

State of AI in Banking





*AI is transitioning banking from a world of workflow and process,
to a world of intelligence and automation.*



— Jim Marous

*Co-Publisher, The Financial Brand
Host, Banking Transformed Podcast
Owner, Digital Banking Report*

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admin@digitalbankingreport.com

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Publisher: **Jim Marous**, jmarous@digitalbankingreport.com

Creative Director: Carol Ann Ryan

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Letter from the Author

DIGITAL BANKING REPORT

Jim Marous, Owner & CEO

jmarous@digitalbankingreport.com

5582 Hollythorn Drive
Brecksville, OH 44141, USA
(216) 218-4257

Issue 308



Jim Marous

The deployment of Artificial Intelligence (AI) and Generative AI solutions has emerged as a pivotal force for organizations engaged in digital banking transformation. As the banking industry evaluates advanced technological advancements, it is imperative for organizations to understand the potential of AI as a tool to address ‘north star’ objectives. This will allow banks and credit unions to avoid misguided efforts while becoming more future-ready and resilient in a rapidly changing banking ecosystem.

Understanding ‘north star’ objectives prior to making decisions on AI deployment serves as a guiding principle that directs all strategic initiatives, including AI adoption. It provides clarity and direction, like a GPS device in a car, enabling organizations to focus their efforts on areas with the greatest potential for impact and the lowest potential for risk. For instance, a bank’s ‘north star’ might be to enhance customer satisfaction, engagement and loyalty through personalized services. AI can play a crucial role in achieving this by analyzing internal and external customer data to offer tailored product recommendations, proactive support, and seamless omnichannel experiences.

The Power of AI

AI’s ability to analyze vast amounts of data in real time, identify patterns, and generate insights is revolutionizing banking. From advanced fraud detection and prevention to creating personalized customer experiences and improving back-office efficiency, AI-driven solutions will be the foundation of most modern banking initiatives. Generative AI, in particular, is turbocharging these efforts by enabling the creation of highly personalized and contextually relevant customer interactions at scale.

AI can also significantly improve operational efficiency and cost reduction. By automating routine tasks and streamlining processes, AI can help redirect human resources to more advanced solutions while minimizing the risk of errors. For



Letter from the Author (continued)

example, AI-powered robotic process automation (RPA) can handle data entry, document verification, and transaction processing, freeing up employees to focus on higher-value tasks.

Finally, AI can offer valuable tools for fraud identification and risk management. By monitoring transactions in real time, organizations can detect transaction anomalies, flagging potential fraud and risk. AI can also assist in automating compliance processes, reducing administrative burden and ensuring that banks adhere to ever changing regulations.

The Need to 'Catch Up and Move Forward'

Our research shows that many financial institutions are still in the early stages of AI adoption. But, the pace of technological change and the increasing complexity of customer expectations requires banks and credit unions catch up while also moving forward. To remain competitive and resilient in the face of external market conditions, it will most likely be necessary for financial institutions to collaborate with third-party solution providers who have solutions that can be brought to market seamlessly.

This report, sponsored by **OpenText**, provides a comprehensive overview of the current state of AI in banking, offering insights into best practices, challenges, and opportunities. The report includes global independent research conducted to determine the AI maturity of the industry and the solutions currently being deployed. This will allow organizations of all sizes to benchmark their efforts with others in the industry.

We hope the report serves as a valuable resource for banking professionals seeking to navigate the complexities of AI adoption and drive meaningful business outcomes.

Sincerely,

Jim Marous

Co-Publisher, The Financial Brand
Host, Banking Transformed Podcast
Owner, Digital Banking Report

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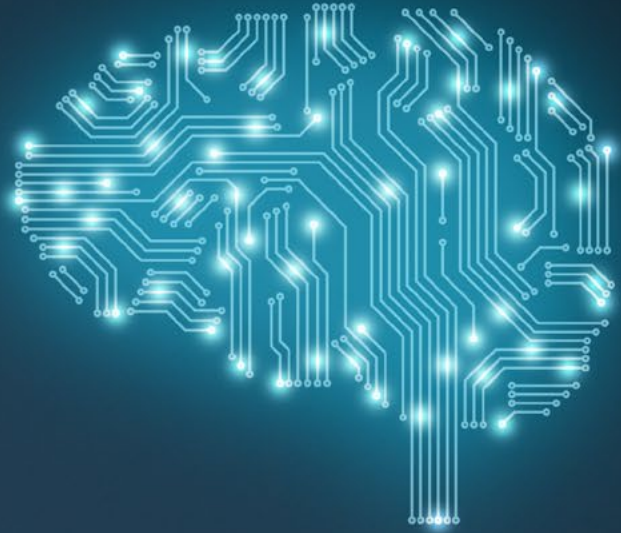
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The Rise of AI in Retail Banking





The Rise of AI in Retail Banking

Artificial Intelligence (AI) is rapidly transforming the landscape of retail banking, offering unprecedented opportunities for innovation, efficiency, and customer engagement. Banks, credit unions and fintech providers must understand the current applications and future potential of AI to stay competitive in an increasingly demanding and fractured financial ecosystem. From enhancing customer experiences through personalized services and engagement to streamlining and automating back-office operations, AI is proving to be a game-changer as financial institutions seek to become future-ready and resilient.

Artificial intelligence is not new to the banking industry. For more than a decade, banks have been leveraging AI in areas such as fraud detection, credit scoring, and more recently, in the realm of customer service through chatbots and virtual assistants. These applications are not only improving operational efficiency but also enhancing the overall banking experience for customers and members.

Yet, with the introduction of Generative AI and the accelerated pace of use case development, financial services executives are looking to further revolutionize product

development, risk management, customer experiences, internal efficiencies and strategic decision-making processes.



CHART 1: USE OF GENERATIVE AI WITHIN BANKING

% of respondents



Source: Google Cloud survey conducted by The Harris Poll © August 2024 Digital Banking Report

As we review AI in retail banking, it's important to consider both the opportunities and challenges of these technologies. While AI offers the promise of increased productivity, customer experiences and cost savings, it also raises questions around data use and privacy, ethics, and the balance of humans and digital in the delivery of banking services.

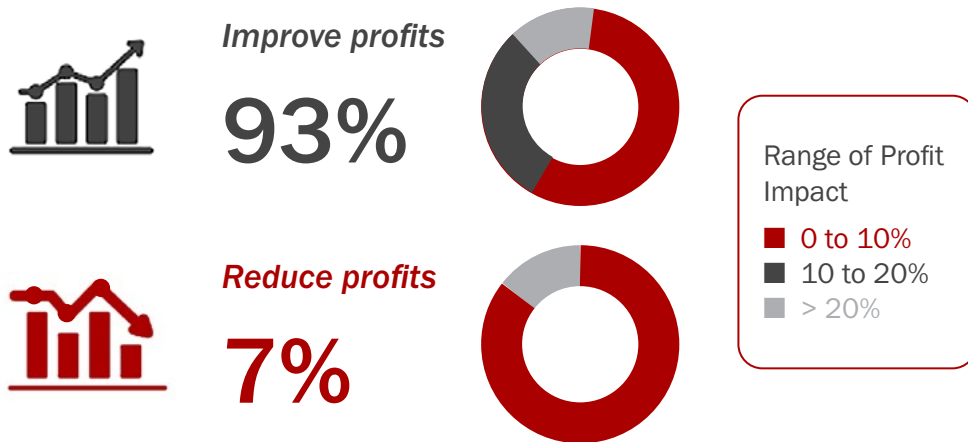
Balancing the opportunities and challenges will be key as banks navigate the AI revolution and seek to leverage its full potential to drive and maintain a competitive edge in the evolving financial services ecosystem.

AI Impact in Retail Banking

The financial services industry is at an inflection point with AI. A study by **Citibank** found that 93% of financial institutions expect AI to improve profits over the next five years. Applying these survey results to forecasts, Citi estimates that AI could boost banking industry profits by 9%, or \$170 billion, by 2028.

CHART 2: IMPACT OF ADOPTING AI ON BANKS' PROFITABILITY

In 5 years time, will AI increase or decrease profits?



Source: City GPS Study © August 2024 Digital Banking Report

It is expected that the profit boost will come primarily from productivity gains, as AI helps to automate routine tasks and augment human capabilities. The study notes that “nearly two-thirds of all work done in banking and insurance has high potential for AI-driven automation or augmentation.” This is higher than what has been projected for the majority of other industries.”

“Generative AI has the potential to change the world in ways that we can’t even imagine. It has the power to create new ideas, products, and services that will make our lives easier, more productive, and more creative.”

— Bill Gates, Co-Founder of Microsoft

AI-Powered Interactions

One of the most talked about applications of AI in retail banking is in the area of improving customer experiences. AI-powered chatbots and virtual assistants are already becoming increasingly sophisticated, capable of handling complex queries and providing personalized financial advice proactively ... using the communication channel of choice.

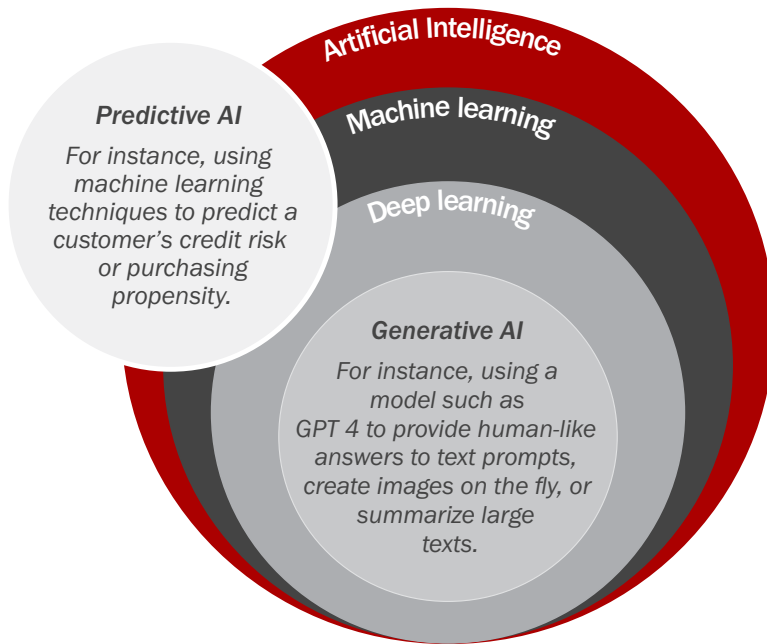
AI-powered assistants can provide 24/7 availability, instant responses, and personalized service at speed and scale. According to OpenText, AI powered chatbots can handle up to 80% of routine customer service questions, freeing up human agents to focus on more complex issues. This not only improves efficiency but also enhances customer satisfaction by providing quick and accurate responses to inquiries.

The chart is a 3x3 matrix with 'Consumer Interest' on the vertical axis and 'Provider Interest' on the horizontal axis. Both axes have three levels: Low, Medium, and High. The matrix cells are shaded from light gray (Low/Low) to dark gray (High/High). Red dots represent the placement of various fintech services. The labels for the services are: Credit Risk Assessment (Low/Low), Wealth Management (Medium/Low), Voice Assistants (Medium/Medium), Fraud Support (High/High), Personalized Offers (High/Medium), and Virtual Assistants (High/High). The label 'Virtual Assistants' is written in red text, while the others are in black.

Service	Consumer Interest	Provider Interest
Credit Risk Assessment	Low	Low
Wealth Management	Medium	Low
Voice Assistants	Medium	Medium
Fraud Support	High	High
Personalized Offers	High	Medium
Virtual Assistants	High	High

The interface features a central hub labeled 'AI' with a complex network of glowing lines radiating outwards. On the left, there are several data displays: a vertical bar chart with four bars, three circular progress indicators showing 20%, 45%, and 80%, and a horizontal bar chart with four bars labeled SECTOR A, SECTOR B, SECTOR C, and SECTOR D. On the right, there is a 'Command Prompt' box with a cursor, a 'Chat AI' speech bubble, and a 'DATA' section with a paragraph of text. At the bottom right, there are three circular progress indicators showing 50%, 70%, and 90%, and a 'PAGE 11' label.

CHART 4: UNDERSTANDING DEFINITIONS AROUND ARTIFICIAL INTELLIGENCE AND GEN AI



Source: BCG Analysis © August 2024
Digital Banking Report



Artificial intelligence - A broad term for nonhuman “intelligence” or problem-solving ability embedded in machines or software.



Machine learning - A subset of artificial intelligence algorithms in which computers figure out how to tackle problems and discover solutions independently, often by using artificial neural networks.



Deep learning - A subset of machine learning algorithms in which computers leverage multilayer (“deep”) artificial neural networks to perform complex learning tasks that in many cases involve large amounts of text or images.



Generative AI (Gen AI) - A subset of deep learning algorithms in which computers focus on generating apparently new, realistic content from unstructured inputs such as text, images, or audio. Widely known examples include ChatGPT (for text) and DALL-E (for images).



Predictive AI - Predictive modeling techniques that are widespread in industries such as banking and that can leverage a variety of AI techniques, sometimes including machine learning or deep learning.

“AI can now analyze vast amounts of customer data and market conditions to create hyper-personalized services at scale as well as highly targeted marketing strategies to promote these services.”

Personalization at Scale

AI is enabling retail banks and credit unions to offer hyper-personalized services and predictive product recommendations based on the analysis of internal and external customer data, behavior patterns, and financial need assessment. This level of personalization was previously impossible at scale but is now becoming a reality thanks to AI and machine learning algorithms.

Creating personalized customer experiences is more important than ever as offerings from non-traditional financial services organizations include more specialized services based on preferences, financial goals and even risk profiles. Beyond causing ‘silent attrition’ from legacy banking organizations, these non-traditional players are realizing higher cross-sell rates and are creating loyalty through higher levels of engagement.

The good news is that legacy financial institutions also have these AI tools (and deeper understanding of existing customers) at their disposal. The Citi GPS report suggests that AI-enabled personalization could also help traditional banks provide more tailored offerings and improved customer engagement.

AI-Powered Financial Advice

As AI becomes more sophisticated, there will likely be a rise in AI-powered financial advisors and potentially even the use of ‘digital twins’ that can bridge the gap of providing personalized financial guidance to retail banking customers. AI-powered advisors could analyze a customer’s financial situation, goals, and risk tolerance to provide tailored advice on savings, investments, and financial planning in a more unbiased and immediate manner than is deployed currently.

The Citi GPS report hints at this future, suggesting that “by 2030 or earlier, AI agents could be making financial decisions and interacting with banks on behalf of consumers.” While this level of AI autonomy may still be some years away and may be met with some level of skepticism by consumers, we’re likely to see increasing integration of AI into financial advisory services in the near term.

Advanced Product Development and Marketing

As referenced, AI-powered predictive analytics can enable retail banks to anticipate customer needs. This same insight can help financial institutions develop products that better meet those needs. Unlike the past, where every financial institution had the same menu of deposit, loan and payment products, AI can now analyze vast amounts of customer data and market conditions to create hyper-personalized services at scale as well as highly targeted marketing strategies to promote these services.

More importantly, AI can also help banks forecast customer behavior, identify potential churn risks, and suggest product offerings that could reverse damaging attrition. The Citi report suggests that AI could drive “productivity gains for banks by automating routine tasks, streamlining operations, and freeing up employees to focus on higher value activities.” This includes activities like product development and targeted marketing, which can directly impact a bank’s bottom line.

“As adverse forces continually find new ways to negatively impact security provisions, AI is improving fraud detection and prevention in retail banking. Advanced fraud detection systems analyze vast amounts of data in real time, identifying suspicious patterns and anomalies that might indicate fraudulent activity.”

Expanded Financial Inclusion

While not covered as extensively, AI has the potential to expand access to financial services for underserved populations by including alternative data sources and advanced risk assessment models. By including the universe of consumers and businesses that currently have ‘thin files’, banks could potentially extend credit and other financial services to those previously excluded by traditional banking models. This is already being achieved by many fintech and big tech firms.

The Citi GPS report states that AI-powered credit risk assessment models can be customized to specific customer segments, potentially opening up new markets for retail banks. This could be particularly impactful for people who rent, have service jobs, receive cash payments for work, etc.

Dynamic Credit Risk Assessment

While the origin of AI in banking was in the risk and fraud monitoring functions, advanced algorithms are now analyzing vast datasets to evaluate creditworthiness with greater speed and accuracy than ever before. The Citi GPS report notes that “AI-powered credit risk assessment models can now be customized to specific industries, customer segments or regions, capturing the needs/behaviors of different groups.”

This level of customization allows for more nuanced and accurate risk assessments. In addition, AI can now help banks continuously monitor borrower behavior against macroeconomic conditions, enabling real-time adjustments to risk profiles and loan-loss provisioning. This approach to risk management could significantly reduce defaults and improve the overall health of loan portfolios.

Enhanced Fraud Cybersecurity Capabilities

The need for robust fraud and cybersecurity capabilities has never been more critical. As adverse forces continually find new ways to negatively impact security provisions, AI is improving fraud detection and prevention in retail banking. Advanced fraud detection systems analyze vast amounts of data in real time, identifying suspicious patterns and anomalies that might indicate fraudulent activity. These systems learn from new fraud patterns and adapt detection algorithms accordingly, with the intention to keep one step ahead of cyber criminals.

The Citi GPS report highlights how AI systems are dramatically improving the efficiency and effectiveness of transaction monitoring for fraud and money laundering. One area of improvement is in reducing false positives with AI, allowing human analysts to focus on more complex cases that require deeper investigation.

Streamlined Back-Office Operations

Despite the power of using AI to drive better customer experiences, develop new products, increase engagement and expand the reach of banking, much of the current AI initiatives are focused on revolutionizing back-office operations. In other words, cost savings.

Robotic Process Automation (RPA) combined with AI can automate routine tasks, reduce errors, and free up human capital to focus on higher-value activities. It is believed that AI can automate up to 80% of routine work in banking, including data

“AI can help banks automate compliance processes, reducing the risk of human error and ensuring consistent application of regulatory requirements. AI also is nimble, with the ability to quickly adapt to new regulatory changes.”

entry, report generation, and compliance checks. This automation will also lead to significant cost savings and improved operational efficiency.

The Citi GPS report notes that “Gen AI will likely have a big impact on internal facing tasks such as content and information management, coding, and software.” This suggests that AI could transform everything from document processing to software development within banks.

Simplified Regulatory Compliance

The regulatory landscape for banks often seems to be playing catch-up with regard to artificial intelligence. That said, AI is proving to be a valuable tool in helping banks navigate the complexity of regulatory demands, ensuring compliance across diverse regulations.

As with many other back-office functions, AI can help banks automate compliance processes, reducing the risk of human error and ensuring consistent application of regulatory requirements. AI also is nimble, with the ability to quickly adapt to new regulatory changes. According to the Citi GPS report, “Compliance roles have tripled in the US from 2000 to 2023.”

Challenges with AI Implementations

While the potential benefits of AI in retail banking are significant, there are also challenges that banks must address:

- 1. Data Privacy and Security:** Since AI systems require access to vast amounts of customer data, privacy and security becomes critical. Banks must implement robust safeguards and comply with evolving data protection regulations.
- 2. Ethical Concerns and Bias:** Banks need to ensure their AI systems are designed and trained to be fair and unbiased, avoiding unfair or discriminatory outcomes, particularly in areas like credit decisioning.
- 3. Regulatory Compliance:** Banks need to ensure their AI systems comply with existing regulations and be prepared to adapt to new rules as they emerge.
- 4. Lack of Transparency:** Banks must avoid advanced machine learning models that act like “black boxes” (where it’s difficult to understand how they arrive at decisions). Lack of transparency poses challenges for regulatory compliance and damages trust with customers.
- 5. Skills Gap:** Implementing and managing AI systems requires specialized skills that are in high demand. Banks need to invest heavily in training and recruitment to build the necessary AI capabilities.
- 6. Fear of the Unknown:** Many employees and customers are fearful of the unknown associated with AI. This includes all of the above challenges as well as the fear of job displacement and/or the lack of human engagement. Ongoing communication with employees and customers regarding how AI will be used (and the impact of AI) is essential.



Recommendations for Retail Banks

Based industry research and research by the Digital Banking Report, here are key recommendations for retail banking organizations:

- 1. Develop a Comprehensive AI Strategy:** Rather than implementing AI in silos, banks must develop a clear and comprehensive strategy for integrating Generative AI into the company's operations, including implementation, governance, and risk management plans.
- 2. Prioritize AI Investment:** Invest in testing and evaluating different use cases for Generative AI such as fraud detection, virtual assistants, personalized offers, etc.
- 3. Modernize Core Systems:** Address legacy technology issues to create a flexible, AI-ready infrastructure.
- 4. Focus on Customer-Centric AI Applications:** AI use cases that directly enhance customer experience, customer engagement and customer value, such as personalization, improved customer service, and streamlined processes should be evaluated with potential ROI attached.
- 5. Invest in AI Talent and Training:** Build internal AI capabilities through hiring and upskilling programs. Also, familiarize stakeholders with Generative AI and its effects on banking.
- 6. Build Trust Through Transparency:** Be open with customers about how AI is being used in banking services. Provide clear explanations and options for human interaction where needed.
- 7. Prepare for AI-Powered Customers:** Start considering how banking models might need to evolve in a world where AI agents act on behalf of customers.
- 8. Collaborate and Partner:** Consider partnerships with fintech companies, third-party technology providers, and even other banks to accelerate AI adoption and innovation.
- 9. Monitor and Adapt:** Continuously monitor technological developments, competitive moves, and regulatory changes ... being prepared to adapt strategies quickly.

Catching Up and Moving Forward

As the financial services industry continues to evolve, retail banks must prioritize catching up with the rapid advancements in AI technology. The potential benefits of AI are too significant to ignore, and banks that fail to adapt risk will fall behind their more innovative competitors. That said, any commitment to investment in AI must take into account other technology priorities that are relatively speaking ... 'low hanging fruit'. To move forward, retail banks must build a strong foundation for AI adoption. This includes investing in the necessary technology infrastructure, developing a comprehensive AI strategy, and preparing employees and customers for AI implementation. By doing so, banks can position themselves to take full advantage of the opportunities that AI presents.



Unfortunately, there is still slow adoption of AI by many banks. Nearly a quarter of banks have ‘not started’ on AI adoption yet. In contrast, this number stands significantly lower for fintech firms and insurance companies — at just about 5%. Furthermore, 68% of respondent banks are still only in the ‘beginning’ stages of their AI journey compared to more than 80% for other financial sectors.

CHART 5:
BANKING LAGS IN AI MATURITY COMPARED TO OTHER FINANCIAL INTERMEDIARIES

Banks		FinTechs		Insurance	
Not started	21%	Not started	4%	Not started	6%
Beginning	68%	Beginning	83%	Beginning	88%
Maturing	11%	Maturing	13%	Maturing	6%
Advanced/ End State	0	Advanced/ End State	0	Advanced/ End State	0
n=73		n=23		n=16	

Source: Citi GPS Study © August 2024 Digital Banking Report

In conclusion, AI represents a transformative opportunity for retail banking, with the potential to significantly enhance customer experiences, improve operational efficiency, and drive profitability. The time to act is now, because catching up gets more difficult (and costly) every day.

TIME TO ACT

High AI Expectations Meet Implementation Realities



High AI Expectations Meet Implementation Realities

Banking leaders globally believe AI and Gen AI present a significant business opportunity, according to research from the Digital Banking Report. Despite understanding these possibilities, few organizations have made significant progress in deploying solutions beyond fraud and risk management and some limited back-office automation creating a ‘readiness gap’.

The potential of AI and Gen AI in banking can’t be overstated. According to a recent **study from BCG**, “Gen AI benefits include a 10-fold reduction in customer inquiry costs, a 25% decline in time spent creating marketing content, and a 30% jump in content creation productivity — all while improving customer satisfaction and accelerating issue resolution.” Citi estimates that AI could boost banking industry profits by 9%, or \$170 billion, by 2028.

Some of the ‘readiness gap’ is related to not fully understanding the technology’s potential or how to integrate it with existing technologies. Other challenges are more structural, such as having the quality and quantity of data or having the time, money, and team resources.

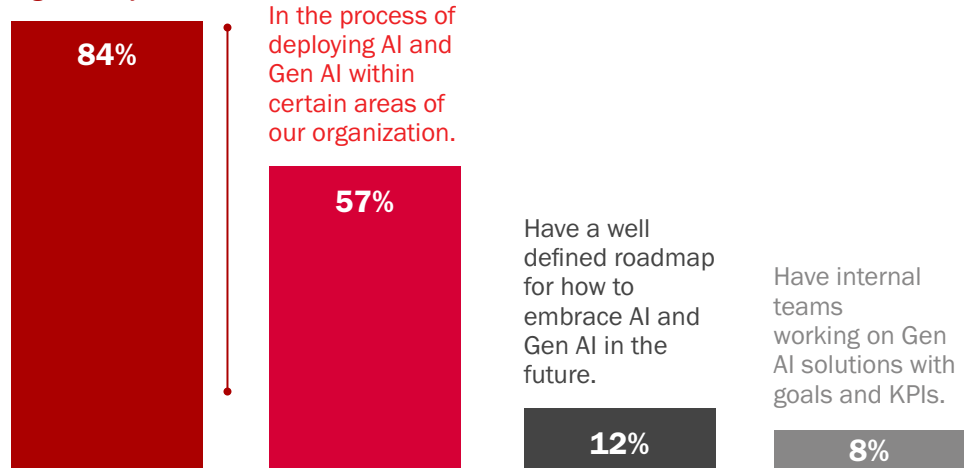


The State of AI in Retail Banking study, sponsored by OpenText, gathered insights from over 200 financial institutions globally. The research provides insights into the progress of financial sector AI and Gen AI adoption, while also providing FI's self-assessment of AI maturity, including existing challenges and future strategies.

Our research found that 84% of financial institutions agreed that AI and Gen AI provide significant benefits to the banking industry. Counter to this perspective, only 12% had a well-defined roadmap for deployment — with only 8% having internal teams working on Gen AI solutions. On a positive note, 57% of organizations were in the process of deploying AI and Gen AI solutions within specific areas of their organization.

CHART 6: BANKING FACES SIGNIFICANT AI READINESS GAP

AI and Gen AI will provide significant benefits to the banking industry.



Source:
Digital Banking Report Research
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Despite the gap between potential and reality, the largest banks in our study are ahead of most of their smaller peers in developing AI and Gen AI strategies. With more assets and a larger pool of budget allocated, more than 40% of regional and global banks say they have a well-defined AI and Gen AI strategy in place, with many of these firms investing a “significant proportion” of their technology and innovation budgets to AI and Gen AI.

The readiness gap suggests that many banks and credit unions may struggle to fully capitalize on AI's benefits in the foreseeable future, with many organizations being challenged to assess the potential of individual use cases. This could result in these firms falling further behind more AI-ready competitors.

That said, the gap also indicates a significant opportunity for banks to improve their AI readiness through better strategic planning, resource deployment, and the creation of collaborative relationships with third-party solution providers. As the following chart shows, the commitment to catch up and move forward remains strong across the industry. Interestingly, despite resource constraints, there was almost no variance in the responses based on asset size of the responding organization.

“The ability to analyze large datasets in real time will continue to be incrementally enhanced as cybersecurity remains in the spotlight.”

CHART 7:
COMMITMENT TO AI INTEGRATION IS STRONGER THAN DEPLOYMENT

How would you rate your FSI’s commitment to integrating AI into its services?
Score from 1 (lowest) to 5 (highest).

One	Two	Three	Four	Five
8%	12%	34%	26%	20%

Source: Digital Banking Report Research © August 2024 Digital Banking Report

Where is the Value of AI the Greatest?

The research conducted on behalf of OpenText found interesting trends related to the value of AI and Gen AI over time. Not only is there an overarching belief that there is significant value in these new technologies, but that the value tends to be centered within very specific areas of retail banking.

When we asked banking executives to share where the greatest additional value of AI and Gen AI will be in the next 3-5 years, there was a strong consensus that areas of customer service and communication will benefit the most. Customer-centric use cases such as chatbots and virtual assistants (87%) and personalized marketing and product recommendations (83%) were the top use cases mentioned, with customer retention and churn prevention ranking lower (52%).

The focus on customer-centric uses highlights the industry’s focus on AI’s ability to provide personalized service, anticipate needs, create new solutions and offer seamless interactions — all of which are crucial for retaining customers in a competitive market. There is also a recognition that AI can replace and enhance current human-centric tasks. The lower value of using AI to assist with onboarding and error remediation most likely is a reflection on these being more complex processes than messaging and targeting.

Improving back-office productivity (74%) and document processing improvement (48%) underscores AI’s role in automating repetitive tasks, thereby increasing efficiency and reducing operational costs.

Finally, the emphasis on fraud detection (65%), credit scoring (62%), and compliance (58%) reflects the critical role that AI continues to play in avoiding losses. These capabilities are some of the first uses of AI in banking, which may explain the relative lower value placed on these benefits vs. those related to customer experience. The ability to analyze large datasets in real time will continue to be incrementally enhanced as cybersecurity remains in the spotlight.



CHART 8: VALUE OF AI EXPECTED TO INCREASE ACROSS MANY DISCIPLINES IN BANKING

Considering AI use cases, which do you believe will add significant value to your business in the next 3-5 years? (Note all that apply.)

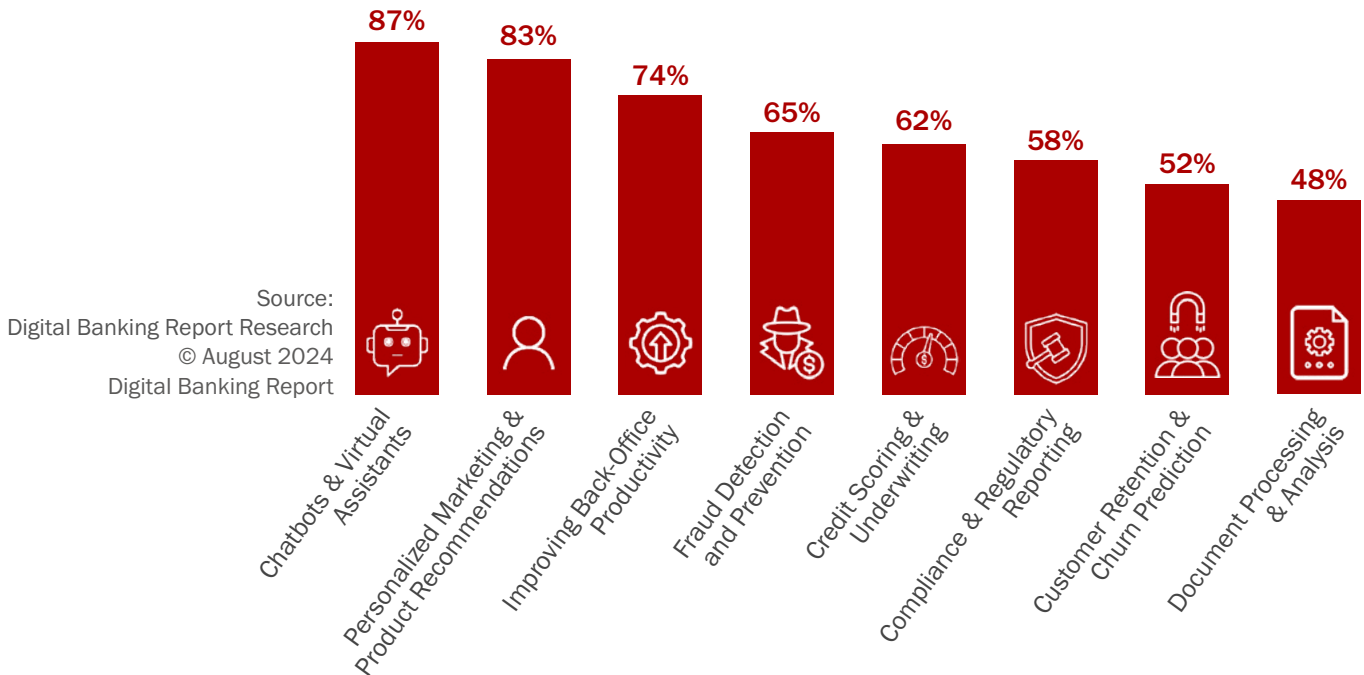
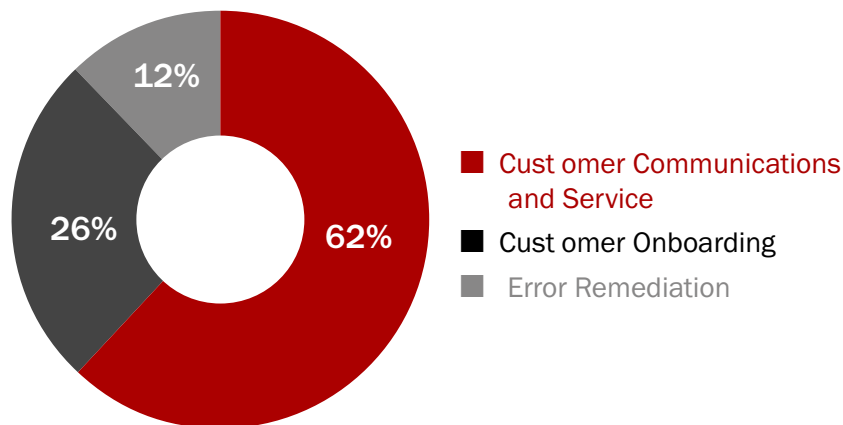


CHART 9: BANKS BELIEVE AI WILL IMPACT CUSTOMER COMMUNICATIONS AND SERVICE

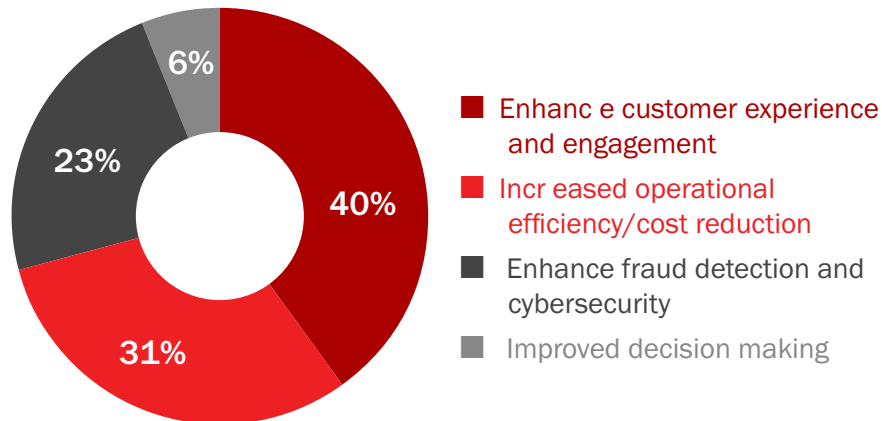
Which of the following customer experience processes do you think would benefit the most from being Gen AI enabled at your organization? (Select one.)



Source: Digital Banking Report Research © August 2024 Digital Banking Report

CHART 10:**PRIMARY IMPACT OF AI IS EXPECTED TO BE OUTWARD FACING EXPERIENCE/ENGAGEMENT**

What is the primary benefit that you would like to get from AI enabled solutions?
(Select one.)



Source:
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Bridging the Readiness Gap

As referenced, most financial institutions have begun to prepare for the analysis and deployment of AI and Gen AI solutions. Unfortunately, many of these efforts lack the top-down endorsement of leadership teams who may feel threatened by aspects surrounding a full commitment to digital transformation. The fear of job displacement, change in legacy processes, and a lack of desire to learn new technologies can create greater operational inefficiencies than existing processes.

To resolve this challenge, there needs to be a clear strategy and consistent communication throughout the organization around the value proposition related to the deployment of AI and Gen AI across key value chains. Without a clear strategy for moving forward, financial institutions will not be adequately equipped to make the necessary changes to their tech stacks and data architecture, to address talent gaps and required upskilling, and to ensure they have AI policy frameworks in place.

In the meantime (and to avoid falling further behind in becoming future-ready), institutions should continue (or begin) experimenting with use cases focused on everyday tasks, as opposed to transforming larger critical functions. Our viewing of the marketplace has seen the most use cases in the areas of productivity improvement, basic customer communication (chatbots and targeting), and enhanced security.

*“Establishing a proof of concept is relatively easy, but implementing at scale is proving more challenging for most institutions,” notes **Stiene Riemer**, Managing Director & Partner at **BCG** and Global Lead for AI & Gen AI developments in Financial Institutions. “To unlock more value, business leaders should consider a structured approach to scaling, based on a three-stage framework: deploy Gen AI in everyday tasks, reshape critical functions, and invent new business models.”*

It should be noted that while there is a lot of buzz and enthusiasm around the ability to enhance personalization with AI and Gen AI, most of these efforts are very rudimentary at this time.

The Power of Collaborating for AI Deployment

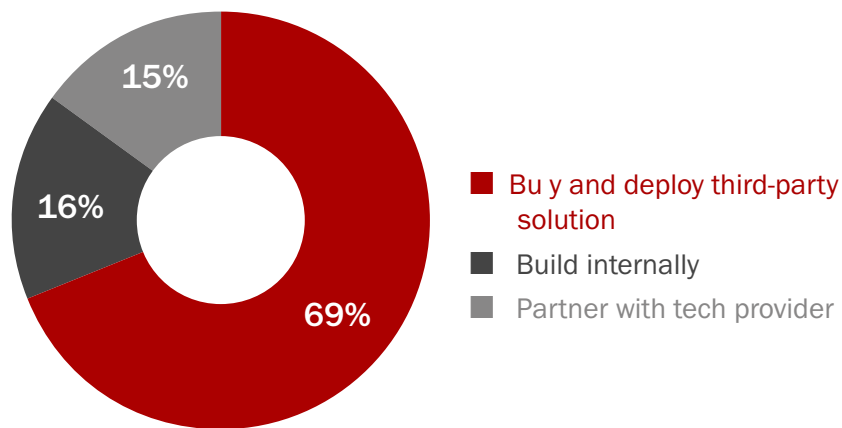
To improve both speed and scale of Gen AI deployment, most financial institutions (69%) are collaborating with third-party solution providers as opposed to building within (16%) or partnering with tech providers. This bias toward using third-party solution providers reflects the benefit of leveraging established partners who are investing heavily in AI and Gen AI solutions specifically for financial institutions.

Collaborating with organizations that not only are building AI solutions for banks and credit unions but also understand the ways to integrate with the dozens of other third party solutions in the marketplace usually allows for a faster time-to-market and lower initial costs. The organizations selecting to build AI solutions internally or partner with tech providers tended to be the firms in the largest asset sized categories.

CHART 11:

MOST BANKING ORGANIZATIONS PREFER TO BUY THIRD-PARTY AI SOLUTIONS

When developing AI capabilities, does your organization prefer to build these solutions in-house, buy them from an external vendor, or establish partnerships with technology providers?



Source: Digital Banking Report Research © August 2024 Digital Banking Report

The most mentioned reasons why banks and credit unions outsource AI implementation include limited internal resources and existing expertise (32%), cost considerations and/or budget constraints (24%), and the time-to-market advantages of outsourced solutions (21%)

CHART 12:**WHY BANKING FIRMS OUTSOURCE AI IMPLEMENTATION**

What factors influence your decision to outsource or take a collaborative approach to Generative AI implementation?

Limited internal resources and existing expertise

32%

Cost considerations and/or budget constraints

24%

Time-to-market advantages of outsourced solution

21%

External expertise and best practice case studies

16%

Scalability of external partner

7%

Source:
Digital Banking Report Research
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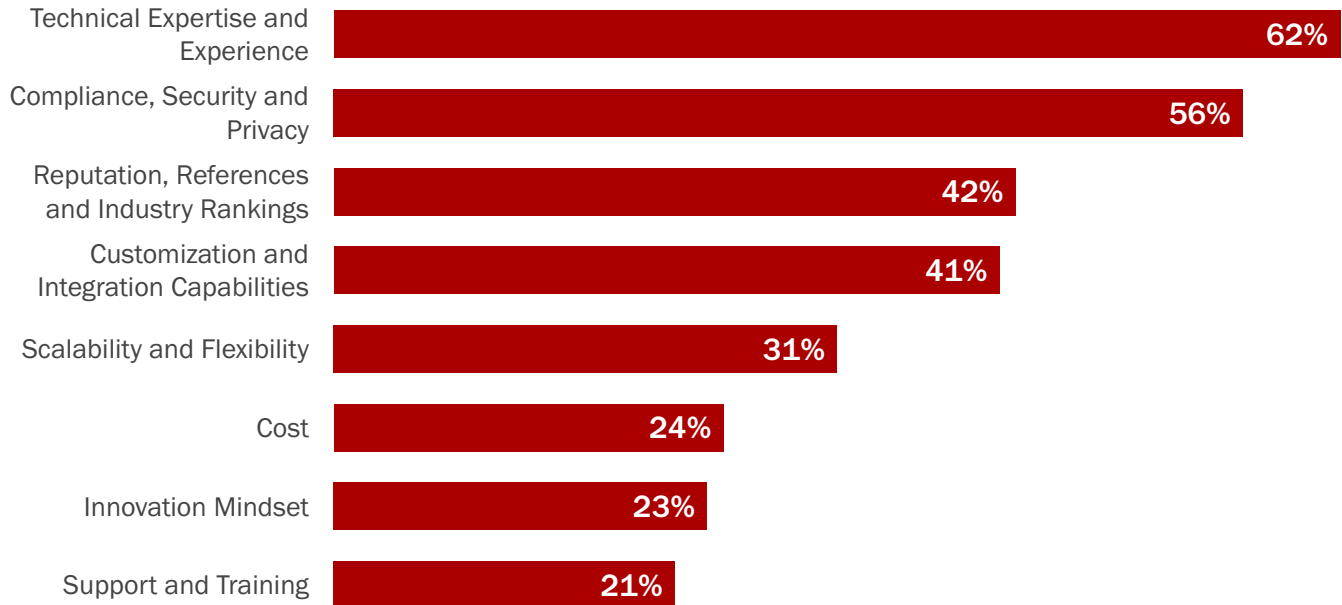
When we asked financial services executives globally about the criteria for selecting third-party solution providers, the reasons mentioned included technical expertise and experience (62%), compliance, security and privacy (56%), reputation, references and industry rankings (42%). Also of importance was the ability to customize and integrate the solutions (41%).

Interesting, cost (24%) was a much lower criteria for selecting partners for AI and Gen AI deployment as was having an innovation mindset or providing support and training.



CHART 13:**KEY CRITERIA FOR SELECTING THIRD-PARTY AI SOLUTION PROVIDER**

What criteria and considerations are taken into account when determining whether to work with a third-party solution provider for specific AI initiatives? (Provide top 3.)



Source: Digital Banking Report Research © August 2024 Digital Banking Report

Challenges and Opportunities Define AI Path to Success

Despite all of the talk about AI in financial services, banks and credit unions struggle to know where to start and where best to deploy resources at a time of continued economic uncertainty. Few would argue against the premise that adopting new AI technologies is essential for financial institutions to keep pace with changing customer expectations, to defend business against fintech, big bank and non-financial challengers, and to operate more efficiently.

The underlying challenge is that overall digital banking maturity still lags behind the majority of other industries that consumers engages with. Failing to innovate with AI is increasingly putting banks and credit unions at the existential risk of falling behind the competition.

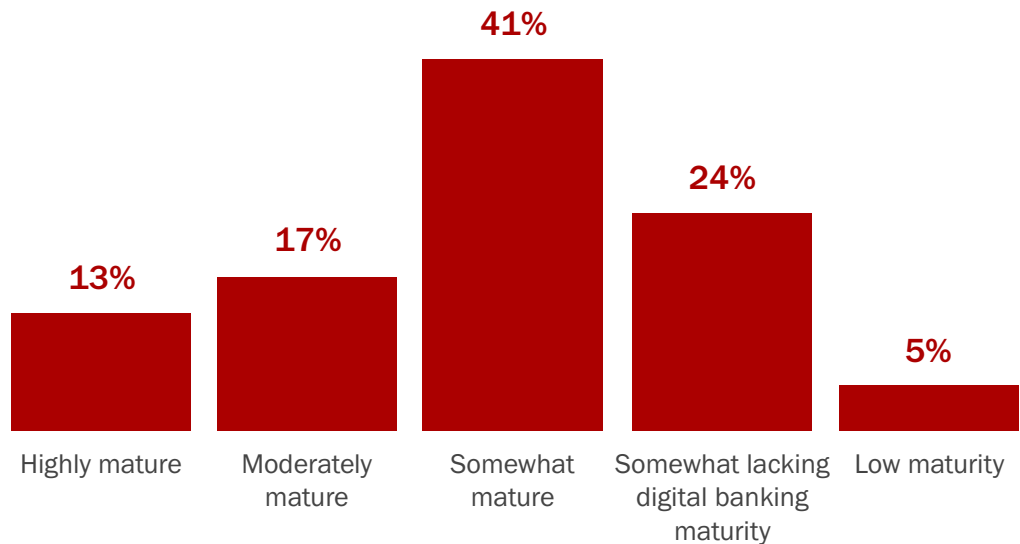
The *AI Innovation Report* from **Evident Insights** found that focusing on AI innovation enables the complete transformation of banks into data-centric organizations. AI innovation also enables leading banks and credit unions to envision the future of financial services and take the necessary steps to remain dominant players going forward. The report maintains that organizations that fail to make AI innovation core to their strategy risk being left behind in what is increasingly, at least among the largest players, becoming an AI-first industry.

Our research found that only 13% of banking organizations rate their AI maturity as highly mature, 17% as moderately mature, 41% as somewhat mature, 24% as

somewhat lacking digital banking maturity, and 5% as low maturity. Since AI maturity has been a moving target over the past several years (higher aspirations), this distribution has not changed much since the beginning of Covid.

CHART 14: AI MATURITY REMAINS LOW WITHIN THE BANKING INDUSTRY

What level of digital banking maturity exists across your organization?



Source: Digital Banking Report Research © August 2024 Digital Banking Report

As could be expected, a handful of banks globally have sprinted ahead in the race for AI maturity, staking out early leadership positions that will be extremely difficult for lagging competitors to overcome. These are almost entirely very large asset organizations as well as digital-only neobanks.

To advance AI maturity, banks must align their AI initiatives with their strategic goals. This involves clear road maps, dedicated AI teams, and consistent investment in technology and talent. It also often involves collaboration with a third-party solution provider that can deliver mature digital banking solutions.

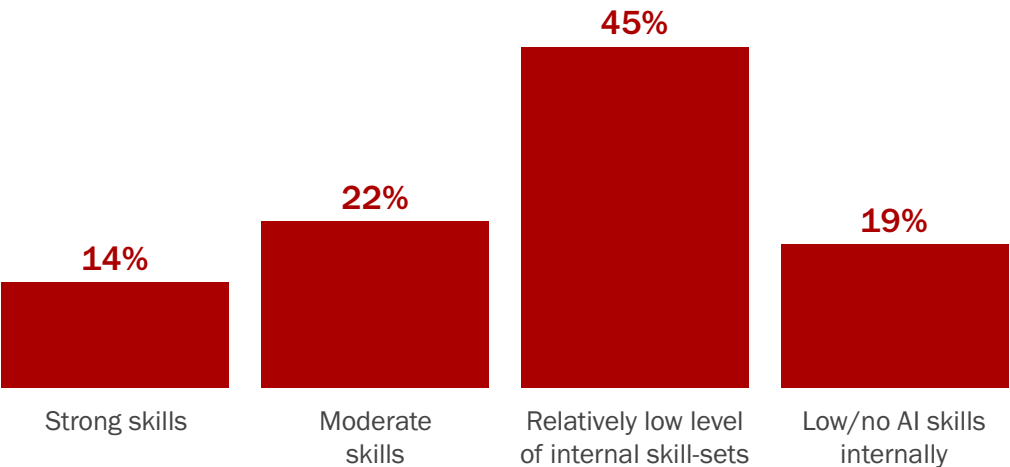
Tapping into shared innovation through diverse collaborations is essential. Savvy banks are building web-like networks spanning open-source communities, universities, accelerators, and third-party solution providers. This cooperation with outside expertise gives access to greater flows of ideas, technologies and partnerships.

The significant portion of respondent banks with low AI skill levels reveals a critical barrier to AI adoption — even if an organization decides to collaborate with third-party solution providers. This gap can impede the effective implementation and utilization of AI technologies, slowing down innovation and competitive advantage.

We found that 55% of banking organizations report either a relatively low level of internal AI skill sets or none at all, while 22% report moderate skills and 14% report strong skills.

CHART 15: EXISTING AI SKILL LEVELS ARE LOW WITHIN BANKING

What level of digital banking maturity exists across your organization?



Source: Digital Banking Report Research © August 2024 Digital Banking Report

Our findings suggest an urgent need for targeted training programs to enhance AI capabilities within banking institutions. Partnering with educational institutions and investing in continuous learning can help bridge the skill gap.

Furthermore, banks may also need to focus on attracting and retaining AI talent. Competitive salaries, career development opportunities, and a strong culture of innovation can make banks more attractive to top AI professionals.



Gen AI: The Bridge to Engagement and Loyalty

The background of the slide is a dark blue gradient. Overlaid on this are two primary geometric patterns. On the left side, there are several concentric circles drawn with thin, light blue lines. On the right side, there is a grid of lines that appear to be receding into the distance, creating a strong sense of perspective and depth. The grid lines are also light blue and intersect to form a mesh-like structure.

Gen AI: The Bridge to Engagement and Loyalty

To drive enduring customer engagement leveraging AI, financial institutions must address adoption hurdles like trust and infrastructure readiness, the capabilities to enhance education, anticipatory guidance, and cross-channel orchestration.

Every generation has financial needs that differ from previous and future generations. A Millennial may be on their second or third job, be married with 1-2 children, and own 1-2 cars, and a house. Unfortunately, this broad definition of a generation doesn't effectively identify their financial needs. Some may be renting and living paycheck to paycheck, while others may be looking for investments to secure their financial well-being later in life.

At each financial juncture in a person's life is a world of potential for financial institutions. An AI-powered mobile

notification could sense an opportunity for personalized education, or a targeted product, delivered at a time of need. Evidence of awareness by a bank or credit union at a pivotal point in a consumer's life, maybe offering a tailored video tutorial or an interactive chat could empower this person with a very important lesson in financial literacy.

Moments that build potential lifelong relationships occur every day — yet banks and credit unions often miss them amidst the transactional aspects of traditional banking. Generative AI holds the promise



STATE OF AI IN BANKING

to help financial institutions create vastly deeper relationships by pinpointing opportunities, then generating the optimal content and engagement strategy for every unique customer.

The Dawn of Generative AI Era

Conversational interfaces like ChatGPT hint at AI's impending impact on customer experience. Beyond rote service queries, these new tools provide expanding capabilities for contextual, intuitive interactions. And with the ability to learn rapidly — each iteration reveals enhancements reflecting consumer usage and trends.

Generative AI represents the vanguard of experience personalization. Human-like language models can create boundless volumes of customized conversations, educational explanations, marketing messages and advisory recommendations tailored to individual financial contexts, profiles, goals and knowledge levels. They bring relevance at speed and scale.

Current successes on this frontier span industries. Netflix employs AI to generate thousands of personalized movie trailers from a single film. Disney uses it to allow performers to converse with visitors in recognizable character voices. Australia's fourth-largest bank **ANZ recently introduced a home loan explainer bot** that breaks down the intricacies of mortgages into simpler conversational language based on the customer's familiarity with the complex product.

For financial marketers seeking resonance, creative AI will soon transcend human capacity to deliver hyper-relevant experiences at the time of need, similar to how a GPS device provides a roadmap to a specific destination.

The State of Banking Personalization

Unfortunately, most banks have miles to go before reaching personalized engagement proficiency. **Bain** research last year found a significant “relevance gap” persists between what customers expect from personalization and what banks deliver. Less than one-third believe their bank understands their needs and

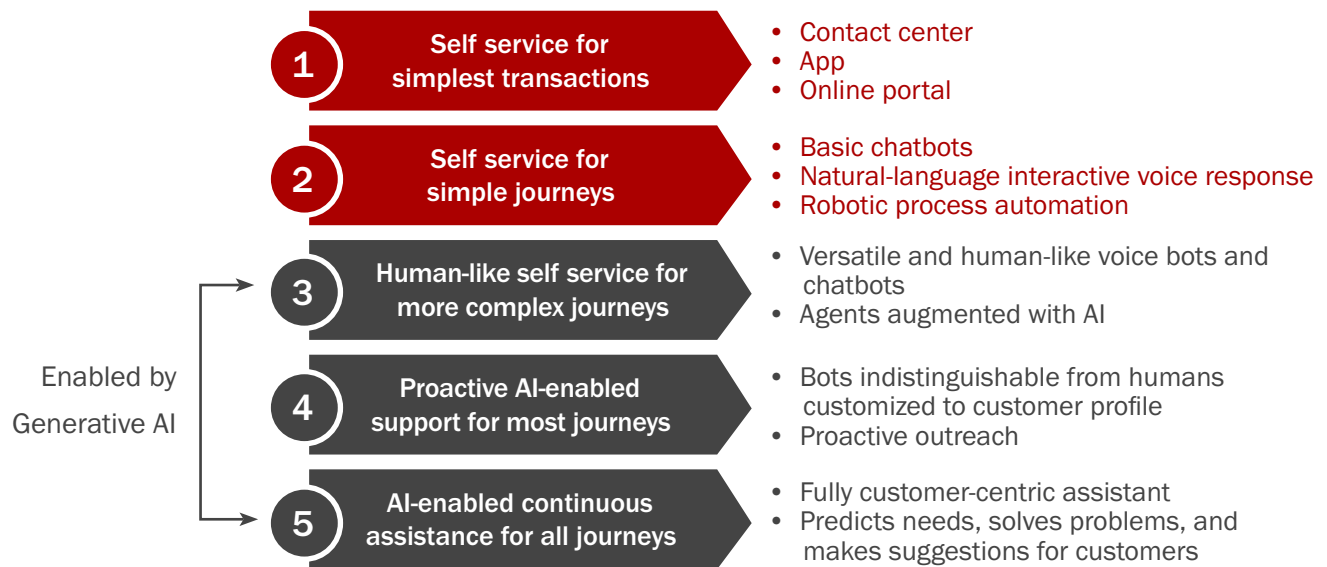


preferences thoroughly enough to deliver tailored solutions, indicating most efforts remain superficial thus far.

The impact of this lack of understanding is an increasing level of “silent attrition” as customers expand the number of financial institutions they use.

CHART 16: THE EVOLUTION OF AI-POWERED CUSTOMER SERVICE

AI-enabled customer service is maturing rapidly.



Source: BCG Analysis © August 2024 Digital Banking Report

Part of the dilemma is data itself. Financial institutions possess expansive transaction logs and engagement history at the core of contextual personalization. But insight teams report ongoing challenges harnessing siloed information from disparate systems to inform integrated strategies. Engineering legacy infrastructure for analytics heightens complexity.

Adding second-party data enriches profiles but raises governance considerations. While external signals create comprehensive pictures of embedded lifestyle preferences on social platforms or browsing habits, ethical questions around consent and transparency emerge. That said, research shows that illustrating empathy and using data for the benefit of customers will open the door for greater use of expanded insights.

Compliance risks also lead risk-averse banks to avoid personalized recommendations in messaging. Broad sloganeering around “better rates” or “earn more” persist despite access to details on actual deposit or loan balances that could inform specific savings advice tailored to a household. Providing individualized financial guidance at scale remains technologically immature.

“Whether struggling customers appreciate aid privately to avoid embarrassment or publicly to catalyze support, financial institutions providing that real-time compassion differentiate relationships through data-enabled empathy and support.”

More than ever, Generative AI awakens new possibilities to resolve each obstacle — but only for those bold enough to adopt early.

How AI Boosts Relevance

Applied prudently, here are four ways leading financial institutions can leverage Gen AI to craft tailored interactions that foster enduring engagement across customer life cycles:

1. 24/7 Financial Literacy Education

Contextual educational content at scale is the holy grail for banks seeking to build relationships around financial wellbeing. However, manual subject matter creation requires tremendous resource investments.

Enter AI – Shared data environments allow models like **ChatGPT** access into reams of bank-approved information on products, markets, regulations and consumer financial needs. Cloud-based tools can synthesize learning materials personalized to nuanced user profiles at incredible volumes in near real time.

ANZ's home loan explainer chatbot uses AI to fill knowledge gaps with on-tap resources — no branch trip required. **OCBC Bank** similarly employs AI to craft personalized financial tips based on spending behaviors, life stages and past queries.

Educational AI augments human advisors, allowing them to reserve specialized guidance for complex needs. But democratic access to information builds equality and trust. Participants feel empowered while institutions gain loyalty.

2. Behavioral Insights for Proactive Care

Gen AI soon won't just react to inquiries, but will be proactive as illustrated by **US Bank** showing leadership by informing, protecting and advising customers that have unique financial situations. Sophisticated analytic engines use spending declines on routine services like daycare or streaming subscriptions to trigger tailored outreach addressing potential financial hardship.

With further data integration, intelligent systems can anticipate consumer stress tied to late mortgage payments. AI then generates a pre preemptive notification checklist with customized assistance on restructuring options, local aid programs and relief sources specific to that family's unique situation.

Whether struggling customers appreciate aid privately to avoid embarrassment or publicly to catalyze support, financial institutions providing that real-time compassion differentiate relationships through data-enabled empathy and support.

3. Predictive Intelligence for Preemptive Value

Predetermined life milestones like my son's first job, home ownership or my future retirement require significant but often overlooked financial shifts. Younger consumers especially need guidance navigating first-time complex decisions on savings plans or major debt obligations. Missed opportunities to steer in these pivotal moments lead to relationship abandonment or missed opportunities for relationship expansion.

But behavioral signals identify inflection points. AI can scan shared datasets spanning spending patterns, web browsing, survey responses and more to accurately

“Most digitally mature organizations acknowledge much work remains translating promise into practical strategies at scale. The keys reside in governance, metrics, a willingness to embrace change, and patience for progress.”

predict major changes ahead. Generative tools craft communications addressing anticipated needs from branching into parenting and small business accounts months before delivery, to countdowns preparing for a cross-country move.

When revealed preferences yield to AI foresight for timely utility, not hindsight-based offers alone, marketing earns its place in customers’ lives. Algorithms spotlight moments where education, products and budgeting tools provide unique lifetime value.

4. Optimized Multichannel Orchestration

Despite access to robust data, most campaign personalization remains compartmentalized by channel, instead of centrally optimized — based on cross-channel intelligence. This limits contextual relevance across touchpoints when digital experience barrages consumers daily.

Generative AI now enables intricate, integrated segmentation where desktop web interactions inform the next best conversation for a mobile app. Content can seamlessly evolve across advertisements, ATMs, statements, in-branch tablets, and call center scripts based on unified customer data and predictive models. This provides unified conversations across all distribution channels.

Where human coordination of this orchestration complexity breaks down, AI auto generation brings coherence. The most public-facing teams use these tools today for audience targeting. But their back-end application coordinating omnichannel messaging stands to accelerate returns on data for relevance.

Overcoming Existing Barriers

Despite the vast array of benefits, Gen AI ushers in as many apprehensions today as anticipations for supporters. This is especially true in financial services, where risk avoidance often stifles innovation and progress. Despite watershed advances, most employees with institutional knowledge on data governance and infrastructure complexity harbor doubts. Similar to questions revolving around deployment of cloud solutions five short years ago, reassurance is required to compel laggard organizations support adoption.

Frustrations certainly pervade early testing phases. Engineering usable data flows requires foundational upgrades, from APIs to reporting protocols enabling model feedback. User studies expose areas of fragility needing reinforcement through further training.

But concerns show signs of subsiding as more organizations report positive results from initial applications. Orienting AI to enhance roles and activities — first call routing, then offline service documentation — rather than wholly replace humans builds internal buy-in. As confidence grows, so do usage domains; **USAA** already reports high member enthusiasm for its AI assistant **Eva** fielded across websites and apps to answer thousands of queries from its military community base.

Still, most digitally mature organizations acknowledge much work remains translating promise into practical strategies at scale. The keys reside in governance, metrics, a willingness to embrace change and patience for progress. But as more success stories emerge, the more skeptics will sign on to drive transformation from within.

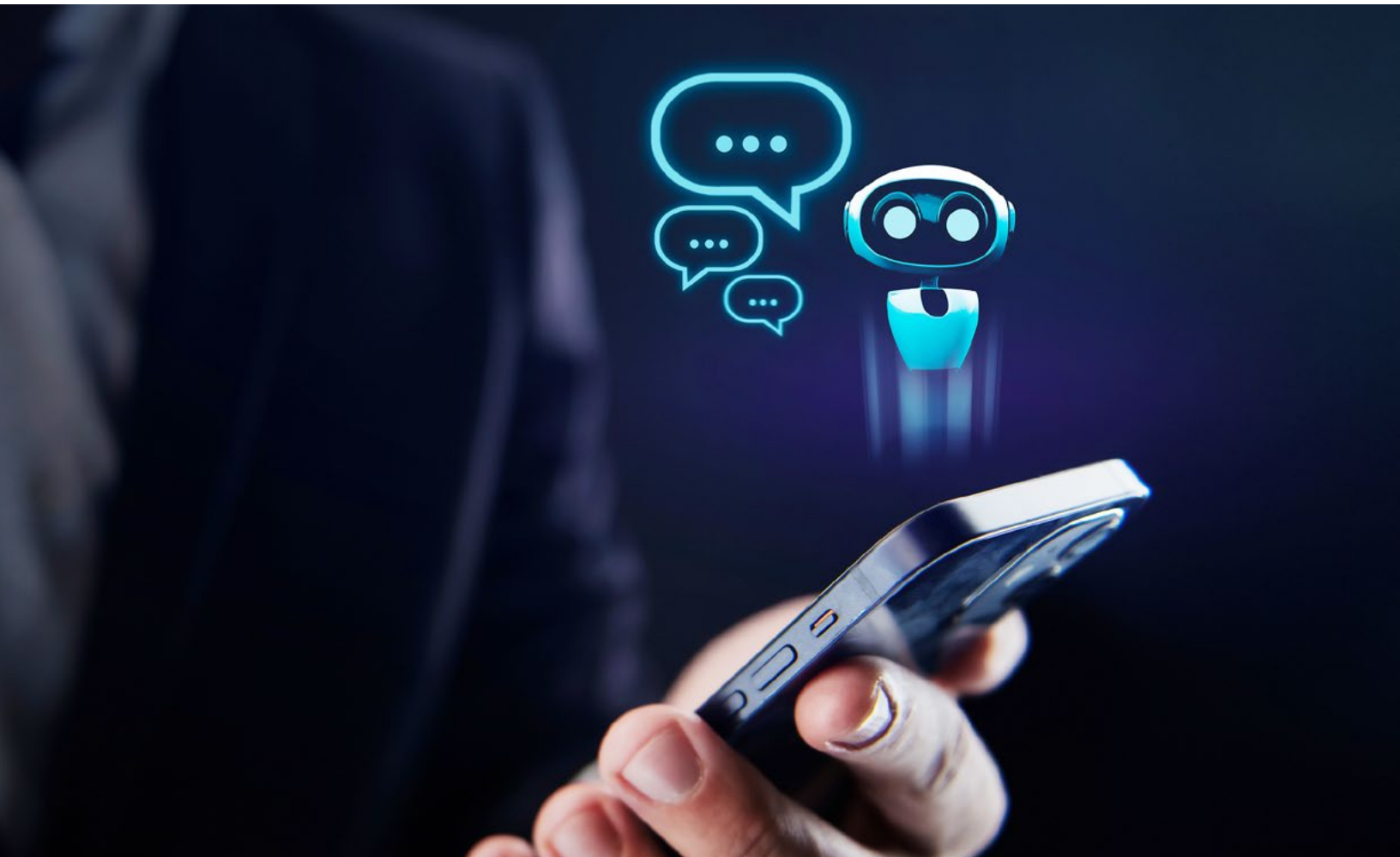
The Road Ahead for Generative AI and Banking

How far along the adoption curve will financial institutions reach with Gen AI when today's middle schoolers look for personalized ways to save or understand the power (and risks) of credit? When industry leaders gathering at trade association meeting swap lessons learned, which case studies will they share?

Many see a future state where **sentient assistants** shepherd consumers their entire financial journey. AI avatars evolve alongside households anticipating decisions and nudging beneficial behaviors daily. They provide guardrails against fraud, relief in emergencies and expertise ensuring sound choices despite boundless freedom.

Yet even the most progressive financial institutions foresee human advisors maintaining irreplaceable roles — their compassion and empathy during turmoil means more than even the most emotionally intelligent algorithms. Instead, the vision taking shape positions AI as amplifiers allowing people to focus energy where it shines brightest. Behind intuitive tools, teams emerge unburdened by rote tasks made obsolete. Their expertise scales.

The time to move forward with Gen AI is upon our industry. How will we embrace the opportunity to change the lives and financial future of our customers?



About the Author



Jim Marous

Named as one of the most influential people in banking and a 'Top 5 Fin-tech Influencer to Follow', **Jim Marous** is an internationally recognized financial industry strategist, co-publisher of **The Financial Brand** and owner and publisher of the **Digital Banking Report**.

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As a sought-after keynote speaker, author and recognized authority on disruption in the financial services industry, Jim has spoken to audiences worldwide. He has been featured by CNBC, CNN, Cheddar, the Wall Street Journal, the New York Times, the Financial Times, the Economist, and the American Banker.

Through his podcast, **Banking Transformed**, Marous provides listeners with an opportunity to hear about the organizational impact of digital transformation. With new shows each Tuesday, Jim interviews his guests with the objective of digging deeper into the opportunities and challenges facing banking and other industries. You can download Banking Transformed on The Financial Brand podcast page or on your favorite podcast platform.

You can also follow Jim Marous on **Twitter** and **LinkedIn** or visit his [professional website](#).

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