growth and performance, cost and efficiency, and risk and compliance? People. True employee engagement and commitment are essential components of an operational foundation; they spur growth and innovation. Transforming operating models across business and technology is not just about cutting cost and keeping pace. It's also about driving the value-generating employee experiences that, in turn, can drive that of clients.

2023 is the year to make it happen.

Action guide

As financial institutions begin 2023, many begin with plans for change to operating models and business plans. An increasing number are applying exponential technologies, new mindsets, and new ways of working.

Here are a few overarching actions for C-suites to consider in their quest for healthier financial performance this year.

1. *Ensure "ambidextrous collaboration" between business and technology leaders when business strategy is created.* Business needs drive strategy, but technology is required to enable the business strategy.
2. *Build flex into your institution with hybrid cloud mindset and ways of working.* That means digital infused throughout your operations for speed and innovation.
3. *Reimagine workforce experiences with automation, data and AI.* People are the lifeblood of any enterprise.
4. *Modernize for resilience.* Modern banking and financial markets require digital capabilities for the resilience that leads to sustained financial performance.
5. *Focus on what truly matters.* Balance a "go-it-alone" approach with open innovation and partners' contributions to unlock the scaling power of the ecosystem.
6. *Engage all stakeholders by aligning incentives to transform and innovate with a defined "value engine room".* Siloes are inhibitors to innovation and growth.

In today's digital world, value comes primarily from better workforce and client experiences. Put another way: digital transformation is intrinsically linked to a bank's culture. When business value is woven into the operational foundation, the workforce becomes a driver of growth and innovation.

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