

Intelligent banks do more with less

Take an efficiency leap with frictionless, personalized banking



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Foreword

As we celebrate the 20th anniversary of our World Retail Banking Report, it's remarkable to reflect on the journey since its launch in 2004. The first decade of the report, from 2004 to 2013, saw significant events such as the adoption of the euro currency; the introduction of Single Euro Payments Area (SEPA) that standardized cross-border euro transactions within Europe; the infamous 2008 financial crisis; and the emergence of the "Great Recession" following the end of "Great Moderation" in the US. Additionally, blockchain made its debut in 2009, when Satoshi Nakamoto, invented Bitcoin and brought blockchain technology to the world. In 2010, the Dodd-Frank Act defined a series of federal regulations to prevent future financial crises.

Between 2014 and 2023 there was a transformative shift in the banking sector. The Payment Services Directive 2 (PSD2) regulation was released by the EU in 2016. This initiated the transition from proprietary data to the open banking era, empowering the rise of FinTechs. Digital transformation, which was already in progress, was accelerated by the 2020 pandemic. Notably, this period marked a significant move towards API and cloud technology, enhancing agility and efficiency for financial institutions.

As we look back on these two decades, our World Retail Banking Report has observed, documented, and analyzed the retail banking evolution. It has provided valuable insights into the challenges and opportunities presented by customer behavior evolution, economic shifts, and technological advancements.

In 2024, retail banks worldwide face a volatile and uncertain landscape marked by inflationary pressure, potential rate cuts, declining net interest income, the real impact of new-age banks toward younger clients, and major geopolitical uncertainties. Navigating this complex terrain will not be easy and will require intelligent solutions to help banks maintain profitability while delivering superior customer experiences through frictionless, personalized banking.

Capgemini's World Retail Banking Report 2024 explores today's challenging banking environment and looks at how embracing AI-driven strategies can optimize operational efficiencies while improving customer experience. The potential for enhanced customer engagement and increased revenue generation opportunity is undeniable. Competitive advantage in the marketplace will follow.

Our 2024 report demonstrates how the seamless adoption of generative AI-powered copilots can augment human expertise and revitalize retail banking. It also offers recommendations for a robust bottom-up strategy to help scale intelligent transformation for banks.

We hope to take some of the guesswork out of the transformative potential of generative AI and help build a roadmap on how it can empower banks to navigate the uncertainties of 2024 and beyond. The potential benefits for both banks and customers are significant, paving the way for a more innovative and customer-centric future of retail banking.



Anirban Bose

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

The World Retail Banking Report Series

Capturing 21st century retail banking evolution

	2004/05	2006/07	2008/09	2010/11	2012/13	2014/15	2016/17	2018/19	2020/21	2022/24
Bank branches (k) ¹	244	272	281	277	271	244	237	224	211	158
					New-age bank customers (millions) ²		1.6	15.4	67.3	~161.0
KEY FINANCIAL SERVICES EVENTS	<ul style="list-style-type: none"> Facebook launches in 2004, the iPhone in 2007 EU: The euro gains acceptance across 12 European countries US: End of the Great Moderation Era (mid-1980s—2008) of low inflation and economic growth: housing prices peak triggering subprime mortgage crisis 		<ul style="list-style-type: none"> Bitcoin launched EU: SEPA (Single Euro Payments Area) launched EU: Sovereign debt crisis. Concerns about Eurozone stability US: The Great Recession triggered by Lehman Brothers bankruptcy <ul style="list-style-type: none"> GDP down by 4.3% Unemployment doubles to over 10% US: Dodd-Frank Act enacted to avoid future financial crises 		<ul style="list-style-type: none"> Bitcoin's record surge sparks interest and debate about its impact on banking FinTechs emerge to challenge incumbents: Revolut, Chime, Monzo, Starling Bank, etc. EU: First open banking regulations introduced in 2015 US: Apple Pay gains scale in mobile payments 		<ul style="list-style-type: none"> FinTech disruption accelerates: PayPal, Square, Stripe dominate growth in online and in-store payments without traditional banks Bank/FinTech collaboration increases EU: Brexit-UK leaves EU EU: Revised PSD2 officially launched in 2018 EU: GDPR imposes strict rules on banks and companies handling consumer data 		<ul style="list-style-type: none"> Covid-19 forces a halt to global activities CBDC pilots across the globe to measure feasibility/implications ChatGPT debuts Q4 2022 US: JPMorgan Chase launches JPM Coin for instant settlement 	
KEY WORLD REPORT THEMES	<ul style="list-style-type: none"> From product centricity to relationship banking as competition for customer wallets intensifies Target mass-affluent customers to boost wallet share Multichannel engagement with focus on online Branches need to evolve from transactional services to advisory sales 		<ul style="list-style-type: none"> Back to basics amid global crisis: preserving core functions essential for sustaining client relationships Strengthen SME business Enhance customer experience with focus on customer demographics, regional norms, and channel preferences 		<ul style="list-style-type: none"> Customers report poor experiences with banks <ul style="list-style-type: none"> Build loyalty through customer experience Mobile banking: the new engagement channel Banking NPS deteriorates signaling a change in customer expectations CX and profitability affected by years of limited investments in back-end operations 		<ul style="list-style-type: none"> APIs critical to digitally connected ecosystems Era of FinTech partnerships and open banking Smart Bank/FinTech collaboration in the Open X era 		<ul style="list-style-type: none"> Composable platforms enable agile scalability and Open X partnerships Time for embedded finance through Banking-as-a-Service CMOs become customer strategists through data-driven insights AI and Gen AI can unlock capabilities for autonomous and intelligent banking 	

Note: Branch and new-age bank customer numbers represent totals for alternate years starting from 2004 and 2016, respectively.

¹ Across 14 key markets: Australia, Brazil, Canada, France, Germany, Hong Kong, Netherlands, Portugal, Singapore, Spain, Sweden, UAE, UK, and US

² New-age players considered: Chime, Monzo, N26, Nubank, Revolut, Starling Bank

Executive steering committee

The Executive Steering Committee participants for our World Retail Banking Report 2024 included top executives from leading banks and industry partners. We are grateful for their time, experience, and vision as they helped guide our report's content.

Banks



Pierre Ruhlmann
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Executive summary

Shifting sands: banks prepare for turbulent macroeconomic headwinds

The year 2023 showcased strong global bank performance, marked by substantial revenue growth and improved net profit margins. High interest rates, low credit defaults, and robust consumer spending were a recipe for success. However, as banks transition into 2024, they face a volatile and uncertain landscape characterized by persistent inflationary pressures, potential rate cuts, declining net interest income, and geopolitical uncertainties.

The persisting cost-of-living crisis has impacted the financial well-being of customers. Financial stress triggered a customer spending contraction, evident in falling demand for credit and bank deposit outflows across key markets in Europe, Asia Pacific, and North America. In response, banks seek to identify and engage with profitable customer segments, which requires a personalized approach. While banks struggle to deliver adequate digital experience and mobile banking, new-age banks are gaining ground, especially with the youth segment.

As banks anticipate a challenging 2024, including rising funding costs and reduced lending volumes, they are reassessing their cost base. Reassessment involves closing unprofitable business lines and exiting non-core markets; streamlining operations through workforce optimization is also high on the banks' agenda.

The time has come to go back to the basics, focusing on productivity, expanding the customer base, retaining profitable segments, and increasing diversification into non-interest income.

At the same time, banks will have to accelerate their digital transformation, leveraging the power of generative AI at scale. As a testament to the need to digitalize and despite required cost discipline, 70% of bank CXOs plan to increase digital transformation investments by up to 10% in 2024.

Banks take a leap forward in efficiency and customer experience with generative AI

Generative AI's impact on democratizing artificial intelligence has been profound. The 2024 World Retail Banking Report survey of bank CXOs found that 80% of bank executives believe generative AI represents a significant leap in advancing AI technology. As applications multiply, scalable benefits will require balancing customer experience enhancements and optimizing operational efficiency. Our survey of bank employees indicates they focus nearly 70% of their time on operational activities, leaving only 30% for customer interactions. Banks can strike a new, more results-driven balance by unlocking the full potential of AI and generative AI across diverse use cases.

Three pivotal processes emerge as prime candidates for intelligent transformation:

- Workforce productivity tools through copilots
- Document gathering, processing, and validating
- Call center customer centricity and efficiency.

80%
of bank executives believe generative AI represents a significant leap in advancing AI technology.

Pursue an enterprise-wide approach to scale AI capabilities and value

Only 4% of surveyed banks are ready to take advantage of generative AI-driven intelligent transformation. To adopt AI at scale, a bottom-up strategy encompassing three enabling layers is necessary:

- **First, develop a modern data estate.**

Establish a robust infrastructure for enterprise-wide data management to serve as the foundational framework for handling diverse data sets efficiently.

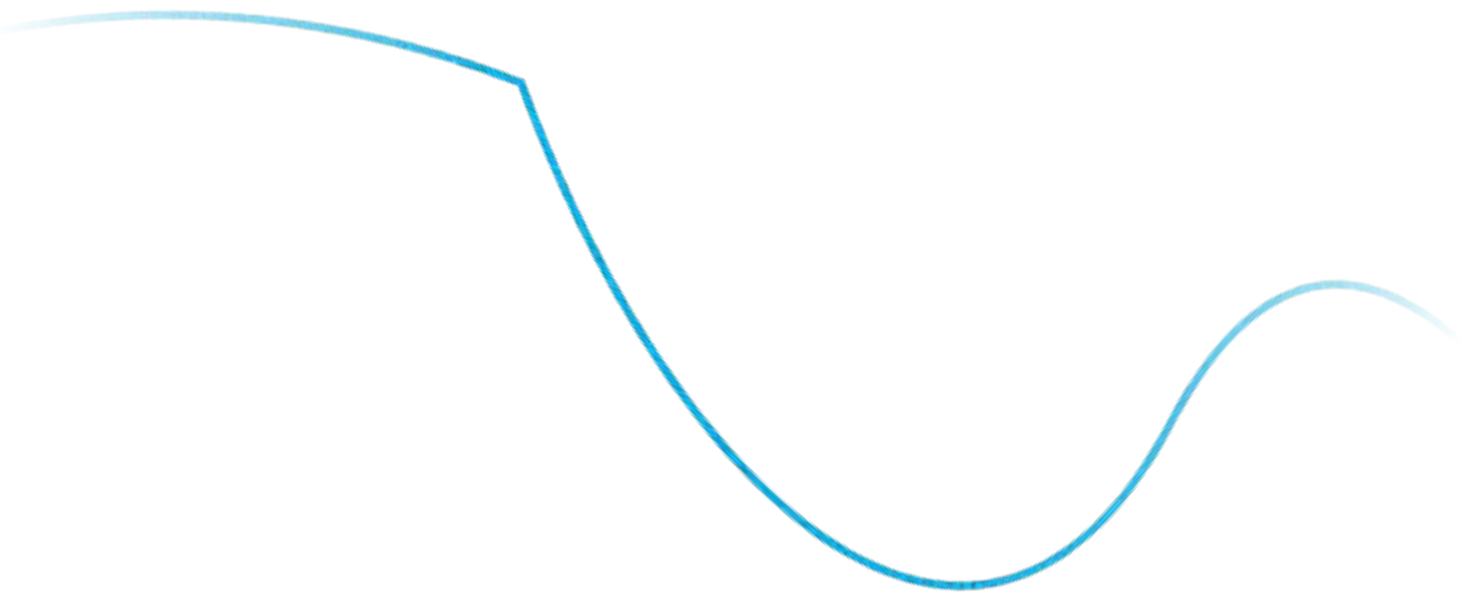
- **Then, leverage advanced data**

processing. Harness the potential of data by implementing a robust model layer equipped with large language models (LLMs) and sophisticated

algorithms. This integration facilitates the conversion of raw data into actionable insights, translating these insights into tangible impacts.

- **Finally, implement guardrails and frameworks.**

Set up comprehensive guardrails and frameworks aligned with business priorities and practices. This responsible approach demonstrates the ROI of AI and generative AI initiatives and ensures ethical and accountable AI deployment and maintenance.



Shifting sands: banks prepare for turbulent macroeconomic headwinds

Much of 2023 was marked by robust global bank performance, with significant revenue growth and long-awaited improvement in net profit margins. High interest rates, low credit defaults fueled by post-COVID public funding, and resilient economic conditions were all catalysts for exceptional results in 2022-2023 in the retail banking sector.

Following the unparalleled profitability of European banks in 2023, the impending peak in interest rates hints at a plateau in earnings for 2024. European financial institutions might contend with a 4-5% downturn in earnings-per-share throughout 2024–2025.¹ Simultaneously, these banks may grapple with a deterioration in asset quality, attributed to weaker growth, sustained inflation, and heightened borrowing costs.² Across the Atlantic, US banks are bracing for a dip in interest income. The convergence of deposit bet as with elevated interest rates, coupled with factors like sluggish loan growth and potentially stringent capital requirements, poses additional challenges to business volumes.³

The 250 banking CXOs surveyed in the World Retail Banking Report 2024 ranked the high cost of capital, a decline in deposit volumes, rising provisions for non-performing loans, falling lending volumes, and increasing cost-to-income ratios as their top concerns. Bank CXOs in 2024 will be navigating an anxiety-inducing triad of cost, competition, and customer churn.

As financial stress mounts, customer spending contracts

As part of the World Retail Banking Report 2024 survey of 4,500 customers across 14 markets, 72% of participants said inflation had a moderate to high impact on their financial well-being, while 16% said it drove them to paycheck-to-paycheck living. The result? We are observing early signs of falling demand for credit and an outflow of bank deposits as consumers depleted savings accumulated during the pandemic.

This trend was most noticeable in the United States, where household savings as a percentage of disposable income dropped to nearly 4% in October 2023 as compared to approximately 13% in 2020-2021 and around 6% from 2015 to 2019.⁴

As customers exhausted their savings, revolving credit – notably credit card debt – surged to a historic high. In November 2023, US credit card debt peaked at USD 1.08 trillion. Bloomberg reported a rise in credit card delinquencies, surpassing pre-2020 levels, followed by historic pandemic lows.⁵ Additionally, non-revolving credit in the United States, encompassing student and auto loans, declined approximately 10% from October 2022 to October 2023. Demand for mortgage lending similarly dipped.⁶

Across Europe, the average savings ratio stood at 12.6% of disposable income between 2012 and 2019. Amid the pandemic, this ratio surged to an unprecedented 25.4% in Q2 2021. Yet, by 2023, a downward trend emerged, steadily pulling the savings ratio to the pre-pandemic average.⁷ In parallel, European banks significantly tightened credit standards for consumer loans, particularly home loans, because of heightened risk perception and low-risk tolerance prompted by the high cost of capital, declining customer creditworthiness, and an uncertain economic outlook. The European Commission forecasted that GDP growth in Europe and the euro area would reach a meager 0.6% in 2023 due to subdued economic activity. The European Commission anticipates 1.2% to 1.3% GDP growth in 2024.⁸

Asia Pacific markets such as Singapore and Australia mirrored the trend. Australia's persistent cost-of-living crunch led to heavy reliance on unsecured credit, keeping credit card debt elevated. Late delinquency rates for cards in Australia reached their highest point since 2021, with the number of accounts 90+ days past due up 19% year-over-year (YoY). Demand for mortgages and auto loans

dipped nearly 5% YoY from September 2022 to 2023.⁹ Similarly, calls for secured credit, including home and auto loans, are anticipated to remain subdued in Singapore.¹⁰

Declining bank deposits and muted credit demand are substantial challenges. Despite the attractiveness of high interest rates to customers, banks have been slow to pass on the benefit to depositors, sparking their redirection of cash to lucrative term accounts and money-market instruments. In the United States, total bank deposits declined 4.8% YoY by June 30, 2023, for the first time since 1994.¹¹

In addition, concern over the stability of small regional banks prompted a shift of deposits to larger financial institutions. Spooked by bank failures, customers began draining their accounts from regional and community banks and credit unions.

More than half of the respondents to our customer survey indicated plans to diversify their deposits across multiple banks to mitigate potential losses in a bank failure. Banks significantly increased interest payouts to retain these deposits, resulting in escalated interest expenses and a decline in net interest margins. Some regional banks resorted to high-cost brokered cash deposits (CDs) to supplement organic deposit growth, leading to elevated deposit costs. Facing the balance of financial stability and customer trust amid a shifting banking landscape, other regional firms, such as PacWest Bancorp, turned to strategic asset sales to shore up funds.¹² For instance, PacWest Bancorp sold its USD 3.5 billion loan portfolio to an asset management firm in June 2023 to strengthen its balance sheet.¹³

Current customer profitability needs careful management

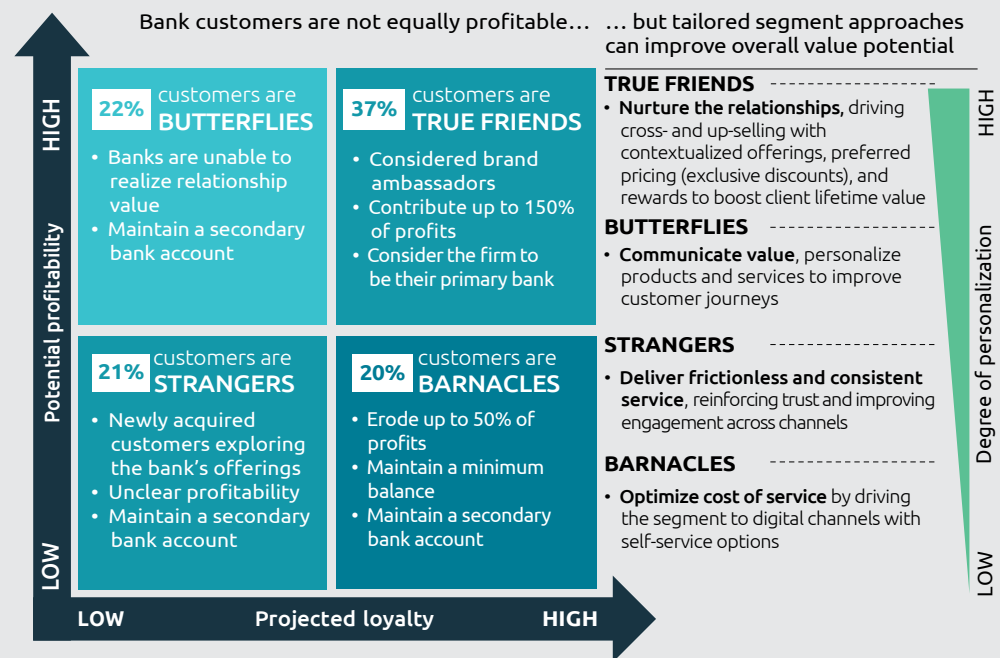
Given recent economic volatility, identifying potentially profitable customer segments is essential but poses challenges. Each segment is characterized by differing profitability and loyalty levels, leaving banks with an unwieldy customer landscape (figure 1). Consider the following customer framework which defines four key customer segments and their potential impact on bottom lines:

- **Butterflies:** Representing 22% of customers, butterflies exhibit potential profitability but lack consistent loyalty. They frequently switch banks in pursuit of better offers and experiences.
- **True friends:** Comprising 37% of customers, this group demonstrates high

loyalty to and profitability for their primary bank. They actively engage with a primary bank, using multiple products and services. Ongoing patronage and positive referrals make them pivotal to bank growth.

- **Barnacles:** These long-term customers stick with the bank over time, taking advantage of basic services or low-profit products like checking accounts and debit cards. Despite loyalty, their revenue impact is marginal. Around 20% of customers fall into this category.
- **Strangers:** Making up about 21%, these newly-acquired customers interact with the bank only sporadically. They explore products and services but rarely engage. Strangers can potentially transition into butterflies, true friends, or barnacles.

Figure 1. Customer segments require different strategies to boost profitability



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 CXO survey, N=250. The framework is from Werner Reinartz and V. Kumar's article, "The Mismanagement of Customer Loyalty;" recalibrated for retail banking customers based on the banking CXO survey.

Our CXO survey of 250 bank executives across 14 markets revealed that the churn rate of newly acquired customers was 5–10% for more than half of the banks surveyed, with 24% reporting 15–20% customer churn. In contrast, for the true friends segment, 42% of banks noted a 0–5% rate, with 36% reporting in the 6–10% range.

By strategically allocating resources and tailoring marketing efforts, banks can optimize profit potential for each customer segment and drive retention as appropriate (figure 1). Proactive moves are crucial now as the share of unprofitable customers is poised to increase, especially if the current cost-of-living crunch is prolonged into the future.

Building a new, future-focused customer pipeline is essential

Generally speaking, today's bank customer profile skews older, which portends a sparse credit-demand pipeline in the years ahead. Older customers often correlate with deposits because mature individuals control relatively higher wealth, own property and savings, and have less need to borrow.

Executives who participated in our CXO survey said Gen Z individuals, aged 18–26 years, account for only 21% of their bank's total customer base; moreover, only 9% of bank executives prioritize targeting and acquiring Gen Z customers.

During interviews, banking executives told us they aim to prioritize customers who can swiftly contribute to the bank's economic margin. Within a fiercely competitive market, investing in younger demographics entails potential risks. Should banks aim to target this segment, the approach largely involves open, collaborative, and white-label partnerships with Gen Z-related brands, rather than making direct investments in the Gen Z segment.

Gen Z is expanding and becoming more influential. In the workforce, they will soon supersede baby boomers aged 60 to 78 (in 2024).¹⁴ Gen Z banking habits, preferences, and expectations for

personalization differ significantly from previous generations. Therefore, banks seeking a youthful business pipeline will adapt services accordingly. The key is capturing Gen Z customers early in their financial journey, which requires a robust technology and data foundation. While banks are lagging, new-age payers are increasingly enticing the Gen Z segment to build up their customer base.

In Italy, Milo Gusmeroli, Deputy General Manager at Banca Popolare di Sondrio, said, "Prioritizing the younger generation is pivotal as they shape the future of banking. Our approach isn't just theoretical; it's pragmatic. We anticipate Gen Z's embrace of digital platforms and physical branches, and our focus extends beyond price wars or unsustainable services." He added that Banca Popolare di Sondrio appeals directly to Gen Z via unique products and approaches beyond numbers-driven strategies.

The shift to digital channels helps keep new-age players competitive

The disparity between in-branch banking and digital channels (such as mobile apps and websites) continues to widen. Of the bank customers we surveyed, 23% said they prefer visiting branches for most transactions, yet they are gradually transitioning to digital channels like mobile apps. Conversely, only 16% choose to conduct all transactions at branches and consider digital channels less critical.

- 37% of customers told us they use digital channels to interact with their banks and are gradually decreasing reliance on in-branch services.
- 24% say they have shifted entirely to digital channels, rendering physical branches redundant in key geographies.

Despite the increasing digital shift, online platforms have delivered relatively lackluster customer experience (CX). Among customers surveyed, 59% rated their mobile banking app experience as average, with only 35% expressing high satisfaction.

59%

of banking customers rated their mobile banking app experience as only average.

The discrepancy in experience is particularly noticeable between transactional and advanced functionalities. For instance, when using advanced features – finance management tools such as budgeting, advisory, or rewards – more than 60% of customers rated their experience as “average”. Yet, almost half expressed “delight” with transactional features, such as money transfers. So, can conclusions be drawn that banks have work to do when it comes to making advanced features more intuitive or convenient?

As incumbent banks strive to adapt to evolving digital experiences, challengers gain traction and build momentum. Nearly 87% of surveyed incumbent bank CXOs considered new-age players their leading competitors.

Despite significantly less venture capital funding, 36 new-age banks entered the market as 34 exited, resulting in 1% overall growth from January 2022 to July 2023, according to an October 2023 report from global consultancy Simon-Kucher.¹⁵ While the pace of new entries has decelerated, growth indicators remain robust:

- New-age players expanded customer reach by 30%, surpassing the one billion mark in the 18 months ending July 2023.¹⁶ As one specific example, in Spain Revolut, a London-based global challenger, outpaced incumbents Santander and CaixaBank in customer acquisition in 2023, securing 12.8% of customers compared with 12.6% for Santander and 9.3% for CaixaBank.¹⁷
- Simon-Kucher reports that new-age players are achieving top-line growth while expanding customer reach, with revenues up nearly 43% within a year and a half.¹⁸ For instance, Revolut is expected to nearly double its revenue growth to USD 1.9 billion in 2023 from USD 1 billion in 2022.¹⁹

Our customer survey data found that excellent customer service, advanced payment capabilities, swift onboarding and account setup, and personalized attention were the ingredients that persuaded convenience-hungry consumers to explore and engage with alternative financial firms.



Customer and competitive pressures prompt banks to reassess their cost base

Globally, banks are strategically preparing for potential 2024 challenges amid economic slowdown prognostication. Rising funding costs, reduced lending volumes, declining consumer confidence, and the threat of non-performing assets may fan the flames of the cost of doing business. Bank CXOs are proactively tightening their operational belts by prioritizing these impending challenges.

Marco Briata, Head of Marketing and Digital at Italy's *Crédit Agricole*, said, "In 2024, banking profits will rely on interest rate margins, yet rising costs squeeze these margins, creating profit pressure. Real estate – especially in critical mortgage cross-selling – poses challenges. With declining lending volumes and heightened market volatility, 2024 presents considerable hurdles." He added that client liquidity remains constrained and unprofitable.

Our CXO survey participants demonstrate cost discipline by closing unprofitable business lines and exiting non-core markets to mitigate losses. Branch closures remain a significant part of this strategy, spurred by industry mergers and consolidations in developed markets in North America and Europe.

This aggressive approach to branch closures aligns with the industry's focus on enhancing digital platforms and catering to customers' increasing shift to online channels. US bank branches plummeted from 100,000 in 2009 to 79,000 in 2022.²⁰ Notably, the pace of closures nearly doubled in 2021-2022 (versus 2017-2021) because of customers' accelerated digital shift during the

pandemic. Similarly, in Europe, the number of bank branches dropped from around 240,000 in 2008 to about 140,000 in 2021, reflecting the global digital banking trend.²¹

Banks are also streamlining operations and talent pools; workforce optimization ranks among the top three priorities for bank CXOs regarding cost discipline. In the United States, major banks have already implemented significant layoffs, reaching nearly 20,000, with Wells Fargo reducing almost 5% of its workforce in 2023. Since 2020, the bank has slashed its workforce by 50,000, signaling impending job losses.²² Meanwhile, Barclays plans to eliminate 2,000 positions in the UK as part of a USD 1.25 billion cost-cutting initiative.²³ Deutsche Bank is also contemplating layoffs, aiming for a 62.5% cost-income ratio by 2025, down from 72.4% in Q3 2023.²⁴

These strategic moves reflect the industry's commitment to cost optimization and restructuring in response to market challenges.

Fortifying growth requires a balanced focus on experience and efficiency

Banks will face strategic decisions in the months ahead as they navigate fundamental challenges to established business models. The convergence of multiple trends will significantly impact how banks operate efficiently, serve customers effectively, and stimulate growth. While banks began 2024 with a strong foundation, restricted organic growth and withering interest margins may hinder established revenue streams.

70%
of bank CXOs plan increased digital transformation investment of up to 10%.

Productivity and efficiency top the priority list of the bank leaders we surveyed. They are determined to expand their customer base and retain profitable segments. They will strategically increase non-interest income, such as fees and commissions, to stimulate top-line growth and reduce interest-income reliance. Diversifying income sources is essential to enhancing fee-based revenues.

“
The prime focus for retail banks will continue to revolve around cost-to-serve and enhancing customer journey excellence (measured by NPS). The pivotal game-changer will be artificial intelligence (AI), serving as a crucial tool to achieve these priorities.”

Pierre Ruhlmann
Chief Operating Officer, BNP Paribas, France

And when it comes to technology, 70% of bank CXOs plan to increase investment in digital transformation by up to 10% in 2024, despite maintaining a strong focus on cost discipline, as per our banking executive survey. Enhancing data management capabilities and modernizing legacy data systems take precedence, but concurrently, banks will migrate core functions to the cloud to establish a nimble, economical foundation. Cloud and advanced data analytics are pivotal for banks seeking to orchestrate value-added services within lucrative open banking ecosystems. Artificial intelligence, including generative AI, is the centerpiece of intelligent transformation (figure 2).

Bank executives we interviewed said they are actively devising strategies to scale AI deployment from back-end to front-end applications while exploring the transformative potential of generative AI.

Figure 2. AI can help banks navigate the cost, competition, and customer triad



Source: Capgemini Research Institute for Financial Services Analysis, 2024.



Banks take a leap forward in efficiency and customer experience with generative AI



Artificial intelligence transitioned toward data-driven methodologies in the 1990s, employing machine learning (ML) algorithms and neural networks, leveraging the exponential growth in available data.

As AI progressed through the 2000s, it expanded into multifaceted domains, including natural language processing (NLP), computer vision, and robotics. The groundwork for generative AI was laid in 2014 with the development of transformer architecture, which led to the creation of large language models (LLMs).

Google researchers developed one of the first LLMs in 2018, called BERT (Bidirectional Encoder Representations from Transformers); it soon became a ubiquitous baseline in NLP tasks. In 2020, Google integrated BERT within Google Search in over 70 languages and now leverages it to rank content and display featured snippets.²⁵

In November 2022, US-based OpenAI launched ChatGPT in what was to become an AI watershed that quickly became the fastest-growing consumer internet application, amassing 100 million users within two months. A year later, ChatGPT's user base had surged to 180 million, solidifying its impact on artificial intelligence and consumer engagement.

Generative AI's impact on democratizing artificial intelligence has been profound. In the past, AI was confined mainly to back-end operations and detached from direct consumer engagement. However, generative AI has bridged this gap remarkably, facilitating its smooth integration into daily activities. Unlike traditional AI models, generative AI models have been developed and adapted to handle multimodal inputs. These models are designed to process and understand information from various modalities, such as text, images, audio, and sometimes even video; allowing for a more comprehensive understanding of data. This transformation has brought AI closer to consumers, seamlessly incorporating it into their routines and interactions, accelerating value creation.

The World Retail Banking Report 2024 survey of bank CXOs found that 80% of bank executives believe generative AI represents a significant leap in advancing AI technology. Although stringent regulations have often reined in the banking sector's approach to technological evolution, ChatGPT – and a growing list of competitors – is catalyzing change. Generative AI illuminates potential efficiency gains and is captivating previously AI-resistant bank boardrooms. During our discussions with CXOs, a consensus emerged: while generative AI might not become an everyday business practice in the short term, no one can ignore its significant potential. Generative AI doesn't merely enhance existing AI use cases within banks, but it also expedites the delivery of these capabilities. Beyond functional augmentation, it can help reshape back- and mid-office operations.



On a scale from one to 10, I'd gauge the AI adoption in the retail banking industry at around a five. We've seen significant adoption, especially in enhancing customer engagement through AI-powered chatbots, leading to improved CX and increased call center productivity. However, there are numerous untapped opportunities within the banking value chain where AI's potential remains underutilized."

Gurbhej Dhillon

Chief Technology Officer, Flutterwave, USA

As AI use cases multiply, banks achieve customer experience/operational efficiency balance

AI applications have become pivotal in banking, transforming the value chain from the front-end to the back office. On the customer engagement front, AI can support customer acquisition, retention, and risk management. AI-powered chatbots and virtual assistants are redefining customer interactions, offering personalized support, handling queries, and boosting customer experience (CX) while reducing operational strain.

It streamlines back-office operations by automating data entry, document processing, and compliance checks to beef up operational efficiency and redeploy human resources to higher-value tasks demanding critical thinking and strategic decision-making.

AI's predictive analytics strengthen risk assessment and fraud detection by leveraging vast data sets to identify anomalies and mitigate potential risks in real time, which fortifies customer trust.

In marketing and sales, AI's predictive algorithms enable tailored recommendations and targeted marketing campaigns to elevate cross-selling and upselling based on individual customer behaviors and preferences.

As AI applications multiply and mature, scalable benefits will require a balance between enhancing customer experience and optimizing operational efficiency. Generative AI can help the organizations strike this balance, as a result banks can unlock the full potential of intelligent automation across diverse use cases.



AI holds immense profitability potential, particularly given generative AI's capacity to elevate established processes. The pivotal factor resides in our adept utilization of AI, machine learning, and deep learning. Areas like business process automation, compliance, audit, and governance stand to gain immensely from the transformative impact of AI. Furthermore, the emergence of generative AI holds the promise of unlocking substantial opportunities in copilot, content creation, and research and data aggregation."

Sweta Mehra

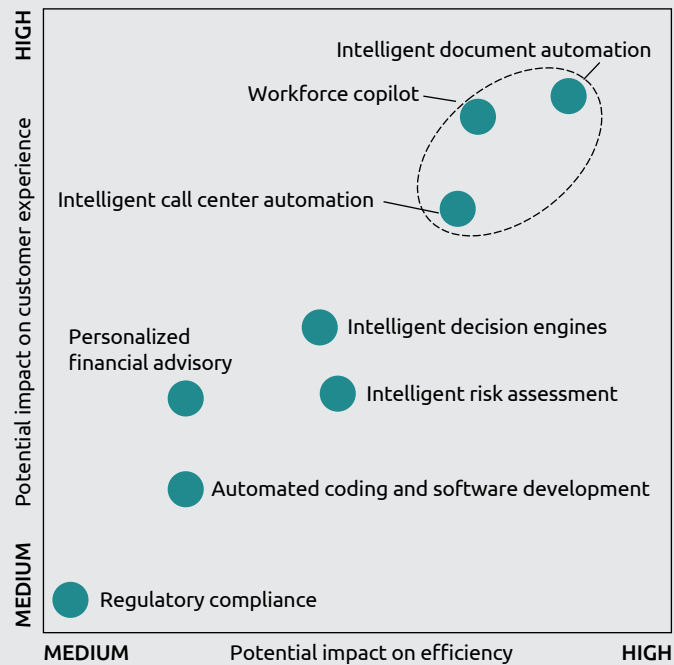
Managing Director, Everyday Banking,
ANZ Bank, Australia

Surveyed bank CXOs have identified key areas where the power of generative AI holds immense potential to elevate efficiency and customer experience across the retail banking value chain. Our survey highlights three pivotal horizontal processes that span the entire spectrum of retail banking and emerge as prime candidates for intelligent transformation (figure 3):

- Workforce productivity tools through AI-copilot
- Documentation gathering, processing, and validating
- Call center friendliness and efficiency

A robust discussion of these three key processes follows.

Figure 3. Bank CXOs prioritized where Gen AI can make the most significant impact



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 bank CXO survey, N=250

Embracing copilot – not autopilot – to elevate workforce productivity

Our survey of bank employees indicates that staff allocates nearly 70% of their time to operational activities, leaving only 30% for customer interactions (figure 4). The industry faces persistent productivity challenges from manual tasks that take employees away from high-value assignments and negatively impact team efficiency.

More than 60% of survey bank employees said they are frustrated by lengthy, repetitive documentation processes. Complex regulatory requirements compound the issue, mandating meticulous compliance checks, particularly evident in Know Your Customer (KYC) procedures. This scrutiny delays account openings and loan approvals as employees identify and validate documents. Most of those surveyed said risk evaluation is time-consuming because high false positives present a considerable efficiency hurdle.

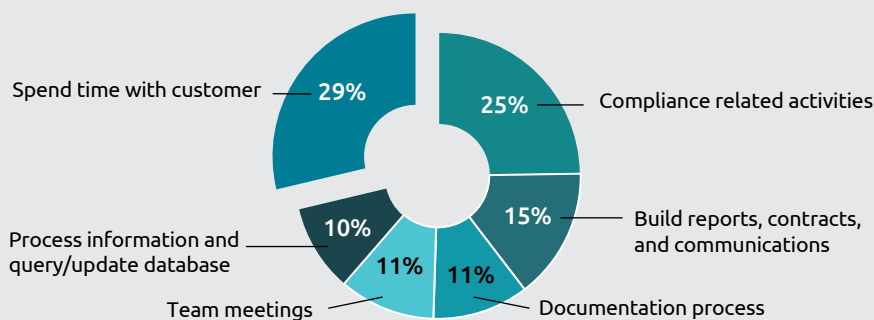
Legacy systems and fragmented databases exacerbate inefficiencies, impeding

comprehensive customer service. Hindered by disparate data access, employees struggle, leading to delayed responses and prolonged transaction times and thereby causing customer dissatisfaction. Despite nearly 15 years of digital transformation efforts, over 80% of bank employees assigned only a moderate rating to automation in their functions (onboarding, lending, marketing, contact center), identifying a significant gap between aspirations and reality.

Generative AI heralds the copilot era, integrating AI-powered tools into the quest for workforce efficiency. A copilot is an intelligent assistant that seamlessly collaborates with human operators to boost their capabilities. It augments human expertise by complementing decision-making, offering insights and recommendations, and aiding task completion. Interactive and adaptive copilots engage with humans and learn from interactions, incorporating feedback, and dynamically adapting their outputs to refine their assistance continuously. This ongoing process ensures a responsive and evolving collaboration.

70%
of bank employee
time is allocated
to operational
activities.

Figure 4. CX suffers as bank employees struggle with mundane tasks



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 bank employee survey, N=1,500.

Note: Chart numbers and quoted percentages- may not total 100% due to rounding.

A July 2023 study by Massachusetts Institute of Technology (MIT) researchers explored generative AI copilot's impact on work tasks like email and cover letter writing, closely resembling actual job duties without factual accuracy needs. The report said ChatGPT copilot users reduced work time by 40% and with an 18% increase in quality.²⁶

How can copilots support the banking workforce?

Generative AI copilot architecture in banking blends advanced generative models and data sources with banking applications and user interfaces to generate and share authentic data.

Copilot components include:

- **Data input and pre-processing:** The bank can create diverse copilot datasets from sources, including internal proprietary data, external publicly available data, and third-party datasets that undergo pre-processing to clean and format the information.
- **Generative AI models:** Advanced AI models like generative adversarial networks (GANs)ⁱ or transformer architectures serve as a core framework. These models create algorithms designed to generate new data outputs based on the learned patterns and structures from the input data. These algorithms facilitate the creation of text, images, or simulations relevant to banking scenarios.
- **Integration and deployment:** Architecture includes interfaces with banking systems and applications. Integration ensures employees can leverage copilot output within various processes or decision-making scenarios.

- **Human interaction interfaces:**

Generative AI copilots have interfaces designed for human interaction. These interfaces allow seamless user communication and present synthesized user-friendly insights and creative output.

- **Adaptive learning mechanisms:**

Copilots continually learn and adapt through feedback loops and exposure to new data. Adaptive learning enhances their generative capabilities over time, improving quality and relevance.



The transformative impact of workforce copilots in banking could yield a productivity surge between 20 to 70%, particularly evident in IT and development activities. Copilots revolutionize how bank employees allocate their time, optimizing once counterproductive tasks. To harness this potential, banks need to introduce their workforce to copilots and commit resources to comprehensive training programs, maximizing the efficacy of these invaluable tools."

Frédéric Tardy

General Manager, FSI, Microsoft, France

ⁱ GAN (generative adversarial network) is a machine learning model that uses deep learning to create new data from a training dataset.

The bank employees we surveyed identified critical copilot elements that could amplify their productivity (figure 5). They were most enthusiastic about copilots' ability to automate fraud detection, swiftly flag suspicious data or activities, and generate comprehensive reports. Copilots can analyze extensive datasets, detect anomalies, and identify potential risks in real time to support regulatory compliance.

The second most crucial feature for employees is data visualization and analytics automation. Copilots distill actionable insights from expansive datasets by harnessing the power of AI algorithms. These insights serve as invaluable aids for informed decision-making, be it discerning market trends, optimizing investment strategies, or tailoring bespoke financial solutions for customers.

Moreover, copilots leverage these insights to craft personalized content for customers, a feature of paramount importance ranked third by bank employees to be disseminated through emails and messages, ensuring a more tailored and engaging customer experience.

Surveyed bank employees ranked data entry and querying as the fourth most crucial copilot feature. Their natural language interface understands and processes queries in everyday language, eliminating the need for specific programming or query syntaxes. Additionally, copilots advanced search capabilities can navigate vast datasets to retrieve pertinent information based on specified criteria. Real-time updates on queried data ensure up-to-date information.

Figure 5. Key features of generative AI copilot that unlock untapped workforce potential

- 1  **Fraud detection** by flagging suspicious activities and drafting a report at the end of sessions
 - 2  **Data visualization and analytics** by creating actionable insights from expansive datasets for informed decision making
 - 3  **Drafting and sending personalized content** and messages to customers
 - 4  **Database querying** to enable entering and fetching data from bank systems without using codes (like SQL)
 - 5  **Loan processing** by analyzing customer data, financial eligibility, and credit scores
 - 6  **Drafting of contracts and legal documents** by structuring content, proofreading, and suggesting tailored information
- Regulatory compliance
 ■ Customer intimacy
 ■ Operational efficiency

Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 bank employee survey, N=1,500.

Subsequent employee priorities, ranked fifth and sixth, encompass loan processing and the creation of reports and contracts. Copilots can analyze large datasets to swiftly evaluate loan applications – financial standings, credit scores, and more – against established criteria. This assessment allows for the precise evaluation of eligibility, creditworthiness, risk identification, and the probability of repayment. Furthermore, copilots streamline the document creation process by structuring content, proofreading, formatting, and cross-verifying it with standardized templates to draft comprehensive reports and legal contracts.

Italy-based Shivaji Dasgupta, Group Data and Intelligence Officer at UniCredit, said, “Generative AI signifies a transformative leap, moving us beyond what we might call 'traditional' AI applications and opening up an expansive new frontier. What lies ahead is a monumental productivity shift, with generative AI embedded into daily workflows and applications. This new technology will change the way we interact with our customers, allowing for full, conversational, and real-time dialogue at all times.”

In May 2023, OCBC in Singapore introduced Wingman, a generative AI-powered copilot. The bank reported that Wingman’s ability to actively track and generate code boosted developer efficiency by about 20% to 30%. In the OCBC contact center, Wingman summarizes sales calls and streamlines anomaly detection. Seamlessly integrated across departments, it facilitates diverse tasks including creating initial drafts of letters that empower employees to save time, refining content as opposed to creating it from scratch.²⁷

In Australia, Westpac’s IT team reported a 46% productivity surge while retaining code quality, attributing it to generative AI assistance in a recent in-house study.²⁸ In the United States, Goldman Sachs is experimenting with generative AI for code generation and testing. During the pilot, Goldman Sachs developers have been able to write as much as 40% of their code automatically using generative AI.²⁹ In the UAE, Emirates NBD gave more than 1,000 developers access to GitHub’s Copilot X, a Microsoft generative AI tool, to enhance coding capabilities.³⁰

Natascia Noveri, Head of Innovation and Processes at Italy’s Intesa Sanpaolo, said, “We’re witnessing a remarkable surge in productivity, across all areas of the bank, with an overall average improvement ranging from 15% to 30%, extending beyond IT and coding. Moving into the mid-office, generative AI stands as a game-changer, automating manual tasks from cover-note generation to customer response repositories. This shift is poised to reshape skill demands in the next five to ten years, emphasizing technology-based expertise in recruitment.”

Generative AI copilots can improve the software development life cycle

Software dictates business pace and quality, yet software teams grapple with test coverage, defects, vulnerabilities, and technical debt. Legacy code, now a bottleneck in digital transformation, demands migration to modern languages – a task laden with risks and costs.

Generative AI's prowess extends beyond coding assistance; developers can articulate software functionalities in plain language and are witnessing AI's transformation of ideas into code across the software development life cycle. Capgemini's A2B translator, leveraging generative AI, redefines code translation by extracting semantic meaning in blocks, and ensures a more automated, accurate transition than traditional line-by-line methods. With multiple frameworks and accelerators, A2B achieves near-complete automation in code translation.³¹

In a proof-of-concept (POC) for a prominent Asia-based financial services firm, Capgemini utilized a generative AI copilot to suggest code fixes. With a codebase surpassing 5,000 lines, manual detection, resolution, and testing of vulnerabilities consume a substantial portion of developers' time. The POC targets enhancing code quality by offering improvement suggestions and expediting vulnerability resolution, boosting developer productivity.

In another example, Capgemini's collaboration with a leading French bank involves modernizing its codebase to reduce technical debt. A pilot was launched, focusing on key criteria such as efficiency, ease of initiation, code suggestions, translation, optimization, tests, and review – aligning with the bank's objectives of leveraging best-in-class tech to secure business value with a streamlined and efficient code transformation.

Only **9%** of client onboarding team time is allocated to customer interaction.

Documentation is the first customer touchpoint, yet it's cumbersome

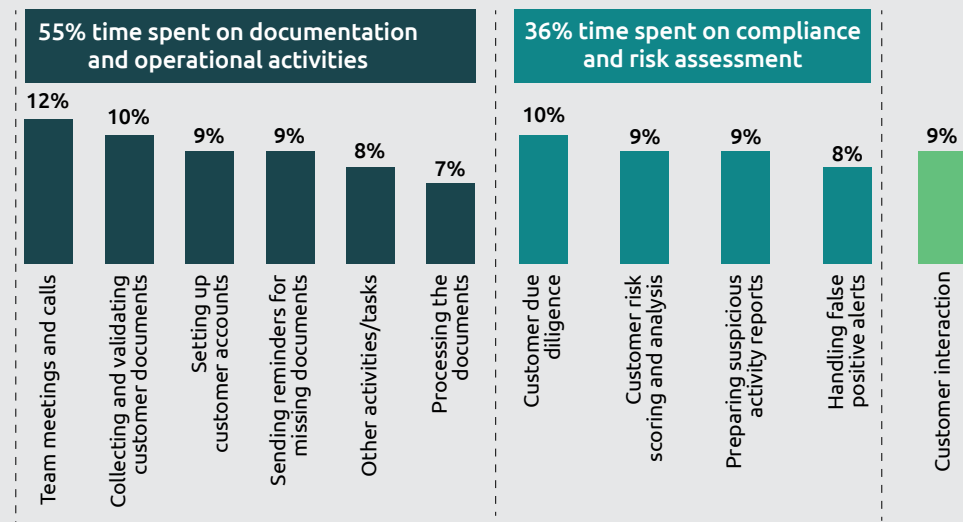
Year after year, banks face more and more physical and digital documents including, applications, claim forms, checks, and bills, and in formats including JPG, PNG, PDF, and HTML. Processing these items and extracting the correct data is very labor intensive and costly. Problems with document processing, such as lost documents and missing signatures, can also lead to regulatory breaches, and bring hefty fines.

Let's dive into a common scenario, a customer applies for a checking account. They submit physical and digital documents at a branch or via the

digital platform. These documents need manual validation, review, classification, and information extraction. A bank employee must remind the customer of missing details or documents. Finally, the information undergoes manual processing for decision-making, and the account is opened.

Bank employees told us they dedicate 55% of their time to documentation and operational tasks throughout the onboarding, KYC, and account opening processes – nearly a third (36%) of their focus is spent on compliance and risk assessment (figure 6). Surprisingly, only 9% of their time is allocated to customer interaction, and a large portion of that time concerns addressing process-related questions.

Figure 6. Customer onboarding team employees spend 91% of their time on operational and compliance activities



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 bank onboarding/KYC employee survey, N=375.

Note: Chart numbers and quoted percentages may not total 100% due to rounding.

According to 64% of bank employees, completing the KYC process for a customer can take up to three days. For mid-size banks, the process might extend longer. The KYC process costs banks approximately USD 80 per customer, with an average onboarding cost of USD 128 per customer, including the KYC expenses.

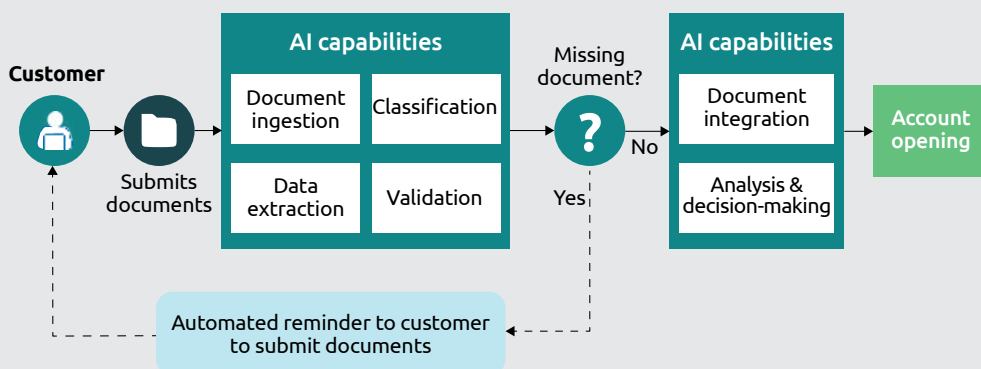
As a result, a cumbersome documentation process and subpar onboarding experiences lead to prospects abandoning their applications: an estimated 18% of customers leave the application process, as our bank employee survey revealed. Over 70% of prospects who abandoned their account applications cite inadequate support and guidance as primary reasons. Half of the prospects said the documentation process was lengthy, time-consuming, repetitive, and lacked progress clarity. Merely 4% claim to be able open an account within a day, while 34% require up to five days. The survey found that the journey extends to 6–10 days for 44% of customers and reaches 10–15 days for the remaining 18%.

Frictionless banking entails automated documentation

Capgemini analysis determined that banks can optimize up to 66% of the time spent on operational, documentation, and compliance-related activities by leveraging AI-powered intelligent transformation and generative AI copilots. Intelligent document processing platforms reduce costs, effort, and risk by leveraging cognitive capabilities, including AI and ML, to automate tasks such as document categorization and data extraction. These capabilities can perform tasks and improve how they are completed.

Consider the same scenario of a customer applying for a checking account (figure 7). When the bank receives scanned or handwritten documents, possibly uploaded by the customers, these materials are sent to a platform for processing. An intelligent document processing platform employs optical character recognition to convert text – typed, handwritten, or printed – from images into machine-encoded text.

Figure 7. AI enables and automates end-to-end bank documentation process



Source: Capgemini Research Institute for Financial Services Analysis, 2024.

Additionally, facial detection identifies identification photos (e.g., from a passport) for profile verification. Language detection and translation ensure uniformity in text language.³² Generative AI can then be employed to understand and interpret the unstructured content within these documents, providing a more comprehensive analysis of the information. Following this initial processing, the next phase involves extracting information from the documents. Various techniques – including machine learning algorithms – extract key phrases, topics, and other significant entities. In addition, generative AI models equipped with NLP capabilities can analyze the natural language content within documents. This includes understanding context, sentiment, and extracting meaningful insights. This data can be cross-verified by scouring public-domain sources like government websites. Documents such as balance sheets, tax forms, or drivers' licenses are categorized using document recognition techniques and deep learning algorithms. Once a document undergoes analysis, validation, and classification, employees can use the resulting information tasks such as email generation or automated form filling. Generative AI, with its ability to understand context and generate content, can contribute to more nuanced anomaly detection by identifying irregularities within unstructured text and highlighting potential issues.

Generative AI-powered documentation presents compelling advantages, focusing on enhancing operational efficiency. Automation accelerates document processing, which is especially beneficial in managing substantial volumes of similar documents like KYC forms. This automation expedites processes and reduces manual labor, enabling workforce redeployment to more strategic areas. Moreover, generative AI contributes

to more advanced analysis, decision-making, and the generation of human-like responses in natural language. This aggregation of automation and human expertise allows specialists to concentrate on intricate cases, thereby mitigating the likelihood of errors. Significantly, process automation reduces the risk of regulatory breaches by minimizing document handling errors to lower the chances of misfiling or accepting incomplete submissions. Finally, reducing paper use across the customer life cycle will establish more sustainable business practices.

In addition to the large volume of documentation at the customer end, banks also have a large trove of data trapped in diverse documents within their back-end operations. These include financial, legal, compliance, operational, customer correspondence, audit, risk assessment, and investment documents. Banks require an intelligent data room copilot to efficiently manage and use information from these documents.

In December 2023, JPMorgan introduced DocLLM, a generative AI extension designed to enhance understanding of intricate business documents such as forms, invoices, and reports. Using an LLM-based model, DocLLM considers text and layout, delving deeper into the semantics of enterprise records. Impressively, it outperformed 14 of 16 established tasks, showing a remarkable 15%+ enhancement in comprehending complex forms. Moreover, it showcased strong adaptability by performing well on four out of five unseen datasets, promising reliable performance even with new document types. This innovation presents a hopeful avenue for businesses, enabling them to extract valuable insights from various forms and records utilized in daily operations.^{33 34}

Capgemini has developed a copilot to extract insights locked within data room documents

Quick and accurate decision-making is crucial in the fast-paced world of financial services. Generative AI-powered intelligent copilots have emerged as essential tools for financial firms, enabling timely analysis of extensive document collections to assess investment opportunities and associated risks. These copilots utilize optimization techniques for document intelligence, supporting teams of analysts. A leading financial services firm from Europe reached out to Capgemini to develop an intelligent copilot to process complex collaterals and a large body of multimodal data to generate actionable insights.

Capgemini has leveraged generative AI's conversational, summarization, and information extraction capabilities, merging them with document parsing and embedding techniques to create an efficient assistant. Seamlessly integrated into SharePoint documents from data rooms, this copilot operates on an architecture based on Azure cloud, Azure Cognitive Search, and the ChatGPT API, ensuring a scalable and robust deployment.

With the ability to process a wide range of data formats – including PDFs, text, simple graphs, and data – the copilot retrieves information from a diverse multimodal corpus. Importantly, each response from the copilot is traceable, providing cited sources. This feature ensures that analysts trust the output and confidently delve deeper into relevant insights.



Bank contact centers often lack critical engagement channel connections

The pandemic ushered in almost overnight digital transformation within banks, marked by digital channel adoption and the widespread use of self-service tools like chatbots. Amid this shift, an omnichannel strategy emerged as the nucleus for seamless, superior customer experiences across various touchpoints. However, despite the emphasis on an omnichannel approach, contact centers often continued to operate in communication silos, disconnected from mobile platforms, websites, and branch networks. Our survey revealed that:

- 61% of bank customers contacted agents because they were unhappy with chatbot resolutions;
- Yet, almost 22% said they rarely engage with human agents, finding chatbots sufficient; and
- The remaining 17% said they distrusted chatbots and preferred direct contact with human agents.

However, the survey also indicated growth in chatbot acceptance among younger demographics. We found that a quarter of millennials and Gen Z individuals liked chatbots compared with only 17% of baby boomers and members of Gen X. Around 25% of Gen X and baby boomers said they regularly contacted human agents for help compared with only 10% of Gen Z and 14% of millennials.

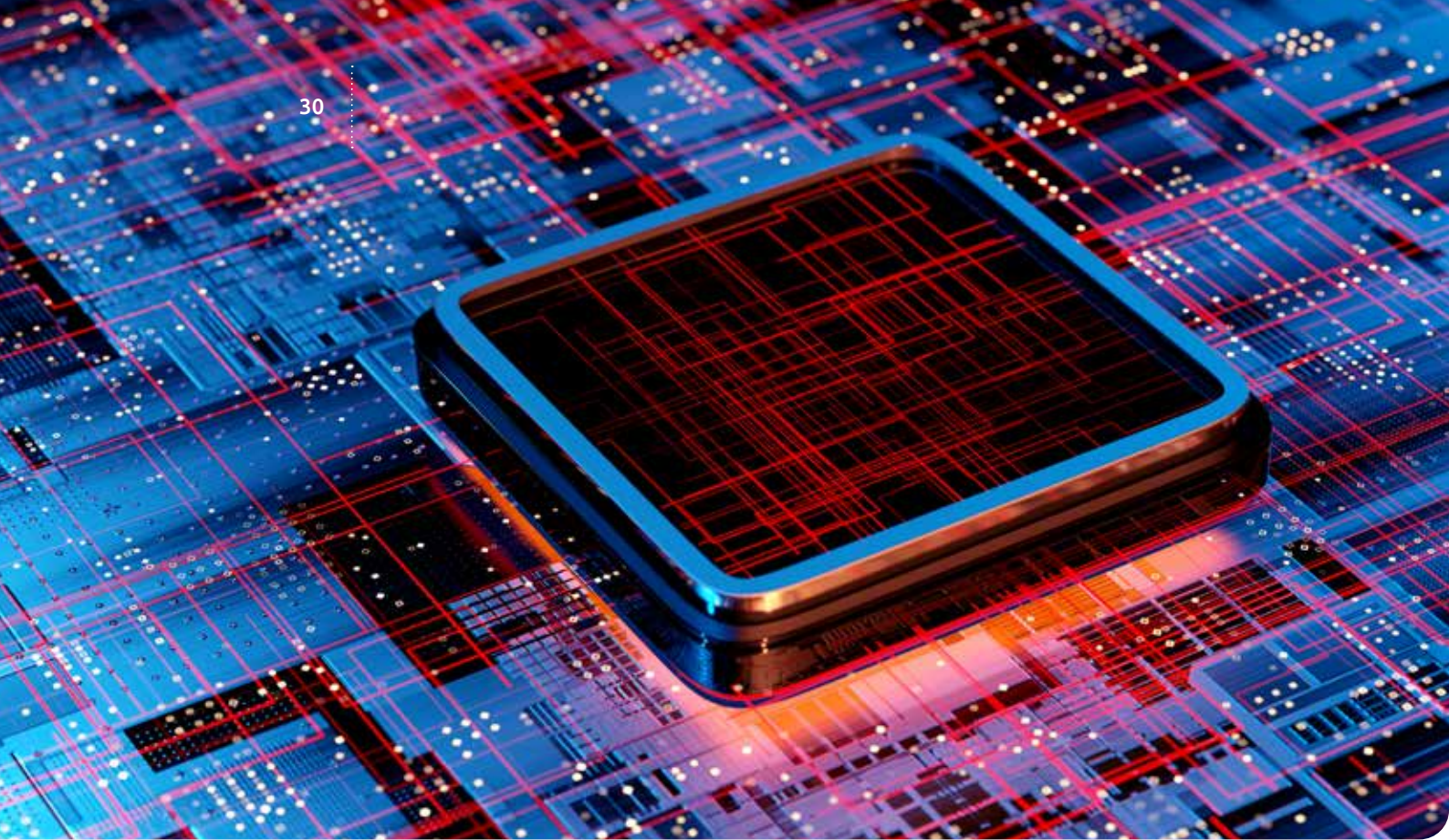
Bank employees rated contact center automation and digitalization as low to moderate – with 81% citing a lower degree of digitalization. Traditional chatbots typically operate based on predefined rules and templates. These rule-based systems follow predetermined instructions, responses, and decision trees to interact with users. They rely on programmed responses for specific keywords or phrases, limiting their ability to understand nuances in language or context beyond what's explicitly programmed into their rule set.

These traditional rule-based chatbots lack the flexibility and adaptability of advanced AI-driven systems. Their programming determines their functionality and ability to handle complex or unanticipated queries. As a result, their interactions might sometimes feel rigid or less responsive. More than 60% of the customers rated their experience with chatbots as only average.

Around 62% of Tier I bank contact center survey respondents and 40% of those from Tier II banks said inadequate chatbot capabilities affect their productivity and efficiency. While each query a chatbot handles saves agents a few minutes, the limitations of these chatbots compel agents to spend more time on less valuable interactions.³⁵ For instance, the contact center workforce allocates significant time toward customer interactions (56%) versus operational tasks (45%), based on our bank employee survey. However, a deeper examination of those interactions reveals a concerning trend: agents spend only 9% of their time upselling and cross-selling new products and services to customers. Interestingly, less than 20% of Gen X and baby boomers engage with agents for information regarding new banking products and services. These findings indicate that while pivotal for customer service, contact centers struggle to maximize engagement aimed at creating additional value for customers, and for the bank.

The repercussions of these limitations often manifest in call abandonment, reaching 12% for Tier I banks and nearly 18% for Tier II banks globally. Furthermore, 55% of banks globally (53% of Tier I banks and 58% of Tier II banks) exhibit first-contact resolution rates (FCR) of below 70%. This is not a good performance, considering 70% is the overall industry benchmark.³⁶ Approximately 66% of European banks also report FCR rates below 70%. Consequently, the cost per call for contact centers has increased, with an average cost of nearly USD 12.00 per call reported in our bank employee survey. Tier I banks maintain a relatively lower cost of about USD 9.00 per call, while Tier II banks may pay up to USD 18.00 per call.

81%
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as low.



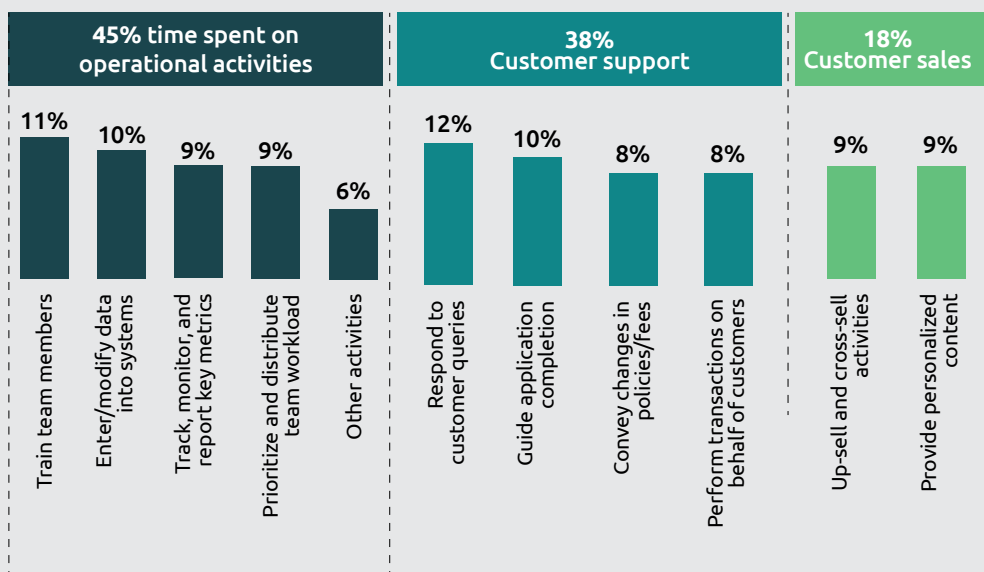
Intelligent capabilities can transform contact centers into value amplifiers

Generative AI-enabled transformation allow banks to optimize nearly 77% of the time spent on various operational and customer interaction activities (Figure 8). As banks rationalize their branch footprints, intelligent contact centers can act as omnichannel hubs, balancing human-digital interactions.

How will banks make it happen?

- Developing chatbots with conversational AI capabilities.
- Providing intelligent copilots to assist agents in basic tasks and customer interactions.

Figure 8. As contact center agents struggle with daily tasks, customer engagement dips



Sources: Capterra Research Institute for Financial Services Analysis, 2024; World Retail Banking Report: 2024 bank contact center employee survey, N=375.
 Note: Chart numbers and quoted percentages may not total 100% due to rounding.

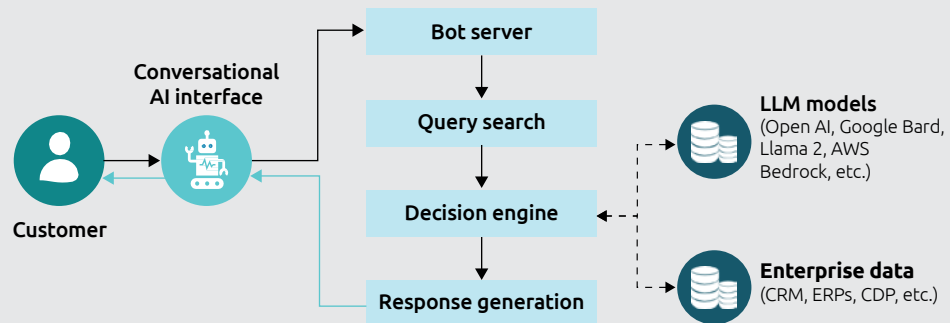
In a typical scenario, a customer will use the chatbot interface to raise a query. A bot server receives and interprets the question to discern the customer’s intent and context. A search engine and a decision engine work together to fetch relevant data. Conversational AI empowered by generative AI capabilities, can then tap into extensive enterprise knowledge bases such as customer data platforms, ERP, CRM databases, and LLMs to process the data and frame relevant responses (figure 9).

This integration of generative AI and chatbots significantly improves efficiency in retrieving pertinent information and consistently suggesting appropriate responses. Generative AI-powered chatbots are capable of highly adaptive and context-aware interactions with users. This combination enables more personalized, contextually relevant, and human-like conversational experiences. The outcome is a seamless customer experience marked by enhanced efficiency and satisfaction.

Based in Milan, Italy, Maurice Lisi, Head of Digital Business at BPER Banca, said, "Optimizing operational efficiency is a top priority, and we're harnessing AI extensively for this purpose. Our AI factory will integrate AI models across multiple functions, from digital customer onboarding to contact center support. Hybrid, human-digital bank is at the core of our digital strategy, therefore we are being very thoughtful to have the right balance of automation and personalized experience. We are prioritizing AI usage to improve digital customer experience but also to empower our call center sales/ assistance agents in delivering swift and personalized service."

For example, the bank has recently launched Hey BPER, a virtual assistant powered by natural language processing and machine learning tools, to deliver personalized, human-like assistance to customers, and with the objective to take over up to 45% of incoming customer inquiries.

Figure 9. Generative AI-enabled conversational AI boosts chatbot efficacy



Source: Capgemini Research Institute for Financial Services Analysis, 2024.

Global bank to transform its conversational AI capabilities

The transformative work aims to improve the existing natural language understanding of the chatbot and help with better intent classification. The bank looks at leveraging generative AI to improve intent identification and, finally, improve customer chatbots' performance.

Capgemini helped the global bank in technology, data, and AI scope assessment, analyzing call transcripts, historical customer interactions, and routing analysis to optimize and fine-tune the intent. The team leveraged generative AI capabilities to fine-tune the model. The team trained the conversational AI system on multimodal customer journeys and tested it against quality parameters for further refinement. Conversational AI is monitored for continuous optimization.

The production rollout and full-scale implementation of generative AI-based optimizations and uplift at the contact center is expected to improve the chatbot containment rate from its current level of 30% to a projected range of 60-65%.

Generative AI-powered copilots developed for agents can also offer multifaceted support to enhance contact center efficiency:

- **Abstract summarization:** Beginning with precisely recording and transcribing customer calls, a generative AI copilot extracts vital details and generates concise call summaries. Agents can then efficiently review and approve condensed transcripts, facilitating rapid insights and informed decisions.
- **Insight extraction:** Contact centers gain business insights from extensive conversation datasets. Copilots analyze call purposes against business metrics to empower agents, enhance call-pattern comprehension, refine performance, and bolster overall efficiency.
- **Complaint resolution:** Copilots dive into historical data on successful complaint resolutions, offering agents insights and effective strategies. Armed with these tools, agents can promptly address grievances to boost CX.
- **Personalized interactions:** Copilots analyze customer data to create tailored responses, fostering meaningful interactions that resonate with customer needs to elevate their sense of value and understanding.
- **Automated mail responses:** Copilots leverage vast customer data to craft personalized email replies. This capability streamlines responses, alleviates pressure on agents, and ensures timely and accurate solutions, ultimately enriching customer service and experience.



AI-driven systems significantly enhance banking, especially within contact centers. At Salesforce, we emphasize leveraging a comprehensive AI system that handles tasks like call analysis, response recommendations, and managing intricate customer interactions. These AI models are set to revolutionize contact centers and entire banking operations by streamlining inquiries and automating transactions. They empower bankers, acting as copilots, fostering more engaging customer interactions, thus enhancing the overall experience.”

Greg Jacobi

VP and GM, Banking and Lending, Salesforce, USA

Generative AI copilot for agents can be a contact center game changer by streamlining operations through enhanced efficiency, accuracy, and continuous learning. Automated tasks and accessible information support agents by reducing inquiry handling times so they can focus on complex issues and boost service quality. Moreover, the copilot’s learning curve evolves with each interaction, enhancing its adeptness over time. Agents appreciate increased control, and costs shrink as existing staff can manage higher service volumes.

A US credit union and Capgemini are developing an intelligent copilot platform for contact center agents

Capgemini is engaged with one of the largest US credit unions to build a minimum viable product (MVP), a copilot to support contact center agents in three lines of business: lending, SME, and compliance. The copilot platform furnishes information needed to serve customers on demand in a user-friendly and expeditious manner.

Under the hood, Microsoft’s Power Virtual Agents connect to a vector database of client knowledge bases using an OpenAI embedding model. The OpenAI LLM works to understand the user request, send it to the vector database, and finally reuse the LLM to stitch together top search results into a credible, plain English response. A Retrieval-Augmented Generation (RAG) framework ensures that the LLM builds responses based on trustworthy information sources.

The copilot is expected to boost the productivity of customer representatives, improving the quick turnaround time. Moreover, the copilot will be able to avoid the hallucination problem that LLMs are prone to and consistently deliver correct answers. The credit union anticipates an NPS gain of 15–20 points with the copilot due to high customer satisfaction and experience.

The credit union plans to roll out similar copilots for other business lines before launching similar capabilities in customer-facing chatbots.



Pursue an enterprise-wide approach to scale AI capabilities and value

Banks encounter several impediments in their quest to embrace enterprise wide AI transformation. The persistence of legacy systems creates complexities in integrating new AI technologies, often incompatible with outdated processes. Additionally, fragmented data across disparate departments challenges the establishment of a cohesive data infrastructure essential for effective generative AI implementation. Uncertain regulatory frameworks within the banking sector adds complexity to generative AI integration. Skill shortages in AI expertise hinder the seamless implementation and management of these innovative initiatives. Banks' inherent risk aversion and concerns about costs and the uncertain returns on investment contribute to their cautious approach toward generative AI adoption.

Moreover, ensuring customer trust while introducing generative AI-driven systems remains a critical concern, as any misstep might jeopardize client confidence. We scored 250 banks on business and technology parameters to understand their readiness to embrace intelligent transformation at scale. Globally, 41% of banks scored average on diverse parameters, while 29% scored low. Yet, only 4% of banks scored high on both parameters, indicating readiness to embrace and scale intelligent transformation. The scores also presented the divergence between the banks based on their sizes. For example, 45% of Tier II banks scored average on business and technology parameters as compared with 39% of Tier I banks. Similarly, 27% of Tier II banks scored low on these parameters while 30% of Tier I banks did so.

In addition to bank size differences, notable regional disparities in bank readiness to adopt intelligent transformation at scale exist:

- In Europe, 51% of banks fell into the average category on business and technology parameters, while 31% scored low. Only 1% achieved high scores in both readiness areas.
- North America followed with 31% of banks at an average rating and 27% scoring low, but with 8% reaching high readiness levels in both parameters.
- Asia-Pacific (APAC) shows significant lag, with 48% of banks scoring low and only 15% reaching an average rating in both categories, and without any banks scoring high on both parameters.
- Among Latin American banks, 58% scored average, and 15% scored low.
- In the Middle East, 41% of banks scored average, and 21% scored low, with only 3% achieving high scores in both readiness areas.

Following a benchmarking analysis, three significant areas emerged where banks are falling behind in business and technological domains. On the business front, challenges include the inability to effectively measure, monitor, and track the impact of generative AI initiatives, a lack of adeptness in identifying use cases and constructing minimum viable products, and the struggle to allocate dedicated budgets for at scale AI endeavors.

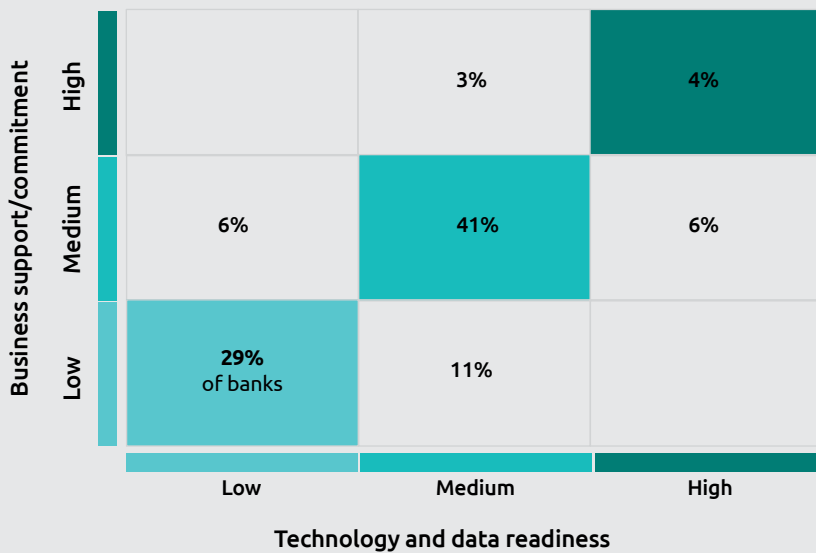
Meanwhile, in the realm of data and technology, banks are grappling with the absence of a comprehensive enterprise-wide data management strategy, leading to sluggish modernization of their data estate. Additionally, they lag in establishing robust AI orchestration layers and machine learning operations (MLOps) setups, and contend with subpar data quality flowing through their systems.

Less than adequate back-end capabilities require renewed attention and investments

Our CXO survey revealed that allocating 56% of the technology budget to front-end transformation compared to 44% on back-end improvements and automation was a prevalent trend across regions and banks. The discrepancy in investment between front-end and back-end digital areas might stem from a desire to meet immediate customer needs and improve CX visible at the front-end, while sometimes neglecting the foundational upgrades necessary to support these advancements. Banks often prioritize investments in front-end digital technologies due to their immediate impact on customer experience and engagement. This focus on front-end

Only **4%** of banks scored high on readiness to embrace and scale intelligent transformation.

Figure 10. Most banks lack readiness for generative AI-led intelligent banking



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report bank CXO survey, N=250.

Note: Business support and commitment were measured by scoring AI vision, AI adoption roadmap, budget, talent, use cases in the pipeline, KPI monitoring, and AI governance. Tech and data readiness was measured by data sourcing systems, ability to manage real-time data, systems to generate synthetic data, centralized data lakes, capability to transform data, MLOps setup (Machine Learning Operations), data management approach to modernize data estate, and data governance framework.

solutions allows banks to enhance user interactions, streamline processes, and create an appealing user interface.

However, investment in back-end digital infrastructure, though equally crucial, might not always be as visible or immediately impactful from a customer's perspective. Back-end digital infrastructure involves systems, data management, security measures, and integration capabilities that support the bank's overall operations. These upgrades and enhancements are fundamental for ensuring data security, operational efficiency, scalability, and seamless integration of various systems within the bank's ecosystem.

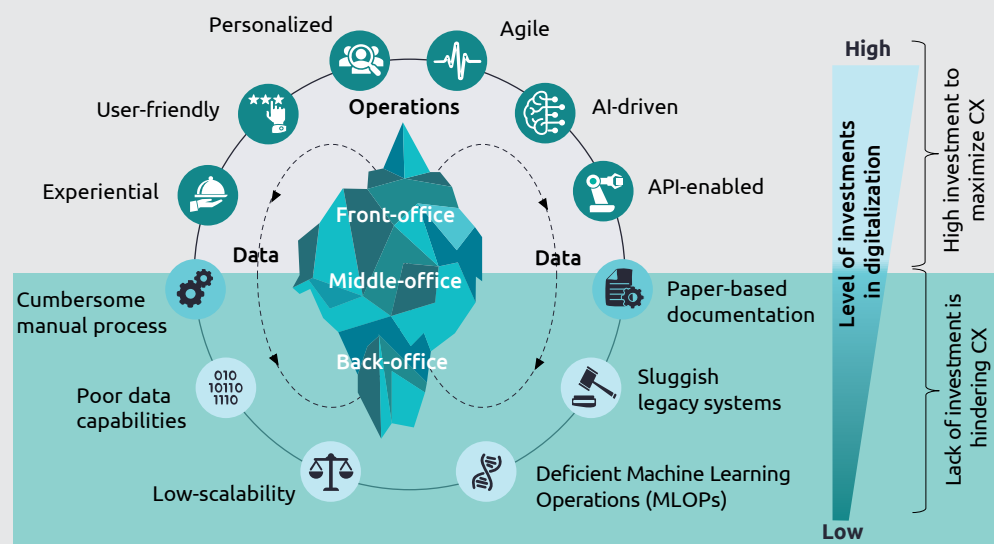
During our conversation with banking executives, they told us that banks are recognizing a pivotal shift toward mid- and back-office investments, pivoting from the prevalent focus on front-end and CX. This change signifies a dual

goal: managing costs and laying a robust foundation for further enhancements in front-office operations.

“ Banks facing the challenge of legacy systems must strategize on how to adopt and scale AI effectively. The considerations while embracing generative AI go beyond just theoretical discussions. It's about crafting a roadmap that navigates the hurdles legacy systems pose, enabling banks to harness the full potential of AI.”

Steven Cooper
CEO, Aldermore Bank, UK

Figure 11. Discrepancy in front- and back-office investments hinders AI scalability



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 bank CXO survey, N=250.

Banks' intelligent transformation readiness lags despite profound benefits

Among the CXOs we surveyed for this report, only 6% of them are ready with a roadmap for enterprise wide AI-driven transformation at scale:

- 28% said they are actively exploring a suitable roadmap for their bank's needs
- 29% are in the early stage of devising a plan
- 34% have developed AI adoption strategies for specific lines of business but not integrated within the enterprise.

North American banks have taken the lead at a regional level, with approximately 13% of banks already establishing an enterprise-level roadmap for AI and generative AI. European banks are also quickly catching up, with nearly 38% of banks setting up AI roadmaps for specific lines of business. Conversely, APAC banks are trailing behind, with 39% of banks in the early stage of roadmap development and only 12% directing their efforts toward specific lines of business.

In addition to regional differences, notable trends emerge based on the size of banks:

- Only 25% of the Tier I banks are in the exploratory phase of developing AI and generative AI roadmap, contrasting with nearly one-third of mid-sized (Tier II) banks.
- Another 36% of Tier I banks have developed targeted business-line roadmaps compared with 29% in Tier II.
- Notably, 8% of Tier II banks have established enterprise-wide AI and generative AI roadmaps, surpassing Tier I banks' 2%.

At the heart of enterprise-level AI and generative AI adoption lies the pivotal role of cloud computing: the demands of these new technologies for extensive computing resources and adaptable scalability make the cloud the nucleus of intelligent transformation. [Capgemini's World Cloud Report – Financial Services 2023](#) underscores the acceleration of

cloud adoption within the financial services industry during the pandemic. Financial services executives surveyed revealed a substantial increase, surging from 37% in August 2020 to 91% in August 2023.



We're in the early stages of AI proofs of concept, which show great promise. Our dedicated team is delving into the technology and is beginning to develop a roadmap. In this experimental phase, we're examining possibilities and considerations to guide implementation. A key variable is to allocate cloud computing resources to generative AI use cases. The convergence of generative AI and cloud economics offer a path to reduced costs and scaled adoption."

Vincent Kolijn

Head of Strategy and Transformation,
Retail, Rabobank, Netherlands

Yet, this rapid shift hasn't resulted in uniform cloud migration and impact. Surprisingly, more than 50% of the executives in the World Cloud Report admitted to not having migrated their core business applications to the cloud. Moreover, industry experts and analysts suggest an even lower migration rate, estimating it at between 20% and 30%.

Composable platforms have emerged as invaluable assets to streamline this transition, particularly for mid- and back-office processes. Leveraging cloud marketplaces and harnessing SaaS-based modular components across the banking value chain can seamlessly integrate with a bank's core banking system. This integration yields heightened business agility, fosters digital collaboration, and amplifies scalability, fortifying the institution's competitive edge.



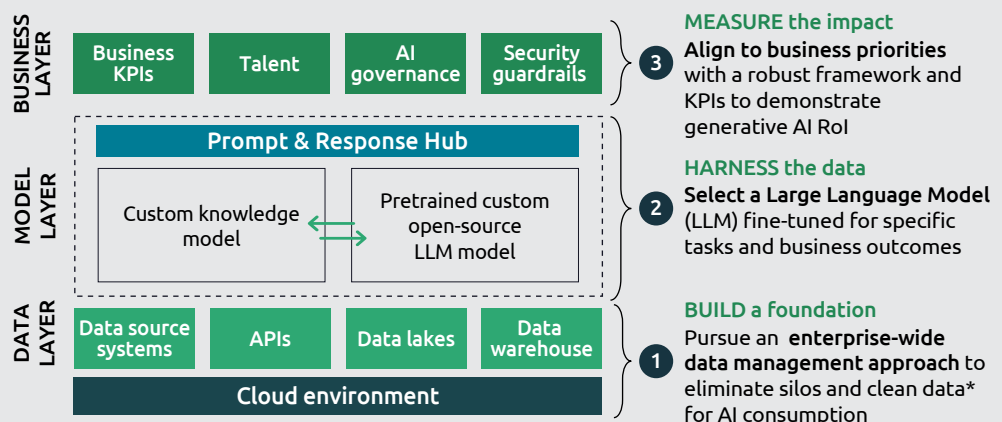
Many AI initiatives does not move from experimentation to product integration due to the foundational architectural and platform gaps—a space where the cloud and elasticity of compute becomes pivotal. Generative AI has elevated cloud discourse, drawing attention to scaling AI. Amidst the hype, even those previously disinterested are now engaged. Yet, the looming challenge remains: data privacy compliance is generative AI's paramount threat."

Arun Mehta
CDAO, Head of Data Analytics and AI,
First Abu Dhabi Bank, UAE

We recommend a bottom-up strategy encompassing key elements to scale AI and generative AI use cases and drive intelligent transformation (figure 12):

- Develop a modern data estate:** Establish a robust infrastructure for enterprise-wide data management. A modern data estate will serve as the foundational framework for handling diverse data sets efficiently.
- Leverage advanced data processing:** Harness the potential of data by implementing a robust model layer equipped with LLMs and sophisticated algorithms. This integration facilitates the conversion of raw data into actionable insights, and can translate these insights into tangible impacts.
- Implement guardrails and frameworks:** Set up comprehensive guardrails and frameworks aligned with business priorities and practices. This responsible approach helps to demonstrate the ROI of generative AI initiatives, and ensures ethical and accountable deployment.

Figure 12. As generative AI quickly evolves, the development of enabling layers becomes essential



Source: Capgemini Research Institute for Financial Services Analysis, 2024.
Note: * Data cleaning (wrangling, remediation, or munging) is used to transform raw data into a format that is easier to access and analyze. The goal is to prepare data for downstream consumption/analytics – AI and generative AI.

A product mindset unlocks value in data

Banks' most significant challenge is eliminating data silos across different domains without building an unmanageably complex data platform. Data siloing is often the result of legacy systems developed at different times and intervals that creates disparate data formats and storage, which complicates integration.

Moreover, departmental databases and systems foster isolated data islands that impede a comprehensive view of operations or customer insights. In addition, stringent regulatory demands necessitate separate systems for compliance, which further fragments data. The paramount concern of data security can also lead to restricted access and compartmentalization, hindering effective data sharing.

Not to mention that today's incumbent banking landscape has been shaped by numerous mergers and acquisitions, resulting in the inheritance of multiple, often incompatible, systems and databases. Integration complexities stemming from this history impede the seamless flow and accessibility of information critical for a unified, comprehensive view of the institution's data assets. These disparate systems persist as independent entities within the organization, which exacerbates data silo challenges.

These days, an abundance of internal and external data, including insights from open banking, is readily available. Some firms consolidate their vast data within centralized platforms to optimize information management. One-third of the bank CXOs we surveyed are actively exploring an enterprise-wide data management approach. Concurrently, an additional one-third are in the process of developing their strategies for enterprise-wide data management. However, pursuing complete data centralization can heighten complexities, including those caused by regulatory barriers.

Data mesh architecture can help complex data management

Data mesh represents a novel architecture paradigm for managing and leveraging data within complex organizations. It proposes a decentralized approach to data architecture, aiming to address the challenges posed by centralized data platforms. What are the principles of the data mesh concept?

- **Domain-oriented data ownership:**

Data mesh advocates for distributed data ownership. Each organizational business domain or unit owns its data and is responsible for its curation, quality, and accessibility.

- **Data-as-a-Product:** Data is not treated simply as an asset or a by-product of operations – but as a standalone offering with a value proposition. Data is curated, refined, and packaged into products or services that internal or external stakeholders can directly consume or utilize. Domain teams create and manage data products tailored to their needs that are discoverable, understandable, and usable by other parts of the organization.

- **Self-serve data infrastructure:** An essential aspect of data mesh is providing self-serve infrastructure and tools for domain teams to manage their data effectively. Necessary components include standardized APIs, data governance frameworks, and platforms that support data discovery and sharing.

- **Federated computational governance:** Data mesh emphasizes federated computational governance, ensuring that while domains have autonomy over their data, there are standardized governance practices and protocols in place to maintain consistency, security, and compliance across the organization.

- **Governed data marketplace:** The marketplace provides a platform to publish consumption-ready data products where consumers can easily search for them, understand details about the data product, identify access

requirements, write peer reviews, and provide ratings. The marketplace also ensures the trustworthiness of data consumption and promotes understanding of data assets, including ownership elements, which are critical challenges in today's data platforms.

Data mesh aims to decentralize data management and foster a more scalable, agile, and autonomous approach to data within large and complex organizations. It strives to enable better data access, utilization, and innovation while maintaining governance and security standards. Moreover, banks pursuing this approach can make the shift without changing much of their existing IT infrastructure (figure 13).

JP Morgan Chase adopted a data mesh product strategy that empowers data product owners to manage their data, fostering enhanced collaboration and sharing across diverse domains. It provides comprehensive visibility into data usage throughout the enterprise, offering clarity on its utilization across various facets of the organization.³⁷

Several banks – including Fifth Third Bank (US), Saxo Bank (Denmark), ABN AMRO (the Netherlands), and PKO Bank Polski (Poland) – reported the adoption of data mesh architecture.^{38 39 40} Data mesh enables these institutions to streamline data management, foster collaboration, and achieve greater coherence across diverse data landscapes.

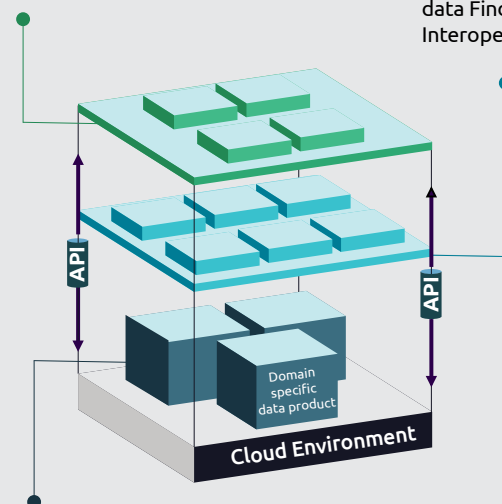
Figure 13. A next-generation data management approach for generative AI and enterprise level AI

Access data on demand

- Create a data marketplace to enable collaborative consumption of data by various business lines
- Reduce time-to-value for AI and generative AI use cases

Embrace data diversity with federated governance

- Create a centralized monitoring and governance platform for distributed data products
- Track, monitor, and report data-related KPIs
- Drive "FAIR" governance to make data Findable, Accessible, Interoperable, and Reusable



Simplify data ownership and management

- Individual domains organize, own, and manage data (functions, product teams across the banking value chain) on a shared platform for ease of storage, cataloging, and access control
- Domain-level data is decomposed into smaller units – data products – to improve data discovery and reusability while reinforcing trust, security, and compliance
- Each domain creates, processes, and publishes its data product within a standard framework
- Data capabilities can be conveniently scaled to meet the domain requirements

Source: Capgemini Research Institute for Financial Services Analysis, 2024.

US-based retail bank embarks on data architecture transformation with Capgemini

A leading US bank with more than 60 million customers wanted to transform its data management approach, which spread information across multiple systems without a single version of truth. A legacy technology stack with an outdated data management architecture, limited analytics and self-service capabilities made it challenging to extract usable insights quickly: consequently, the bank was missing revenue opportunities.

Capgemini and the bank embarked on a new multi-tenant architecture to accommodate several hyperscalers and a private cloud by adopting domain-driven data products and distributed data management principles. The team defined new architectures and architectural patterns for data management, movement and processing, data platforms, security, AI, and ML. A single data-management framework control plane provided a landscape view of data assets, quality controls, lineage, and a data catalog.

The bank is gradually creating data products under a new operating model featuring data owners and stewards who control their domains. Data literacy is growing through product descriptions, peer reviews, and sample datasets, driving improved enterprise collaboration. Business stakeholders are now more engaged in the product architecture development life cycle, leading to greater adoption.

How to shape your model layer – buy, partner, or build

Selecting the right large language model (LLM) demands a long-term strategic vision, a comprehensive assessment of specific needs, available resources, model capabilities, risk and compliance considerations, and cost analysis. Beginning with defining essential use cases for LLMs – such as customer support, risk assessment, copiloting, or fraud detection – banks must then evaluate the relevance and quality of their available data for training purposes. Concurrently, assessing internal talent and expertise, computational resources, and infrastructure is pivotal in understanding the capacity to manage LLMs effectively.

Jorissa Neutelings, Chief Digital Officer at ABN AMRO Bank in the Netherlands, said, “When it comes to generative AI, banks are not necessarily competing with tech giants. Strategic partnerships, especially with hyperscalers, are essential for the tools and support banks need. Exploring generative AI, prioritizing large language models, and weighing in-house development should be the focus. Off-the-shelf solutions are equally important. It is crucial for large banks to balance these approaches. Banks must continue to experiment, collaborate, and adapt to harness the potential of AI without losing sight of their core business.”

We asked bank CXOs how they approach LLM deployment; we charted a two-by-two matrix based on the responses to delineate the distinctions among the three possible deployment approaches (Figure 14). We positioned the required investment on the X-axis – covering costs and resources. Along the Y-axis, we placed the level of customization,

denoting the model’s capability to execute intended tasks effectively. This graphical representation offers a visual understanding of the varied approaches.



Banks navigating the evolving generative AI landscape should weigh three approaches: building a custom LLM, considering off-the-shelf generative AI, and partnering with specialists. Custom LLM will bring ownership and customization but require substantial resources, off-the-shelf generative AI solutions provide immediate availability but limited control, and partnering with specialists accelerates the development and contribute to expertise enhancement.”

Pierre Ruhlmann

Chief Operating Officer, BNP Paribas, France

Buy to explore generative AI

The advent of ChatGPT and generative AI has introduced numerous off-the-shelf generative AI solutions tailored for various industries, including banking. These solutions encompass chatbots, fraud detection platforms, compliance tools, and more, catering to specific banking needs. Banks can seamlessly integrate these solutions into their infrastructure to bolster their operations. Banks leverage retrieval augmented generation methodology to use off-the-shelf generative AI solutions.

In this scenario, the bank faces constraints in accessing or modifying the underlying LLM utilized by the off-the-shelf solution provider. Consequently, the bank cannot train the LLM model with domain-specific data and knowledge, constraining its proficiency in handling complex tasks. This limitation results in minimal customization options available to banks. Despite these drawbacks, 56% of bank CXOs surveyed prefer this approach due to its capacity

to explore generative AI capabilities with lower investment. In this framework, the bank primarily supplies high-quality data to the off-the-shelf generative AI solution; this approach doesn't require alterations or transformations to existing infrastructure.

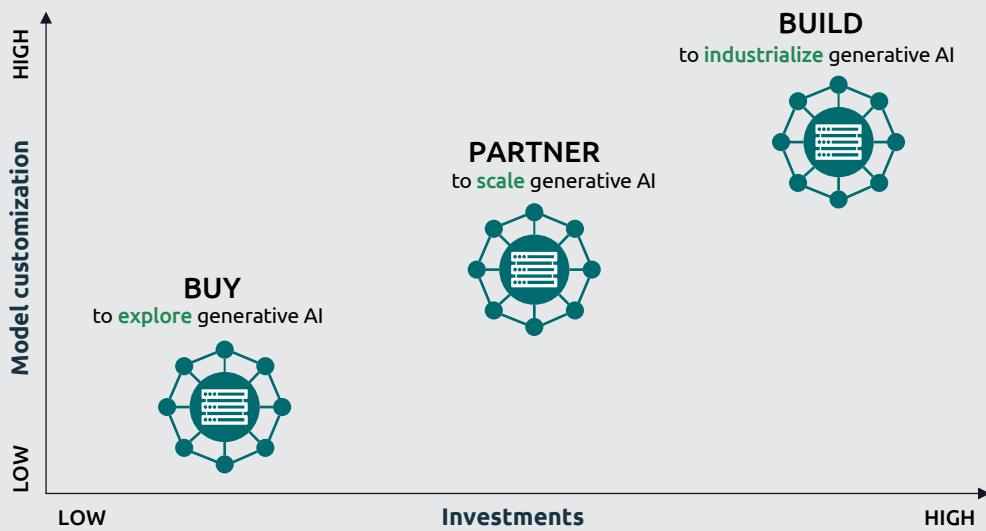
Partner to scale generative AI

Over one-third of bank CXOs prefer this approach, which offers a balanced path to scale generative AI use cases at the enterprise level. Collaborating with LLM providers allows banks to customize or fine-tune generative AI solutions using domain-specific data and knowledge. Fine-tuning involves adapting a pre-trained LLM, such as GPT-3, using bank-specific data or tasks to enhance its performance for industry-specific use cases.

This process starts with identifying an LLM that closely aligns with the bank's needs – like GPT from OpenAI or BERT from Google. Banks then gather domain-specific data, encompassing customer

56%
of bank CXOs intend to buy solutions to explore generative AI capabilities.

Figure 14. Banks typically select one of three approaches to shape their generative AI model



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report CXO survey, N=250
Question asked to bank CXOs: Which of the following Gen AI approaches, in your experience, is best suited for your bank?

interactions, financial reports, compliance documents, and other banking-related texts. The pre-trained LLM is calibrated using this data, refining its parameters to understand banking-specific nuances.

After fine-tuning, banks evaluate the model's performance, testing it on tasks like customer query resolution, fraud detection, and risk assessment. Iterative refinement may follow, integrating additional data or adjusting training parameters for improved performance. Once the bank is satisfied, the fine-tuned LLM integrates into the bank's systems, elevating its ability to handle banking tasks and enhance customer experiences.

For instance, within the “buy” approach, a chatbot provides broad yet precise responses to general queries, such as “What are different mortgage rates?” or “How to apply for a loan?”. In contrast, within the “partner” development approach, a chatbot powered by a fine-tuned LLM leverages its training on banking-specific data, like transaction records and financial product information. Due to its domain-specific training, this specialized chatbot adeptly handles queries related to account balances, transaction history, and personalized financial and product recommendations.

Fine-tuning LLM necessitates robust enterprise-level data management for banks to supply domain-specific knowledge to the LLM. While this allows for increased customization and capability to handle complex tasks, it demands substantial investments and modifications to the bank's data architecture for seamless integration of the generative AI solution.

Build to industrialize generative AI

The approach that was least preferred among the bank CXOs we surveyed, chosen by only 10%, involves building an LLM model from scratch. This method incurs significantly higher costs, potentially requiring up to 20 times the expense of other approaches. It also demands internal expertise to design the model architecture, conduct the training, evaluate the LLM, and integrate it into existing banking applications.

For instance, a chatbot powered by a custom-built LLM goes beyond providing hyper-personalized suggestions to customers and can perform complex financial tasks like fund transfers, payments, and investments. These bespoke LLMs are also well-versed in regulatory standards, ensuring compliance with industry regulations and prioritizing secure interactions to safeguard sensitive customer information.

Regardless of the approach followed for generative AI implementation, success is contingent upon aligning AI ambition and possibilities, which requires monitoring for continuous improvement and course corrections.

ⁱⁱ **RAG** stands for Retrieval-Augmented Generation. It's a methodology that combines two key processes in artificial intelligence: retrieval and generation. In this approach, a retriever model first identifies relevant information from extensive datasets or knowledge sources. Subsequently, a generative model uses this retrieved information to create or generate text, aiming to enhance the coherence and contextuality of responses.

Define KPIs for generative AI to ensure transparency and explainability

As generative AI evolves, they push the limits of human understanding. Instead of transparent explainable mechanisms, generative AI applications can be mysterious decision-making processes that may not be easily interpretable by humans. Unsurprisingly, calls are escalating for explainable generative AI from boards of directors, tech conference keynotes, and research labs. If an AI system makes a decision, it should be explainable so humans can quickly comprehend the how and why behind it.

Beyond the imperative of ensuring explainability, banks must diligently monitor and manage several other critical categories of risk associated with these advanced technologies:

- **Bias** poses a significant concern within AI models, manifesting in various settings through the incorporation of stereotypes related to race, gender, or sexuality. This inherent bias introduces the risk of generating discriminatory and unjust answers, potentially perpetuating discrimination and contributing to oppressive outcomes.
- **Hallucinations** represent a notable challenge in large language model (LLM) functionality, wherein these models confidently produce inaccurate statements. Despite their intent to generate the most relevant answers within given constraints, LLMs are not infallible, and their responses may not always be entirely accurate, potentially containing false information.
- **Privacy risk** associated with LLMs is a pressing concern, given their potential to unintentionally learn and memorize private information. This risk extends beyond personal data to encompass

sensitive details within project documents, codebases, and works of art. The incorporation of private memorized data in generated outputs introduces additional complexities, particularly in relation to copyright considerations.

- **Risk of malicious use** is a notable concern, involving the intentional creation of entirely new content by injecting purposefully incorrect, private, or stolen information into the outputs generated by LLMs. This malicious use poses significant challenges as it can lead to the dissemination of misinformation, potential harm to individuals or entities, and the misuse of generated content.

To effectively mitigate these risks, thorough testing of generative AI models is essential. This testing phase should prioritize the establishment and measurement of KPIs to ensure the reliability, transparency, and ethical use of these advanced models in real-world banking scenarios. By implementing robust testing protocols, banks can foster a more responsible and secure integration of generative AI technologies into their operations.

Measurement of the impact of generative AI is significant across various facets of organizational strategy and performance. It enables generative AI system evaluation and determines whether a bank is meeting its objectives and performance benchmarks. Measurement allows informed decision-making, guides resource allocation, and can shape generative AI implementation strategies.

By comprehensively assessing impact, organizations gain valuable insights into areas that require optimization or improvement, facilitating refinements in algorithms, models, or operational processes to enhance overall AI and generative AI performance.

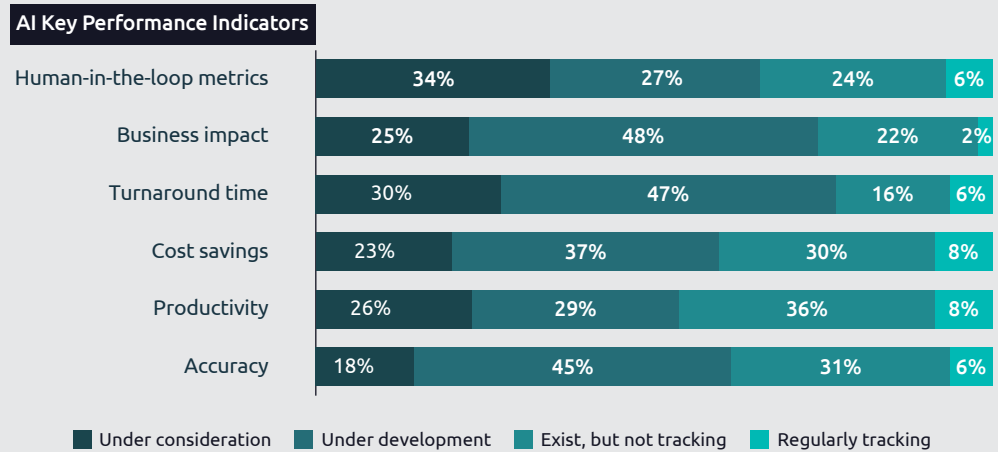
Despite the undeniable benefits and pivotal role of KPIs in monitoring and assessing generative AI impact, banks are falling behind. Only 6% of banks have established KPIs to measure generative AI impact and maintain continuous monitoring. In contrast, 26% have identified KPIs but are not actively tracking them, while 40% are in the process of developing these indicators (figure 15). A quarter of banks consider using KPIs to evaluate generative AI's impact.



Explainable AI (XAI) in banking is essential to mitigate bias risks and enhance trust. It accelerates AI adoption, ensuring transparent decisions, compliance, and collaborative industry implementation. XAI's role in clarifying complex AI processes drives trust, compliance, and understanding – all vital for industry-wide scaled deployment across banking and beyond."

Cormac Flanagan
Global Head of Product Management,
Temenos, Ireland

Figure 15. Banks are lagging in developing KPIs to gauge generative AI performance



Sources: Capgemini Research Institute for Financial Services Analysis, 2024; World Retail Banking Report 2024 CXO survey, N=250.
Note: The total will not add to 100% as responses where 'KPIs does not exist hence not tracked' are excluded.

As a result, the “Generative AI silent failure” phenomenon may emerge; yielding suboptimal results and outcomes. The crux of this issue lies in the delayed realization by key stakeholders that problems exist. To achieve desirable outcomes with generative AI, banks need to establish and monitor KPIs. They should also develop a roadmap and draw insights from their experiences in scaling AI at the enterprise level.



The hurdles in responsible AI aren't merely technological; they're rooted in navigating evolving organizational frameworks. With generative AI, the challenge isn't primarily cost-related; it's aligning our organizational structure with exploration, experimentation, and deployment. It's the calculus of costs once our framework is in sync.

Rafael Cavalcanti

SVP – Data, Analytics, and AI, Banco Bradesco, Brazil

Consider these insights from surveyed bank CXOs: while an average of 14 use cases are under exploration, only one or two have achieved enterprise-level scaling.

When evaluating the performance of these scaled AI use cases, 39% of bank CXOs expressed dissatisfaction, citing the failure to achieve desired outcomes or align with initial expectations. This delayed awareness of underperformance hampers the timely rectification of issues and leads to a substantial gap between anticipated and realized benefits.

We suggest that banks consider setting up an AI observatory to track, monitor, and report AI and generative AI impact and outcomes. KPIs assess model performance through metrics like accuracy and precision, unearth biases within models to ensure fairness, track feature importance to elucidate decision-making, aid in selecting interpretable models, and establish a feedback loop for continuous refinement.

KPIs also play a pivotal role in improving AI governance by providing measurable benchmarks for oversight and management. These quantifiable measures enable the structured monitoring of AI system performance against predetermined benchmarks, allowing organizations to ensure alignment with established standards and objectives. KPIs also serve as early warning systems, identifying potential risks and anomalies within AI models and facilitating proactive risk management and compliance with regulatory requirements.

João Quaranta, Executive Portfolio Manager, Data Governance, AI and Analytics, and Rafael Rovani, Head of AI and Analytics, CDAO, from Banco do Brasil explained, “The bank’s 2024 focus revolves around key macro themes like governance. The bank is instrumentalizing its data governance model, a new implementation critical for operations. Additionally, the bank is delving into emerging themes like the AI treadmill, emphasizing ethics and standards, particularly concerning generative AI algorithms. This involves restructuring the bank’s framework to mitigate risks associated with model development in this era. This marks a significant milestone, prompting enhanced research and development initiatives.”

An AI observatory with measurable KPIs will help banks strategically allocate resources to areas that require attention, ultimately contributing to robust and effective AI governance frameworks.

Enterprise-wide AI is a stepping stone to autonomous and intelligent banking

Retail banks need to implement AI and generative AI at an enterprise-scale with:

- Robust cloud infrastructure and a solid data foundation;
- Accessible LLM under strong AI governance; and
- In-house expertise and stringent protocols.

39%
of bank CXOs expressed dissatisfaction with AI use case outcomes.

Further, intelligence needs to be infused throughout all banking operations encompassing products, services, customer care, and engagement. The over-arching goal should be to lay the groundwork for autonomous and intelligent self-driving banks, similar to self-driving car concepts.

Autonomous banking uses advanced technology, such as generative AI, to streamline financial processes. It harnesses the power of algorithms and data analysis to provide personalized financial planning and automate transactions and investments. Autonomous banks will function with minimal human intervention by utilizing generative AI-driven systems and automation across various banking functions.

While the self-driving bank concept develops (Figure 16), some firms are gradually incorporating autonomy and intelligent capabilities to enhance customer experiences and streamline processes:

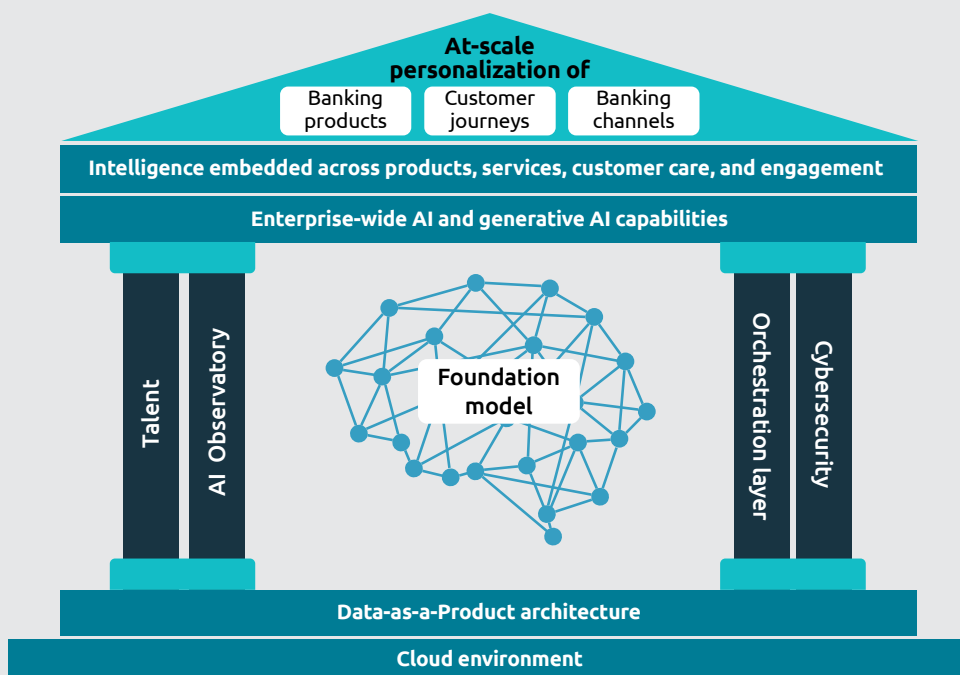
- Imagine a future state in which a customer’s bank account autonomously

transfers funds from checking to savings if an unusual deposit is detected. It might also swiftly identify and cover an overdraft by transferring funds from another account. For example, at BBVA, the bank’s mobile app features “Bconomy”, which anticipates each customer’s needs, alters them in the case of specific scenarios (like an overdraft), and proposes activities to improve the customer’s finances.⁴¹

- Spain’s Santander Bank partnered with Personetics, an AI and data FinTech firm, to integrate self-driving finance solutions into their mobile app. This implementation offers personalized customer engagement driven by AI, analyzing individual financial data to enhance the banking experience.⁴²

With highly efficient and productive mid and back-office processes, self-driving banks will achieve true customer centricity – enabling hyper-personalized customer journeys, omnichannel engagement, and contextualized product recommendations.

Figure 16. Intelligent banks of the future will deliver hyper-personalization at scale



Source: Capgemini Research Institute for Financial Services Analysis, 2024.

Conclusion

This year presents unique challenges for the banking industry: it faces a harsh economic climate and rapid technological advancements. Generating income while managing costs is more crucial than ever, forcing banks to find new ways to create value even with limited capital.

The pressure to increase revenue and control costs makes 2024 a pivotal year. For banks, efficiency isn't just essential – it's a potential competitive advantage. Despite previous efforts to improve efficiency, sluggish revenue growth and rising expenses may make the coming months even more challenging.

The key to survival? Intelligent solutions. Future-proof intelligent banks will thrive by doing more with less.

- **Deepening engagement with profitable customers:** Build meaningful relationships with high-value clients, attract new customers with forward-thinking products, and maximize customer lifetime value.
- **Finding the perfect balance:** Use AI and generative AI wisely across all your operations. Automate tasks to improve efficiency, but prioritize technologies that enhance the customer experience, not detract from it.
- **Unifying digital and data capabilities:** Combine your digital and data resources to drive an intelligent transformation. Embrace the power of AI and generative AI, but manage the risks they bring responsibly.

By focusing on these intelligent solutions, banks can navigate the challenges of 2024 and emerge stronger. They can generate sustainable growth, improve customer experience, and gain a competitive edge in the changing financial services landscape.

Methodology

The World Retail Banking Report 2024 draws on insights from three primary sources – the Global Retail Banking Executive Surveys and Interviews 2024, the Global Retail Banking Employee Survey 2024, and the Global Retail Banking Voice of Customer Surveys 2024. These primary research sources cover insights from 14 markets: Australia, Brazil, Canada, France, Germany, Hong Kong, the Netherlands, Portugal, Singapore, Spain, Sweden, UAE, the UK, and the USA.

on onboarding, lending, marketing, and customer service domains. Participants were also asked about the challenges and gaps in their department, their understanding of artificial intelligence, and how it can benefit them and their organization.

Global Retail Banking Executive Surveys and Interviews 2024

The report includes insights from focused interviews and surveys with 250 senior executives of leading banks representing all three regions: Europe, the Americas (North America and Latin America), and Asia-Pacific and Middle East.

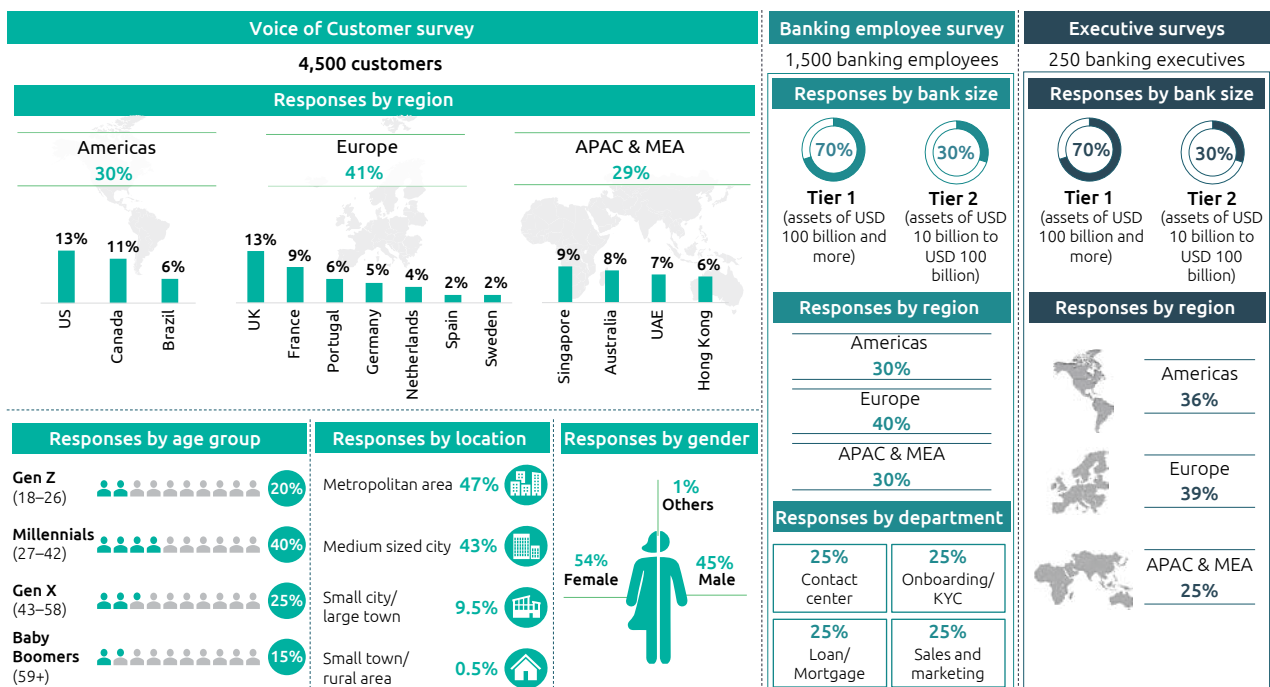
Global Retail Banking Voice of Customer Surveys 2024

The survey questioned 4,500 customers on their financial journey and their banking preferences, products, and services; factors influencing their adoption or avoidance of traditional banks vs new age players as well as their comfort with increasing technical intervention in their banking journey. Participants were also asked questions to understand their banking behavior, technology savviness, willingness to share personal data, and interest in adopting financial products and services using conversational bots.

Global Retail Banking Employee Survey 2024

The survey questioned 1,500 banking employees on factors affecting the efficiency across their banking value chain from front-end to back-end, focusing

Customer and banking executive surveys to derive market and industry insights



Partner with Capgemini

The time to transform your business is now.

Custom Generative AI for Enterprise

Custom Generative AI for Enterprise helps banks move from generic public LLMs that can be challenging to control and risky for data and privacy – to a tailored, trusted, and compliant solution. We work with your customer data and company information in a ring-fenced environment to ensure reliable output and tangible business outcomes.

Capgemini's proven generative AI framework augments your organizational expertise through secure, privacy-protecting, reliable, high-scale, generative solutions.

Intelligent layers

- Data (data-platform foundation)
- Model (trained based on company knowledge)
- Business (experience layer orchestrated for business domain use)
- Testing and trust (transversal layer)

We can help you define your organization's baseline and envision a strategy to develop minimum viable products (MVPs) and enterprise-ready custom solutions that scale business transformation.

Generative AI for CX

One of generative AI's most significant capabilities is hyper-personalization, which boosts customer experience. It's an ideal tool for banks seeking to elevate and scale self-service capabilities across channels, bolster the consistency of in-person customer service, improve the scale, reliability, and reach of appropriate content and campaigns, and improve sales

staff productivity and stability. Generative AI can be critical when orchestrating personalized journeys across all customer interactions and complex ecosystems.

However, the challenge is adopting generative AI successfully and delivering competitive advantages without exposure to significant risks. To hedge against generative AI errors, banks must control the entire process, from the business challenges they address to the governance that manages the model once deployed.

Generative AI for CX can help your bank develop tuned foundation models and smoothly navigate complexities. To help you deliver innovative, transformational CX faster and at scale, we leverage our Digital Customer Experience Foundry – a collaborative and dynamic environment for ideation and innovation. Fostering collaboration among our clients and partners, the Foundry is a global delivery incubation hub.

Intelligent Process Automation

Automation is a top 2024 priority as banks align operational efficiency with profitability. However, many firms struggle to reach their desired pace of automation adoption and scale. Capgemini's Intelligent Process Automation delivers self-service and end-to-end automation through automated, frictionless business processes and a digitally augmented workforce infused with robotic process automation (RPA), AI, and smart analytics. Let us help you connect your teams with data to drive success at scale while breaking down organizational silos around front-, middle-, and back-office processes. The results?

- Better productivity through faster resolution of issues and fewer manual operations and errors
- Keener insights thanks to sharper forecasting, better customer knowledge, and informed decision-making
- Superior customer experience based on self-service process, personalized support and interactions, and increased transparency.

Contact Center Transformation

Contact Center Transformation can help your service staff meet dynamic customer expectations while improving cost savings and efficiency. If your organization relies on legacy infrastructure and faces team silos, scalability issues, and challenges with employee performance and satisfaction – then contact center transformation can help you migrate to cloud and leverage artificial intelligence, generative AI, and machine learning modernization.

By moving your on-premises contact center to cloud, your organization can improve scalability and bolster cost savings and agent productivity. Reduce customer wait times through support from virtual AI agents that emulate natural conversations. Generative AI copilots assist live agents in discovering customer intent and suggesting solutions promptly to increase productivity. State-of-the-art analytics platforms help monitor and report KPIs to encourage superior customer experience.



Ask the experts



Nilesh Vaidya

Global Head of Banking and Capital Markets practice

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



Ashvin Parmar

Global Head of FS Generative AI CoE

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Ashvin comes with more 25 years of experience leading large scale initiatives and advising C-suite executives. In his role, he collaborates with cross-functional teams to drive innovation leveraging generative AI solutions. He prioritizes customer-centricity, efficient enterprise management, and cutting-edge AI strategies, empowering organizations to make informed choices regarding the most effective AI technologies and solutions to achieve growth objectives.



Carlos Salta

EVP, Head of Banking and Capital Markets Practice

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Carlos comes with extensive experience and skills sets focused around transformation planning and management, solution definition and complex solution delivery disciplines. He has a strong background in digital led core modernization/replacement and has experience in driving transformations that span front end and back end functions.



Nathan Summers

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Nathan Summers is the Managing Director of Financial Services in Capgemini Invent. He has more than 25 years of consulting leadership experience and works with senior client leaders on group strategy and strategic transformation initiatives.



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