

Firms must mitigate risks and overcome operational challenges to unlock agentic AI's transformational potential.

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Reimagining the future of banking with agentic AI



Key takeaways

Agentic AI is coming of age. And with it comes new opportunities in the financial services sector. Banks are increasingly employing agentic AI to optimize processes, navigate complex systems, and sift through vast quantities of unstructured data to make decisions and take actions – with or without human involvement. “With the maturing of agentic AI, it is becoming a lot more technologically possible for large-scale process automation that was not possible with rules-based approaches like robotic process automation before,” says Sameer Gupta, Americas financial services AI leader at EY. “That moves the needle in terms of cost, efficiency, and customer experience impact.”

From responding to customer services requests, to automating loan approvals, adjusting bill payments to align with regular paychecks, or extracting key terms and conditions from financial agreements, agentic AI has the potential to transform the customer experience – and how financial institutions operate too. Adapting to new and emerging technologies like agentic AI is essential for an organization’s survival, says Murli Buluswar, head of US personal banking analytics at Citi. “A company’s ability to adopt new technical capabilities and rearchitect how their firm operates is going to make the difference between the firms that succeed and those that get left behind,” says Buluswar. “Your people and your firm must recognize that how they go about their work is going to be meaningfully different.”

Methodology

MIT Technology Review Insights surveyed 250 executives and leaders in banking and financial services from around the world to explore how agentic AI is being used. All organizations have revenues over \$500 million. The survey was conducted in April and May of 2025.



1

Agentic AI is showing rapid adoption in banking; almost three-quarters of executives say their firms are already using it to some degree. Most say agentic AI is not ready to be fully autonomous.

2

Priority applications include fraud detection and security, customer experience, reducing costs, and increasing efficiency.

3

Managing governance, risk, and compliance, a lack of technical skills, and poor data quality and integration are the biggest challenges in adopting agentic AI.

The emerging landscape

Agentic AI is already being rapidly adopted in the banking sector. A 2025 survey of 250 banking executives by MIT Technology Review Insights found that 70% of leaders say their firm uses agentic AI to some degree, either through existing deployments (16%) or pilot projects (52%) (see Figure 1).

And it is already proving effective in a range of different functions. More than half of executives say agentic AI systems are highly capable of improving fraud detection (56%) and security (51%). Other strong use cases include reducing cost and increasing efficiency (41%) and improving the customer experience (41%) (see Figure 2).

“Think of agentic AI as like an intern helping you get all of the more simplistic tasks done, but the human is still there to oversee and take the final decision.”

Ian Glasner, Group Head of Emerging Technology, Innovation, and Ventures, HSBC

Specific use cases showing promise include mortgage underwriting, small business loans, collections, disputed transactions, and “know your customer” and anti-money laundering requirements, says Gupta. In risk and compliance, banks are using agentic AI systems to continuously monitor employees, customers, and potential bad actors using deepfakes or other AI-powered methods to impersonate customers and attempt fraud. Using agentic AI in this way reduces the workload of humans who have to manually review cases, and frees them up for more high-risk and high-complexity work.

In the future, more than half of the banking executives surveyed say they expect to continue to improve fraud detection (75%), security (64%), and the customer experience (51%) (see Figure 3).

Transformative potential

The most promising use cases for agentic AI at scale in banking have a few characteristics, says Buluswar at Citi:

- High-volume processes, such as handling hundreds of thousands of calls or customer interactions per day.
- Back-end processes, such as investigating a suspicious transaction or dispute with a merchant.
- Front-end processes, such as giving a customer credit.
- Aggregating large amounts of information from diverse sources, such as for a case investigation or underwriting.

“A company’s ability to adopt new technical capabilities and rearchitect how their firm operates is going to make the difference between the firms that succeed and those that get left behind.”

Murli Buluswar, Head of US Personal Banking Analytics, Citi

Figure 1: Almost three-quarters of banking executives are using agentic AI to some degree

Survey question: What stage is your organization at deploying agentic AI?



Source: MIT Technology Review Insights survey, 2025

For example, agentic AI can reduce the internal friction associated with mortgage underwriting. The process can be onerous for customers who must provide all the necessary information and for bank employees who must parse through and stitch together all that data. It can take weeks to reach a decision. But automating the process using agentic AI with humans in the loop can dramatically increase the speed of decision-making and result in a positive client and customer experience.

Seizing on the opportunity relies on organizations training their broader workforce to be savvier about how they use AI-based systems, says Gupta of EY. If achieved, the benefits of a smarter approach to agentic AI include:

Fewer errors, faster detection of errors, and faster learning. “One of the most powerful things about AI is that these systems can get more accurate over time if they are retrained on the right data with proper lifecycle management and oversight,” says Ian Glasner, group head of emerging technology, innovation, and ventures at HSBC. “The system will make mistakes, but with the right feedback loop, systems can be updated to avoid repeating the same mistakes.”

Early identification of security issues before they grow into broader problems. Agentic AI is already reshaping threat detection, automatically responding to anomalies by quarantining infected machines. Agents can also autonomously manage identity verification and access to data and systems. Glasner sees a potential future opportunity for banks to provide micro-personalization with fraud detection and prevention. Banks will be able to further customize detection to customer's patterns and preferences with appropriate transparency and user control.

Improved customer service and strategic decision-making. "Wouldn't it be powerful for a wealth or financial advisor to be able to stitch together anything and everything you know about a client, tie that to macroeconomic conditions and portfolio observations, and then have a much more surgical set of interactions with your clients?" says Buluswar.

A better workforce and employee experience. DBS Bank, headquartered in Singapore, is using generative AI and agentic AI to synthesize and classify highly complicated SWIFT messages that contain financial instructions for transactions such as international

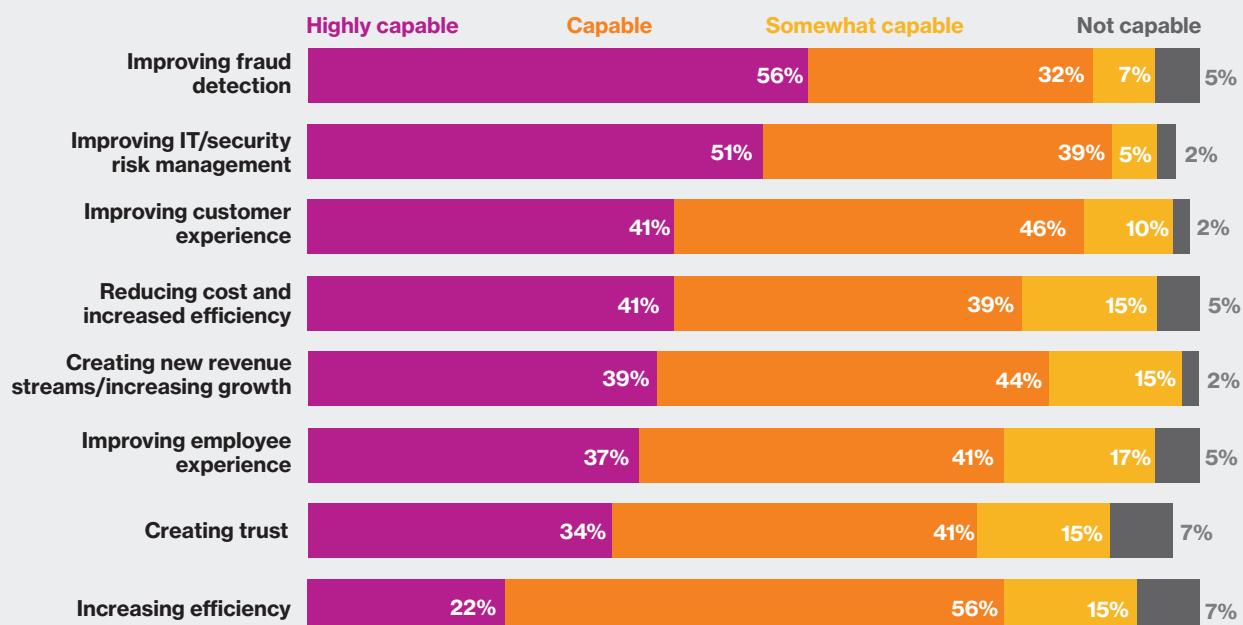
transfers. AI agents extract the information and present an action to a human for approval. "I think fundamentally AI will apply to every part of the business: front office, middle office, back office," says Nimish Panchmatia, chief data and transformation officer at DBS Bank. "Fundamentally, the way work gets done is going to be very different in the coming years."

At present, the technology is most effective when used to complement the work of human workers. Most respondents in our survey say their AI systems are capable of advising (95%), assisting (92%), cooperating with (82%), and augmenting users' abilities (76%). Around a third (38%) say AI is not capable of being fully autonomous in the digital world (see Figure 4).

In the next 18 months, executives are prioritizing most levels of use cases at a high or medium level of priority, except for those in the real world, such as retail banking locations (see Figure 5). Physical AI – the integration of artificial intelligence with physical systems and environments – is still far off. Two thirds (64%) say AI is not capable of making decisions and taking actions independently in the real world (see Figure 4).

Figure 2: Banks are finding success using agentic AI to improve fraud detection, security, and customer experience

Of those deploying agentic AI, we asked how capable their organizations have been at various outcomes.



“You can start with a simpler agentic system that addresses a set of the needs within a process and scale that over time to automate bigger and bigger parts of the process itself.”

Sameer Gupta, Americas Financial Services AI Leader, EY



Overcoming the challenges

To reap the rewards of this transformative potential, organizations must overcome several critical and complex obstacles:

Governance, risk, and compliance. The number one challenge respondents identified in creating value from agentic AI is in managing governance, risk, and compliance with confidence (cited by 63% of respondents) (see Figure 6). As the technology rapidly evolves, regulations around the world are lagging behind. Without firm regulatory standards in place, organizations need to implement their own guardrails.

Organizational adoption. The second most common challenge for executives in our survey is a lack of technology skills and capabilities (cited by 58% of respondents) (see Figure 6). Firms face the dual challenge of training the workforce to effectively use AI systems, which can help overcome organizational resistance to adoption, while also measuring ROI sufficiently to overcome C-suite skepticism. “How do you improve the general IQ and EQ of the organization to be able to actually adopt an AI system and not have organ rejection but rather have stickiness and usage?” asks Gupta.

Figure 3: Respondents expect future gains in fraud detection, security, and customer service, with significantly lower expectations for trust

Survey question: What are the most important outcomes your bank/financial institution expects from agentic AI?



Source: MIT Technology Review Insights survey, 2025

Data integration and security. Poor data quality and integration is the third biggest challenge for banking executives in our survey (according to 54% of respondents) (see Figure 6). Large financial institutions have hundreds of existing data systems that require reliable linkages, or application programming interfaces (APIs), to execute agentic responses. Role-based access controls and security protocols are imperative, says Gupta, and can prevent a system from learning something it should not learn based on its role.

Technological complexity. Given the rapid pace of technology change, new AI model and platform releases come out every three to six months, or even more quickly. Executives face uncertainty about future-proofing technology investments.

Questions around autonomy. “What sort of autonomy should you give to an agent-based system?” asks Gupta of EY. “When can it work entirely autonomously, and when does it require human intervention, or at least a human approval or review to the process?”

Building trust. Another major challenge when it comes to implementing AI in the high-stakes world of financial services is trust. In a recent [EY survey](#), just 42% of respondents said they would trust financial services companies to manage AI in ways that align with their best interests, while 30% say they would actively distrust them to do so. The difference between those two extremes is a net trust percentage of only 12%, one of the lowest levels of the industries studied. Agentic AI seems unlikely to change this dynamic at present; just 14% of respondents in our survey say their firm expects trust to be an outcome of agentic AI (see Figure 3).

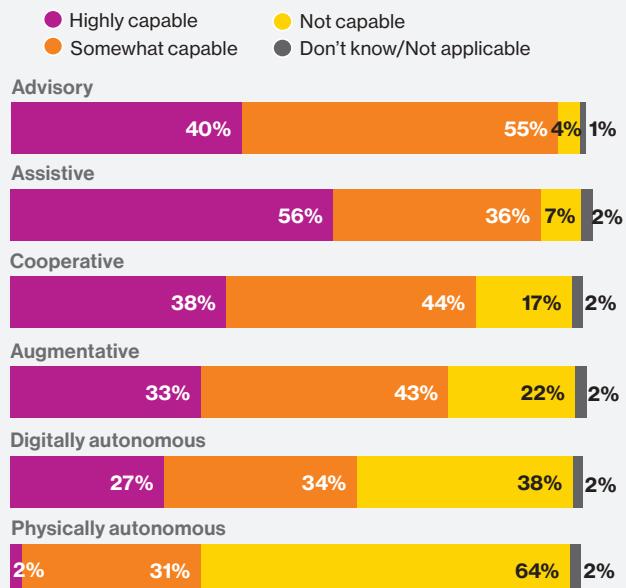
Investing in cybersecurity is a key way to build trust. A previous [MIT Technology Review Insight's survey](#) found that 40% of executives in regulated industries believe that effective security practices can strengthen trust in agentic AI. And cybersecurity can contribute to the bottom line too. A [2025 study by EY](#) found that cybersecurity can add between 11% and 20%, or a median of \$36 million, in value to each enterprise-wide initiative it is involved in.

Seizing the agentic AI opportunity

Adopting emerging technologies like agentic AI is not simple. The good news is that it can be implemented incrementally, says Gupta. “You can start with a simpler

Figure 4: Most say agentic AI is helpful in many ways, but not yet ready to be fully autonomous

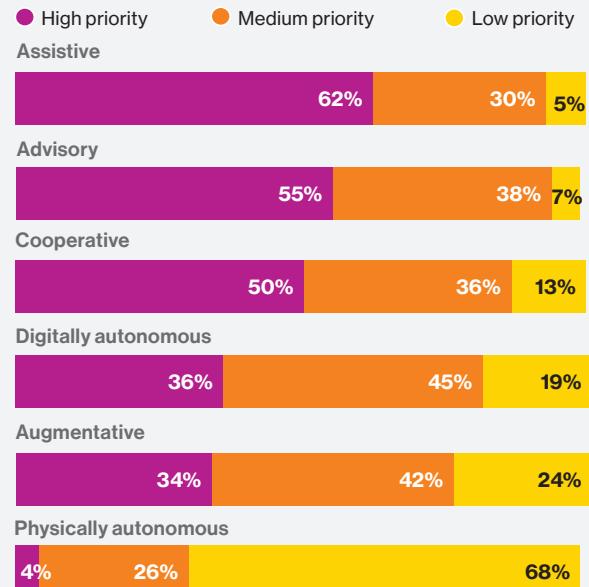
Survey question: Rate your organization’s current level of AI use case capabilities for employees, customers, partners, etc.



Source: MIT Technology Review Insights survey, 2025

Figure 5: Most use cases for agentic AI are being prioritized, except autonomy in the physical world

Survey question: Looking ahead to the next 18 months, what is your organization’s priority for adopting various levels of AI use cases?



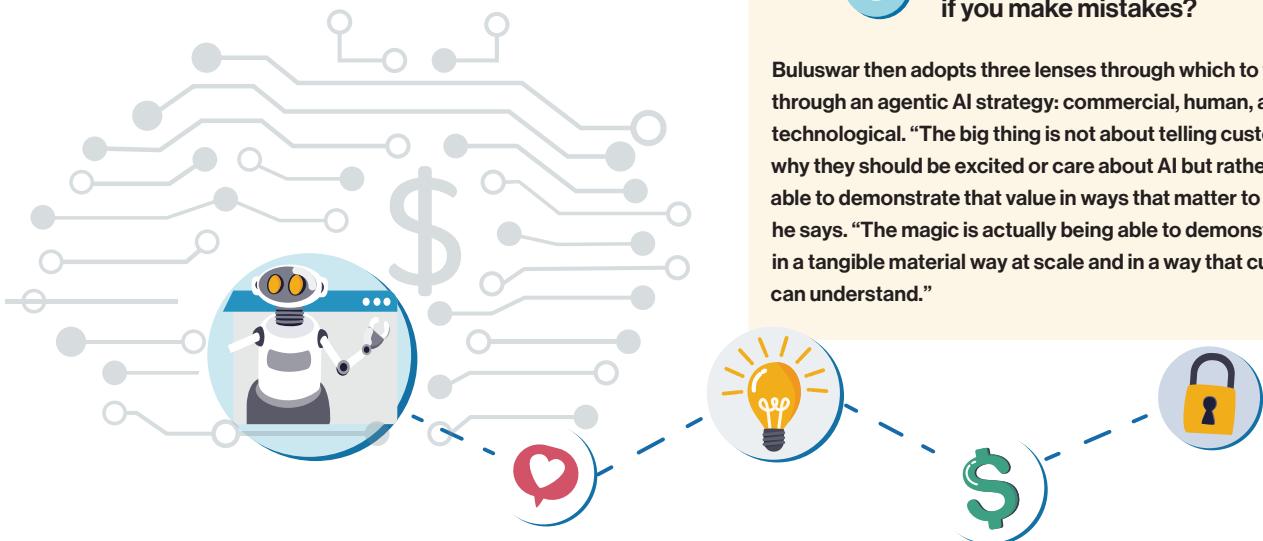
Source: MIT Technology Review Insights survey, 2025

agentic system that addresses a set of the needs within a process and scale that over time to automate bigger and bigger parts of the process itself."

Targeted aspects of customer service such as fraud claims, collections, and disputes lend themselves to automation as agentic AI matures and institutions become more proficient and efficient at adapting agents to existing governance guidelines and frameworks.

At HSBC, Glasner says priority areas for near-term impact for AI include credit lending and underwriting, onboarding and "know your customer" operations, contact centers and query management, engineering, and fraud detection and prevention. As they prioritize use cases, companies should take the following steps to ensure meaningful agentic AI improvements, according to Glasner:

Establish a robust governance framework: "This is all about safety and making sure that our AI systems are being built in a way that we as a firm are comfortable with and within our risk tolerance," he says. Glasner says HBSC maintains a detailed inventory of AI systems, linked to business owners, model documentation, and risk classification.



"Agentic AI is a continuous journey. If done properly, there's significant value at the end of it. But you have to persevere."

Nimish Panchmatia, Chief Data and Transformation Officer, DBS Bank

Lessons learned in creating agentic experiences in banking

The key to unlocking growth opportunities with agentic AI is to be systematic and rigorous in your approach, says Murli Buluswar, head of US personal banking analytics at Citi. "Rather than start with the task, you should ask, 'What am I looking to accomplish and can I reimagine how that should look?'" he says.

Buluswar recommends that executives develop a framework to guide their thinking, asking five questions to break down a set of activities for further business case analysis:

- 1 Is a process manual?
- 2 Is a process expensive?
- 3 Is a process time-lagged?
- 4 Is a process error-prone?
- 5 Is a process consequential if you make mistakes?



Buluswar then adopts three lenses through which to think through an agentic AI strategy: commercial, human, and technological. "The big thing is not about telling customers why they should be excited or care about AI but rather being able to demonstrate that value in ways that matter to them," he says. "The magic is actually being able to demonstrate value in a tangible material way at scale and in a way that customers can understand."

Prioritize use cases with clear business value:

HSBC has developed a mix of use cases tied to priority areas of the business, as well a process that evaluates the value – including revenue, cost, or efficiency improvements – the company generates from building an AI system.

Create common platforms and capabilities: With more than 200,000 employees in over 50 markets, it would quickly get chaotic for each technology team to do its own thing. A common technology platform allows data scientists, machine learning experts, and software engineers to build systems that are easier to govern, scale, and monitor safely.

Focus on data quality and accessibility: HSBC focuses on creating a single source of truth, data lineage processes, and formatting and contextual data standards needed for a variety of use cases.

Augment humans with AI: “You can almost think of agentic AI as like an intern helping you get all of the more simplistic tasks done, but the human is still there to oversee and take the final decision,” says Glasner. “Slowly things will move in the direction of being more and more autonomous, but I don’t think it’s going to be an overnight flip.”

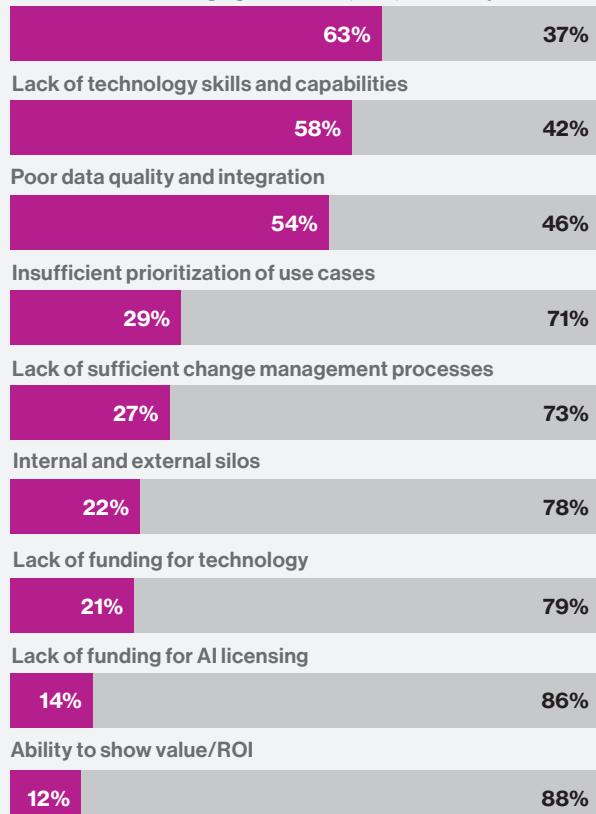
Transform the workforce: “To succeed, we need to invest heavily in reskilling, recognizing that even experienced staff will need to learn how to build, supervise, and use AI tools responsibly,” says Glasner.

Figure 6: A majority cite challenges managing governance, risk, and compliance with agentic AI

Survey question: What challenges does your organization face when creating value from agentic AI?

● Top-3 key challenge
● Not a top-3 key challenge

Confidence to manage governance, risk, and compliance



Source: MIT Technology Review Insights survey, 2025

Metrics are key

For its part, DBS Bank has built a sandbox for pure experimentation, but anything that interacts with people must adhere every year to its PURE framework for ethical AI governance. For very sensitive use cases, the company insists on real-time metrics, with allowable upper and lower performance limits. If any of those metrics are breached, there's a kill switch, according to Nimish Panchmatia, chief data and transformation officer at DBS Bank.

The PURE framework requires projects be:

Purposeful

Ensure AI solutions have a well-defined purpose that clearly explains why you're adopting them.

Respectful

Design AI interactions that do not violate customer privacy or social norms.

Unsurprising

Prevent unexpected uses of data from the customer's point of view.

Easy to explain

Clearly explain AI decision-making and data-use processes to both customers and regulators.

Panchmatia says agentic AI has generated a lot of excitement, along with challenges implementing innovations quickly. Executives need to be in it for the long haul. “It's a continuous journey, and done properly, there's significant value at the end of it,” he says. “But you have to persevere.”



"Reimagining the future of banking with agentic AI" is an executive briefing paper by MIT Technology Review Insights. MIT Technology Review Insights has collected and reported on all findings contained in this paper independently, regardless of participation or sponsorship. Laurel Ruma was the editor of this report and Nicola Crepaldi was the publisher.

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Nimish Panchmatia, Chief Data and Transformation Officer, DBS Bank

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