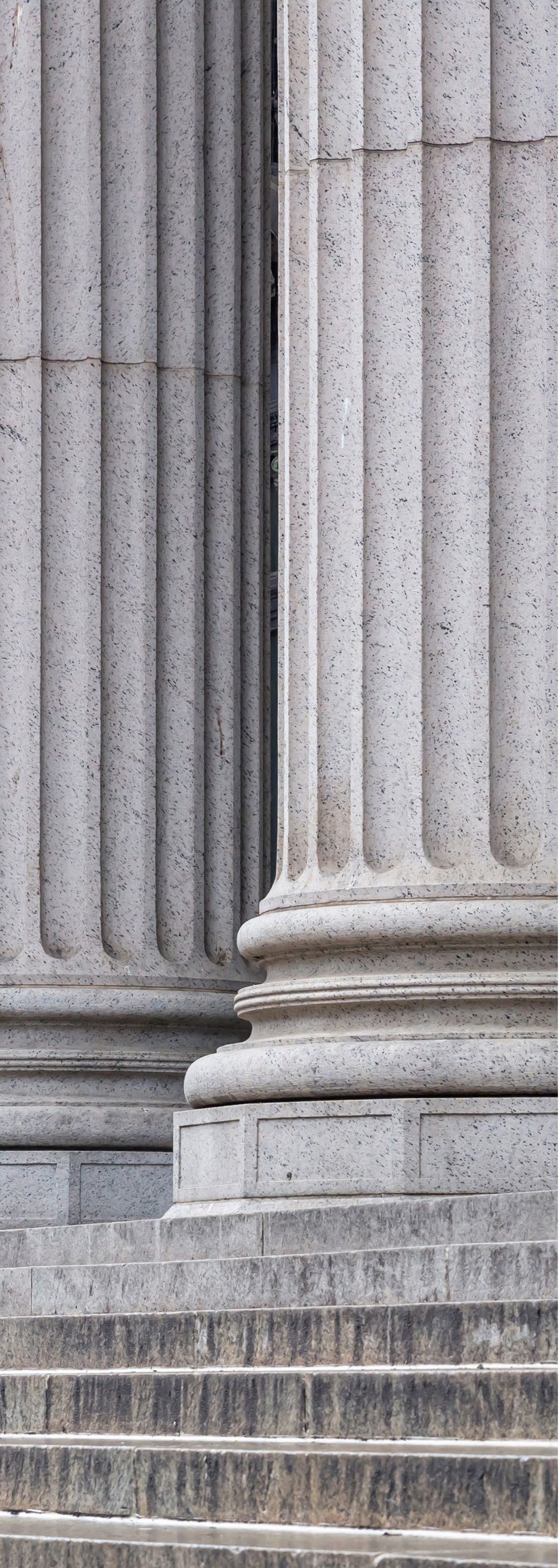

Expert Insights

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Essentials for the post-pandemic bank

Why extreme digitization
is a must for financial services

IBM **Institute for Business Value**

Experts on this topic

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Key takeaways

Financial institutions need to master extreme digitization to succeed in the post-pandemic environment.

The social and economic consequences of COVID-19 will make the post-crisis normal an enduring reality. These ramifications are accelerating the arrival of an uncertain future, inviting banks to lead "through the dark" by transforming business models and strengthening operations through secured cloud access, advanced automation, and the simplification of processes and products.

The different normal touches every corner—virtual and otherwise—of financial institutions.

Organizations need to adopt both a holistic perspective and a granular approach. They need to transform operations end-to-end to achieve structural cost savings, succeed with extreme digitization on the cloud, and achieve operational resiliency.

The "data-driven bank" will be based on the "data-enabled client."

Innovative financial institutions will redesign customer proximity not only by using data to personalize their offers, but by infusing interactions with artificial intelligence (AI). This model generates new value, understanding how digital relationships can truly create closeness and positive impact even during crises such as a pandemic lockdown.

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The different normal: Forging the future of financial services

The COVID-19 pandemic has claimed thousands of lives, stricken many more ill, and devastated entire economies. In response, many financial institutions have safeguarded employees, enabled alternative working models, focused on business continuity and resilience, and learned new ways of serving customers.

Yet, the post-pandemic economic environment is unexplored terrain. Case in point: depending on the scale of government assistance, credit defaults could be higher than during the 2008 global financial crisis. Lower interest rates could prevail, potentially accelerating compressed net interest margins and impacting a key revenue stream for banks.

The new normal for financial services could compel banks to embrace continual reinvention of their business models and solutions. How should banks manage costs, transform operations, and use technologies such as AI and cloud to impact innovation and the digital delivery of products and services? All are in play. It could be a matter of survival.

A sobering assessment of future uncertainty: The recession and its ramifications

The Great Lockdown put the profitability of most firms under unprecedented stress. It has triggered a global economic downturn that endangers the very sustainability of entire industries, such as travel and hospitality.

Facing elevated uncertainty, firms may be cautious. Reduced consumption and weaker business investment could drive the biggest immediate impact. Lower inventory accumulations could arise from supply shock and diminished demand. A dysfunctional global supply chain could weaken the economic outlook of developing markets and increase the risk of countries defaulting on their debts.

The shape of the post-pandemic recovery will not be identical across industries and regional economies.

The shape of the post-pandemic recovery will not be identical across industries and regional economies. And it could take a variety of forms, all influenced by the potential for future periodic lockdowns and growing political uncertainties. For example, overall early expectations were of a "V-shaped" recovery—with a shock to the economy and a displacement of output, but growth eventually rebounds, and annual growth rates absorb that shock.

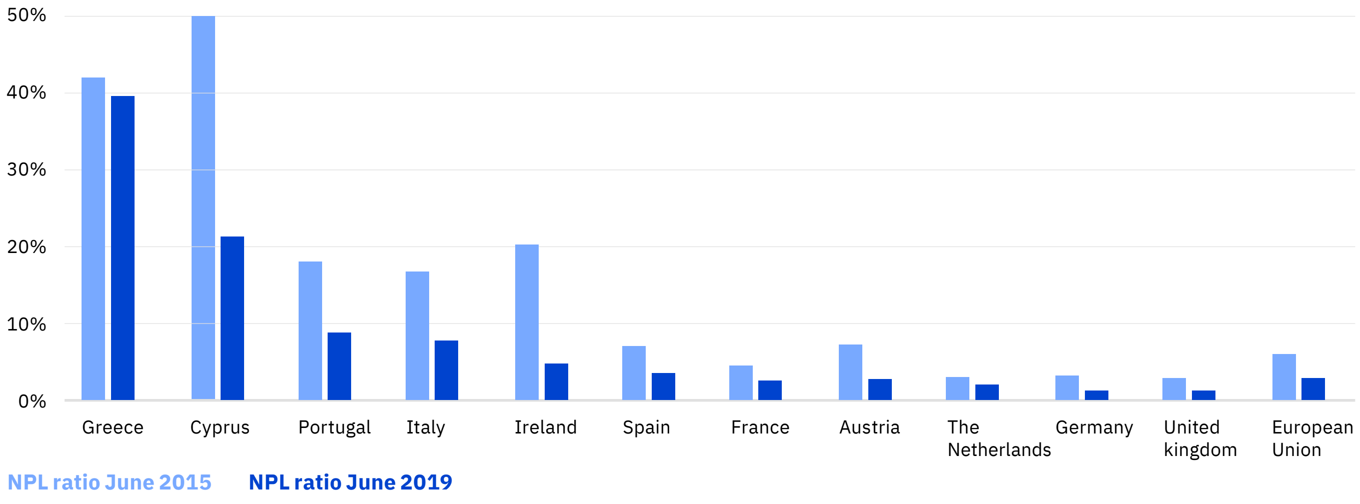
However, where the shock persists, recovery predictions have shifted to a "U-shaped" recession. While the initial growth path resumes, some output loss is permanent. An "L-shaped" recession, where the crisis does significant structural damage to supply or demand, could be imminent. Certain regions or industries may even face a "W-shaped" recovery, with multiple sharp declines and rises.

Clearly, governments and central banks made headlines in their attempts to stabilize economic and social systems with unprecedented stimulus packages, granting banks the option of stretching lending capabilities and accelerating their active roles in the recovery. Banks are instrumental to the effective transmission of monetary policies and stimulus packages, helping businesses to progress toward recovery and restore consumer confidence.

The initial perception has been that financial services could, on average, withstand the global shock better than in the 2008 global financial crisis, having already done substantial homework in that aftermath. In particular, the European banking system engaged in sustained de-risking and restructuring of credit portfolios from 2014 post-crisis peaks of nonperforming loan (NPL) ratios to end-of-2019 levels. According to the European Banking Authority, Irish banks reduced their credit portfolios from 21.6 percent to 4.6 percent. Italy moved from 17.0 percent to 7.9 percent. On average, the euro zone halved aggregate NPL ratios from 6.5 percent to 3.0 percent (see Figure 1).[1]

Figure 1

NPL ratios by country in June 2015 and June 2019 (%) indicate sustained de-risking[2]



Source: European Banking Authority

But is this the calm before the storm?

In June 2019, Andrea Enria, Chair of the European Central Bank's Supervisory Board, had already warned, "We have to solve the issue of NPLs while the economy is still resilient. If banks have to sail into the next storm with too many NPLs on their balance sheets, they will be less able to weather it and come out safely on the other side."[3]

What lies ahead is not reassuring. Financial services need to plan for the worst. The current deterioration of economic conditions could well transform a sudden recession into an economic depression.[4]

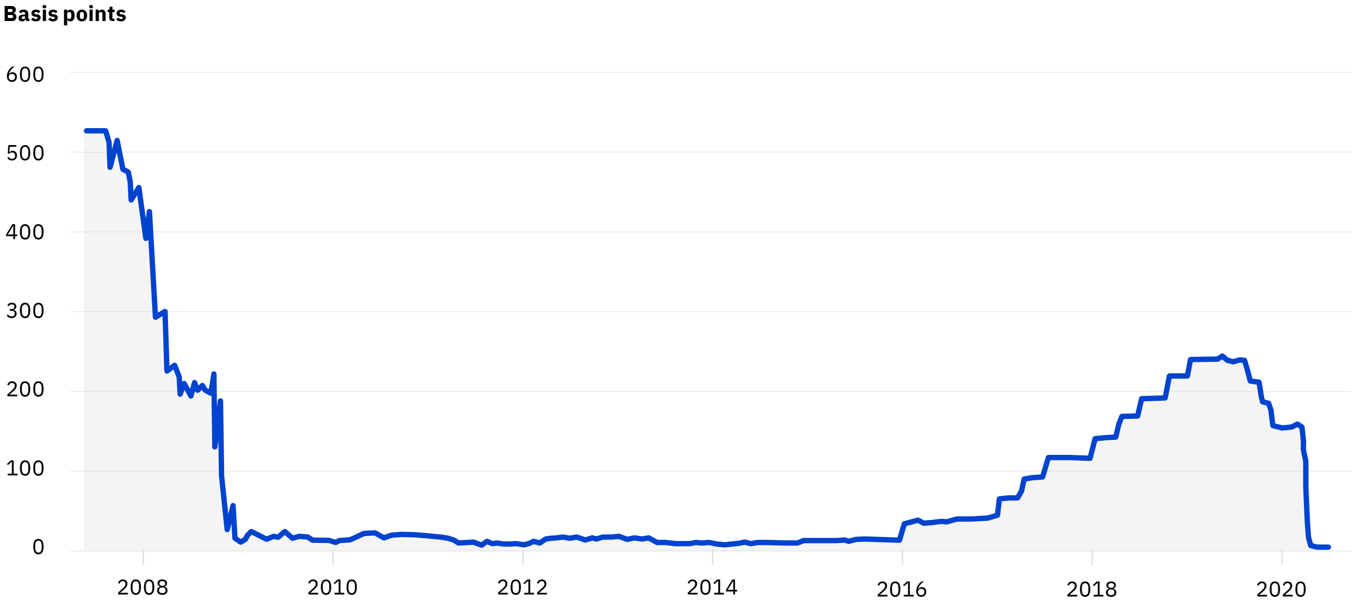
The plummeting of interest rates

Interest rate margins for US and UK banks are getting squeezed, after the price for risk, by the re-emergence of zero-to-negative interest rates and the flattening of yield curves, as has already happened in Europe and Japan through the 2008 global financial crisis.

The Federal Reserve System ("the Fed") reduced interest rates by a total of 150 basis points (bps) in two emergency meetings in March 2020, taking the federal funds rate to 0-to-0.25 percent, along with USD 700 billion in asset purchases.[5] These and other measures were meant to stimulate the US economy. The last time the Fed reduced rates this aggressively was in 2008, and the rates were suppressed until 2015 (see Figure 2).[6] The implication: we could linger in a low-interest-rate environment for some time.

Figure 2

To promote US economic growth, the Effective Federal Fund Rates were suppressed from 2008 through 2015[7]



Source: Federal Reserve System

Innovation cannot stop in a crisis—actually, it is foundational to navigating *out* of a crisis.

The escalation of credit defaults

Rising unemployment rates, especially in the US, are expected to trigger high rates of delinquencies in credit card operations and increase exposures to unsecured personal loans. Default rates are also expected to rise for small and medium enterprises globally, while large corporations might be forced to heavily restructure their debts.

NPL exposures are forecasted to spike up again, as reflected in analyst estimates.[8] Apparently, US banks acted more quickly than their European counterparts to "take it on the chin," increasing their loan provisions significantly as early as in Q1 2020 (see Figure 3). This also reflects different regulatory expectations. Regulatory fragmentation continues to be a complex reality in global financial services.

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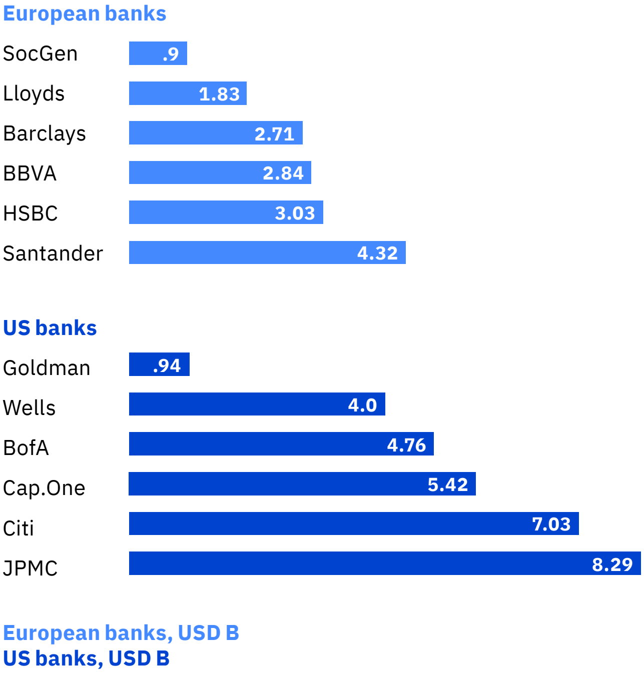
Figure 3

When compared to European banks, US banks increased their loan provisions substantially in Q1 2020[9]



Source: Internal IBM research

Not surprisingly, the market capitalization of most banks is still under pressure compared to pre-global financial crisis levels, as the Euro STOXX® Bank Index indicates, attesting to unresolved weaknesses. Financial markets have been discounting market evaluations of banks because of persistent challenges facing the industry since 2008 (see Figure 4). Markets have already been aware of an emerging normal that includes zero-to-negative interest rates, high costs of capital, disintermediation of payments and remittances, reduction of intermediation margins, and last but not least, digital competition from institutions outside the brick-and-mortar framework.

Using new business models to navigate the next normal

The social and economic consequences of the current pandemic may make the post-financial crisis an enduring reality. They will further accelerate the trend toward an uncertain future, inviting banks to lead "through the dark" by transforming business models and strengthening their operations through secured cloud access, advanced automation, and the simplification of processes and products.[10]

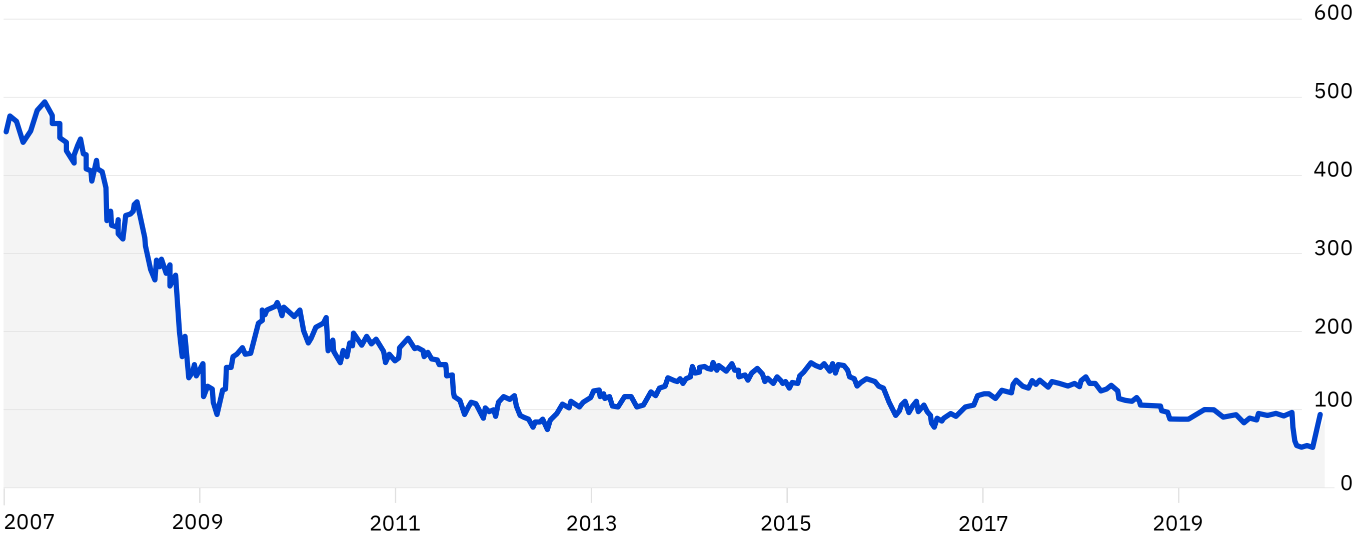
Mario Draghi, former Chairman of the European Central Bank (ECB), addressed the need for business model transformation during his last speech in that role back in September 2019: "Banks would like to have positive rates, unquestionably, so whenever they have negative rates they don't like it. . . . The necessity to adjust the business model to digitalization, to changes in technology, is something much more compelling than being angry about negative rates."[11]

Additionally, financial services—like society itself—could emerge from the pandemic crisis profoundly changed. A key indicator for the next phase of transformation: the accelerated pace of digital adoption by consumers who embraced mobile technology to handle unexpected challenges during the lockdown.

For example, e-commerce sales reached all-time highs. Mobile payments appeared to be the safest, most appropriate retail transaction method. This accelerated digital adaptation in everyday life will likely drive customers to demand banking that is more open, transparent, secure, and deeply integrated into their lives and businesses.

Figure 4

EURO STOXX® Bank Index: Market valuation of European banks have dropped consistently since 2008[12]



Most banks moved rapidly to protect their employees and clients in the first weeks of the pandemic outbreak, shifting the majority of their workforces to home offices, promoting video conferencing, and reducing and re-organizing access to branches. While the process of reduction in the number of branches continues,[13] we can expect that banks, like many service-oriented businesses, will also make working from home a more acceptable, if not standard, practice. This could reduce organizational real estate costs, yet negatively affect the returns of institutional investors. For example, pension funds and insurance companies often have holdings in commercial real estate and could be impacted by a downturn in that sector.

Last but not least, the potential role of Central Bank Digital Currencies (CBDC) might prompt new forms of interaction among financial institutions and with their clients, re-shaping the next landscape of banking digitization from its very foundation.

A balancing act: Executing a measured response during the pandemic

From managing urgent customer care inquiries to engaging customers and employees remotely, financial institutions worked to increase institutional resiliency during the Great Lockdown. And overall, they've had to identify experience gaps that hurt business performance and scale secure, resilient solutions quickly—all while managing cost and resourcing needs.

Innovation cannot stop in a crisis—actually, it is foundational to navigating *out* of a crisis. Partners became pivotal to quickly scaling capabilities with remote experts to focus on highest priority workstreams, expediting proofs-of-concept to market and increasing the quality of their services.

A European bank: Conversational AI-enabled customer and employee service during COVID-19[14]

In today's digitally connected world, consumers deserve an unprecedented level of always available customer service. AI assistant technology enables business users and developers to build robust conversational solutions. It enables enterprises to continuously address and resolve customer and employee inquiries scaling across multiple channels.

A European bank deployed an IBM "Smart Agent" function to its site in five days, allowing customers to learn about measures the bank is taking during the pandemic through a chatbot or live agents. More than 250 employees, most working from home, were enabled to interact with distant customers.

An AP financial institution: Enabling VPN service for 22,000 users[15]

A large financial institution in Asia Pacific saw an 11-fold increase in virtual private network (VPN) service access during the Great Lockdown. Accordingly, it needed to reconfigure IT and operations for efficiency and agility. IBM enabled VPN service access for 22,000 concurrent users (scaling up from the original 2,000 users) utilizing Citrix Netscalers, and deployed new ways of delivering replacement devices with zero-touch enrollment, configuration, and management of the devices.

Transforming social distance into customer connection

As social distancing created gaps between financial institutions and customers, industry leaders rapidly identified opportunities to elevate customer engagement, with people at the center of the experience strategy. For example, customer volumes were redirected to expedited service with AI-powered solutions like chatbots, cognitive routing, and smart search (see case study, "A European bank").

Remote doesn't mean distant: Empowering the virtual workforce

The way employees work might be forever changed. An IBM Institute for Business Value survey of US workers found the percentage of people working from home exploded from 10 percent to more than 40 percent during the pandemic.[16] Financial institutions must enable a flexible workforce model with remote employees who are productive and engaged in times of crisis—and beyond. Required business outcomes don't disappear in unprecedented times. To achieve targets, the workforce requires effective virtual assistance and digital engagement, regardless of its location, to remain healthy during emergencies (see case study, "An AP financial institution").

This assistance encompasses maintaining a productive, engaged, healthy workforce during emergencies; providing employees continual crisis-related updates; creating frequent opportunities to collaborate via voice, video, and other technologies; and building a culture of ongoing self-directed, self-motivated learning.

As financial institutions transition to less restrictive workplace measures, they need strategies for both workforce re-entry and ongoing support of those workers remaining offsite. Business resiliency, of course, is always an imperative.

Companies are preparing for a future that has essentially arrived, and workforce planning is the first step. Workforce planning creates a framework that enables business and talent strategies to integrate and inform each other while improving agility and resilience. As they adapt to the short term, financial institutions should consider how these elements integrate into the longer term.

The new blueprint: Evolving operations, customer relationships, security, and compliance

The post-pandemic normal will touch every corner—virtual and otherwise—of financial institutions. These organizations will need to adopt both a holistic perspective and a granular approach. Agility, responsiveness, collaboration, and perseverance can all contribute to effective strategies for renewal.

Transforming operations end to end

Structural cost savings. Financial institutions have to act now to uncover new efficiencies and become more flexible and responsive to market threats. With the accelerating compression of net-interest margins, and the looming decline in fee income, financial institutions have to quickly and radically reduce operating costs to maintain profitability.

Traditional cost-saving areas, such as management de-layering, span-of-control optimization, budget fine-tuning, and other traditional expense management techniques may still resonate. But post-COVID-19, cost savings should be:

- Substantial (reflecting new economic and competitive realities)
- Structural (extending beyond capacity reducing, delivering more with less)
- Sustainable (enduring savings without compromising business objectives related to customer, resiliency, compliance, and security).

Extreme digitization on cloud. Extreme digitization impacts virtually all aspects of the financial institution. It starts with evolving the customer experience, creating more cohesive and personal digital journeys, and integrating every aspect into a single platform and toolkit.

A transformed environment enables the business to create timely new services through cloud-native architectures and containerization, which is an alternative or companion to virtualization. It packages up or encapsulates software code and all dependencies so that it can run consistently and uniformly on a variety of infrastructures.[17] Additionally, the business can adopt DevOps to improve efficiency and drive a culture of automation in hybrid multicloud environments.

Beyond the customer interface, digitization encompasses automated-into-intelligent workflows. It includes solutions like virtual assistants and AI to support customers, employees, and partners.

Delivering extreme digitization requires hybrid multicloud, API platforms, blockchain, and AI at scale. These technologies perform better when paired with an agile approach to design thinking and organizational integration. An open, hybrid cloud platform enables financial institutions to securely build, run, and manage applications and workloads in a consistent way, across virtually any environment (see case study, “Bank of America and IBM” on page 8).

Operational resiliency. This concept is defined as the ability to rapidly adapt and respond to opportunities, demands, disruptions, and threats with limited business impact, with a scope spanning people, processes, and IT. And clearly, the operational resiliency of most financial institutions is now being tested.

The industry should prepare for further pandemics, societal and geopolitical tensions, climate change, intense cyberattacks, and other unknowns that continue to target not just financial markets, but retail and commercial banking businesses as well.

Challenges increase for trade compliance, as well, with more front-office roles performed remotely, and order and trade volumes growing. This is especially true for institutions that do not embrace the cloud to conduct trading or investment-management activities virtually.

Therefore, financial institutions grapple with achieving resilience across increasingly complex architectures, with more integration and a growing number of critical systems. Operational resilience must battle for resources and attention against competing priorities—for example, operational complexity.

In addition, regulators are expected to be hypervigilant, levying hefty fines on banks suffering service disruptions that impact customers and could trigger systemic threats.

Bank of America and IBM: Customizing a public cloud for financial services[18]

Bank of America and IBM have announced the development of the world's first financial services-ready public cloud. The platform will also be available to other financial services institutions and their suppliers. This cloud aims to address the industry's need for regulatory compliance, security, and resiliency as it utilizes the speed and efficiency of cloud computing. The ability to adopt cloud computing can accelerate the digitization process that is transforming banking operations.

Financial institutions should embrace this mantra: to succeed, they must invest in preparation, anticipate failure, and provide for recovery. And while preventative measures work much of the time, disruptions are inevitable. Financial institutions need a lifecycle that can be managed to their benefit.

A catalyst for reinventing customer relationships

COVID-19 has profoundly changed the way we live and work. In terms of digital adoption, remote working and consumption have altered customer routines and expectations.

In times of crisis, customers migrate to environments that are less risky, or appear to be so. In the financial markets, investors sell what they perceive as higher-risk investments and purchase safer ones, such as gold and other precious metals. In retail banking, customers might move their savings from smaller, newer banks to larger, more established players.

These changed behaviors and expectations create an opportunity for incumbent financial institutions to reinvent their customer relationships. It's the moment to recapture market share lost to startups and other innovative competitors.

A reinvented customer relationship would be open and transparent, secure and deeply integrated into personal lives and individual businesses.

Expanded infrastructure, expanded vulnerabilities

The post-COVID-19 environment is expected to see expanding digital channels, increasing interconnectivity, and round-the-clock access. These shifts can drive increased security risks. New threats are compounded by well-funded, sophisticated adversaries who can exploit gaps in security that stem, in part, from employees adapting to new ways of working. The sudden expansion of infrastructure to meet extreme digitization needs also creates vulnerabilities.

Forward-looking banks and financial market enterprises can respond to these unique, mitigating circumstances by migrating to a new business architecture.

A radical transformation: Envisioning the different normal

Long after the medical threat has passed, the pandemic will bestow lasting consequences on business and society. Forward-looking financial institutions can seize this opportunity to accelerate their migration to a new business architecture.

This architecture can be built on next-generation customer experiences embedded in customer ecosystems, enabled by AI engagement and digitalized end-to-end journeys. It relies on a data environment transformed with structured and unstructured, open or proprietary data. Advanced analytical tools and AI help manage vast information flows. This new architecture can be security-rich and compliant with effective risk reduction and more efficient compliance operations.

Finally, operations can radically transform to be digital, agile, and intelligent, with modernized applications deployed on hybrid multicloud environments. They can be designed for virtually zero risk tolerance, at structurally lower cost, and offer entire new ways of working and serving clients.

The data-enabled client: Progressing to a human-centric business model

A dramatically different normal calls for financial institutions to play a crucial role both in their business operations and in their clients' lives. They'll need to step up and guide customers through economic and financial instability. And they'll need to help those customers navigate and even thrive in an uncertain world.

Taken together, the challenges of this next environment point to the need for a new business architecture. Forward-looking banks and financial market enterprises can respond to these unique, mitigating circumstances by accelerating that migration. Their employees have already demonstrated admirable adaptability. This new architecture can accelerate workforce reskilling, agile ways of working, and the strengthening of both client and employee relationships, whether face-to-face or virtual.

Until now, client-centric operations have been anchored to products typical of *"output economies,"* in which customers are those who buy. The next normal might accelerate the transformation to human-centric, service-based platforms, ones that place relationships front and center.

These platforms are based upon value-generating interactions that are typical of *"outcome economies,"* in which customers achieve their goals through seamless experiences. Consider interactions that create transparent banking relationships, directly or digitally augmented, with trust generated through a value exchange between banks and their most precious assets, their clients.

Therefore, banking architectures and their corresponding business models could see a dramatic transition. A bank's purpose could evolve from credit institutions, which provide relevant accessory solutions (payments, investment, insurance), into platform-driven centers of competence (CoC). These CoCs would integrate lending operations into advisory relationships for families and businesses. The emphasis shifts from distribution channels of lower-margin products to relationship-based services built on client engagement and experience.

The bank of the future will redesign customer proximity not only by using data to personalize their offers (output economy), but also by infusing AI into interactions. The "data-driven bank" will be based on the "data-enabled client." This model generates new value, understanding how digital relationships can truly create closeness and positive impact even during a crisis such as a pandemic lockdown.

Trusted digital relationships are not only the real asset of financial institutions facing a different normal, but a necessary mechanism to help communities weather the storm, and emerge robust and ready for the future.

Action guide

Essentials for the post-pandemic bank

Why extreme digitization is a must for financial services

1. Use new platform business models to reinvent customer engagement.

Reshape customer engagement. Financial institutions must embrace *cognitive customer engagement* by digitally reinventing the customer interface to improve experiences across channels, enabling cross-industry value chain integration and the participation in marketplace platforms.

Extreme digitization can accelerate *new platform business models*. Financial institutions must develop and deploy new business models for delivering integrated experiences across customer value chains with new revenue models, including exploring new, innovative ways to engage and monetize customer relationships based on the data-enabled client.

2. Digitally transform for agile, expanded operations.

Drive *end-to-end transformation operations* and customer and employee journeys, using new technologies (such as automation, cognitive insights, and blockchain) to transform operations to deliver structurally lower costs, new capabilities, and improved capital efficiency.

3. Recalibrate risk operations to align with the different normal.

Risk operations must be reconfigured to reflect new realities. Multiple tools exist to rapidly evaluate changes to internal risk exposures (such as operational and internal liquidity), and external risk exposures (such as credit, counterparty, market, liquidity, and regulatory). Risk models must be recalibrated based on new data to reflect current market scenarios.

Likewise, banks need to deploy risk mitigating actions for potential delinquencies, security, and fraud, both on a temporary and long-term basis. Asset valuation models should be improved to ingest unstructured data and other variables to better predict asset value and react based on market movement. Financial and risk models need to be stress-tested to help ensure regulatory compliance and adherence to new government incentives. At the same time, with more staff working remotely, especially front office, banks need to provide essential employee and trade surveillance at all times.

4. Modernize the application portfolio, reduce structural costs, and accelerate the migration to cloud.

A key lever of structural cost reduction is to *modernize the application portfolio*. Some successful approaches include:

- Incorporating service-based (“as-a-service”) capabilities
- Re-hosting, or “lift and shift,” of workloads to different venues
- Rationalizing, re-platforming, re-factoring, and re-architecting into microservices or APIs on hybrid multicloud platforms.

A comprehensive program can deliver substantial structural reduction in related technical operating expense. Structural cost reduction is achieved through data center consolidation, technical debt removal, legacy optimization, infrastructure cost optimization, and operational efficiencies. This cost reduction also helps address improved agility, innovation, compliance, and skills challenges, and it accelerates the journey to cloud.

Accelerate the transformation and migration of legacy infrastructure and applications to *hybrid and multicloud environments.* This includes re-architecting and migrating core functionality. It also spans the development of cloud-native apps that can be deployed in a secure, compliant manner while interoperating across private clouds, public clouds, and on premises.

5. Put your data to work for you.

Data is the new currency in the financial services industry. Financial institutions must drive the *transformation of data environments* to reduce costs, while enabling the ability to use internal and external data insights to make better customer, operational, and compliance decisions. Market and operational differentiation can be achieved by using unique advanced analytics, and AI on large internal and external data sets, differentiated through NLP, machine learning, and cognitive functionalities.

6. Let the cloud show you new ways of working.

Financial institutions need to scale capabilities for *new ways of working*, such as identifying, retaining, and building the right talent for a digital organization. These capabilities also include enabling employees to work remotely by pivoting to cloud-based collaboration and workplace virtualization while still reinforcing resiliency and security. Cloud-based tools, including video, voice, and chat capabilities, help facilitate interactions and meetings with teams, vendors, and customers. Digital workplace services are enabling employees to access more secure virtual desktops as part of their employers’ remote working plan.

7. Use advanced analytics, AI, and automation to drive security and resiliency.

Successful financial services organizations should embed security and compliance across their operations and technologies to drive efficiency and effectiveness. This includes leveraging advanced analytics, AI, and automation to make operations more resilient and secure, addressing financial crimes, conduct risk, compliance, and risk management. An evolving next normal of culture and risk expectations must also be incorporated into operational and organizational design.

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