

2023 Technology Survey



SPONSORED BY:

jack henry™

TABLE OF CONTENTS

Executive Summary	3
Key Findings	4
Strategy & Adoption	5
Serving Customers	7
Investment	14
Leveraging Resources	26
About the Survey	31

About Bank Director

Bank Director reaches the leaders of the institutions that comprise America's banking industry. Since 1991, Bank Director has provided board-level research, peer insights and in-depth executive and board services. Built for banks, Bank Director extends into and beyond the boardroom by providing timely and relevant information through *Bank Director* magazine, board training services and the financial industry's premier event, Acquire or Be Acquired. For more information, please visit www.bankdirector.com.

BankDirector.

About Jack Henry & Associates, Inc.

Jack Henry™ (Nasdaq: JKH) is a well-rounded financial technology company that strengthens connections between financial institutions and the people and businesses they serve. We are an S&P 500 company that prioritizes openness, collaboration, and user centricity – offering banks and credit unions a vibrant ecosystem of internally developed modern capabilities as well as the ability to integrate with leading fintechs. For more than 47 years, Jack Henry has provided technology solutions to enable clients to innovate faster, strategically differentiate, and successfully compete while serving the evolving needs of their accountholders. We empower approximately 7,500 clients with people-inspired innovation, personal service, and insight-driven solutions that help reduce the barriers to financial health. Additional information is available at www.jackhenry.com.

jack henry™

EXECUTIVE SUMMARY



Laura Alix is the director of research for Bank Director, an information resource for directors and officers of financial companies. You can connect with her on LinkedIn.

Bank leaders are reevaluating their strategic priorities in an increasingly digital landscape, but they may be missing an opportunity to better serve small businesses.

A majority of the senior executives and board members responding to Bank Director's 2023 Technology Survey, sponsored by Jack Henry, say their bank offers small business clients digital capabilities including mobile deposit (93%) and payments (84%). But less than half offer deposit account opening (41%), loan applications (37%) or treasury management capabilities (36%) via the digital channel. And far fewer offer payroll services (37%), accounts payable/receivable (19%) or cash flow monitoring (11%) as part of their digital banking suite.

Banks that neglect the small business segment could risk losing those customers, especially the very smallest of them, to fintech competitors, says Lee Wetherington, senior director of corporate strategy at Jack Henry. And too often, banks can't truly identify their small business clients.

"When it comes to small businesses, [banks are] operating with huge blinders on, because many don't realize that somewhere between 13% and 35% of their retail accounts are being used to run micro and small businesses," he says. "Eighty-plus percent of all small businesses are a single person -- that is, sole proprietors. Serving and lending to small businesses is a \$400 billion revenue opportunity."

The survey also finds rising concern about the threat of digital neobanks such as Chime that have demonstrated success in growing deposits from a younger client base. While more than half of respondents still point to traditional competitors — small, local financial institutions and big/superregional banks — as their top threats, 42% say they're concerned about neobanks that attract consumer deposits.

Just 18% of bank leaders believe their organization has the tools it needs to effectively serve Gen Z customers, between 16 and 26 years old.

"Banks can capture Gen Z customers with mobile-only account opening that doesn't require funding upfront, early paycheck access and automated savings options," says Jennifer Geis, senior analyst, corporate strategy at Jack Henry.

In anonymous comments, bank leaders say it's challenging to meet the needs of this digitally-savvy generation, especially with the limited resources available to community banks. Some worry it may already be too late for their bank to win over Gen Z. "Are we too late to the game in the technology they want?" says one chief operating officer responding to the survey. "Have they already immersed themselves with other fintechs instead of banks?"

KEY FINDINGS

➔ The Rising Neobank Threat

Sixty-one percent of respondents identify local banks or credit unions as their bank's primary competitive threat, followed by big/superregional banks (56%) and neobanks that compete for consumer deposits (42%), such as Chime — a significant increase compared to last year's survey.

➔ Barriers To Adoption

Almost three-quarters cite integrating with the bank's core as a chief obstacle to planned upgrades or implementations, followed by adoption or acceptance by bank staff (53%) and customer adoption (51%).

➔ Emerging Opportunities

More than half (56%) say their board has discussed allocating budgets or resources to artificial intelligence, while 47% say the same about banking as a service. Smaller percentages have had similar discussions about blockchain (15%) or cryptocurrency and digital assets (24%).

➔ More Dollars For Tech

A large majority (83%) of survey respondents say their bank's technology budget increased over the past year, at a median increase of 10%. A median 15% of the technology budget is devoted to new initiatives, bank leaders report.

➔ Seeking Board Expertise

Fifty-one percent say their board has at least one member they would consider to be a technology expert. Among those who do not, 38% say they are actively seeking a director with technology expertise.

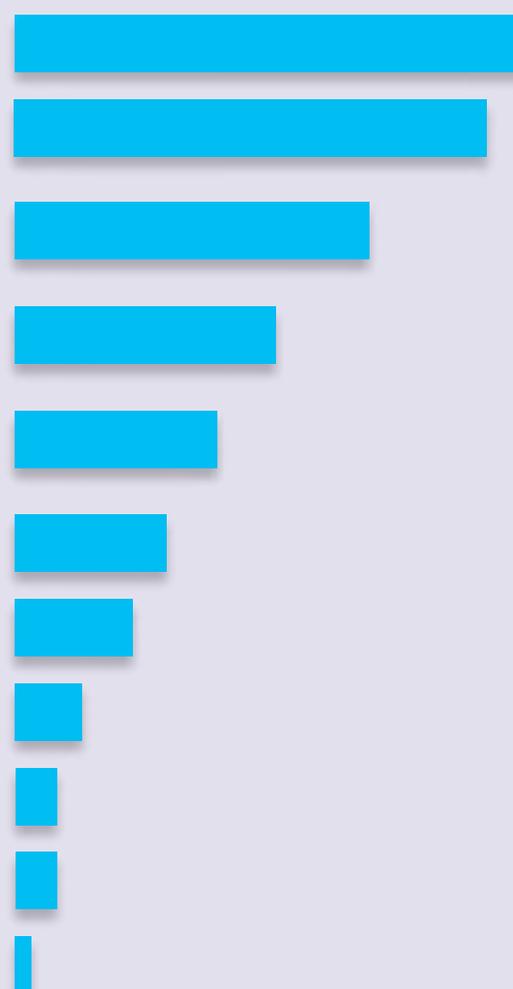
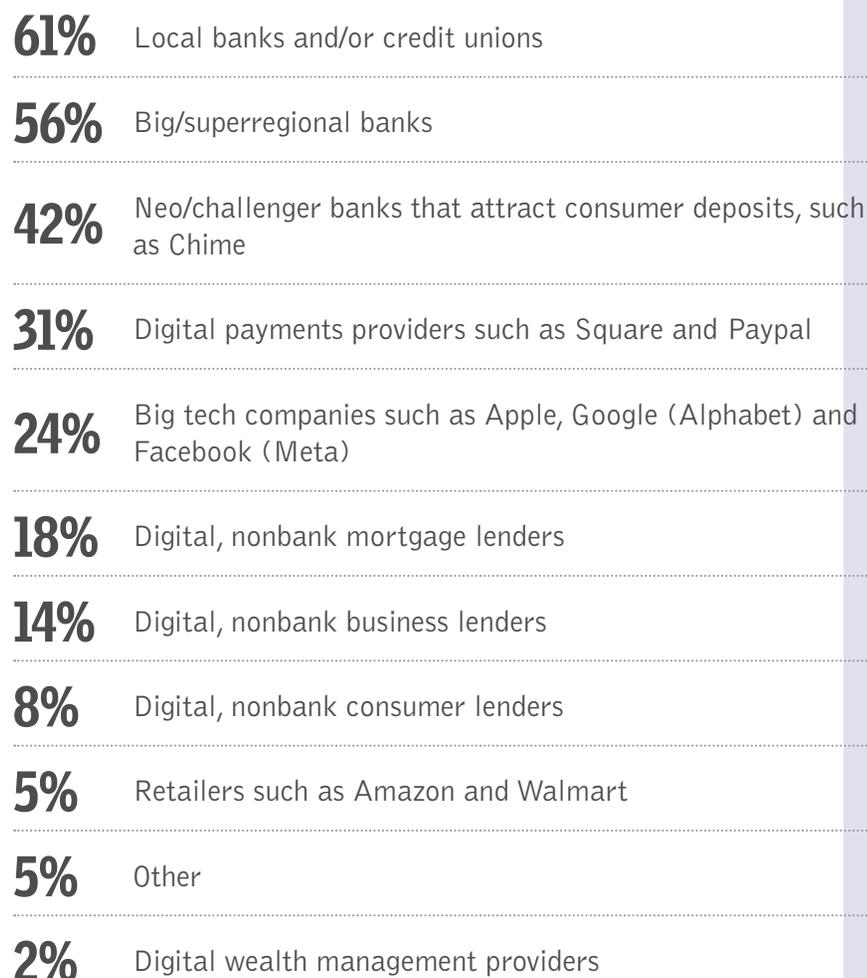
➔ Emphasizing Digital

This year, 44% of respondents say that digital channels are more critical to their bank's strategy, compared with 33% who said the same last year. The percentage that rank digital channels and the branch as equally important also dropped, from 57% to 48%.

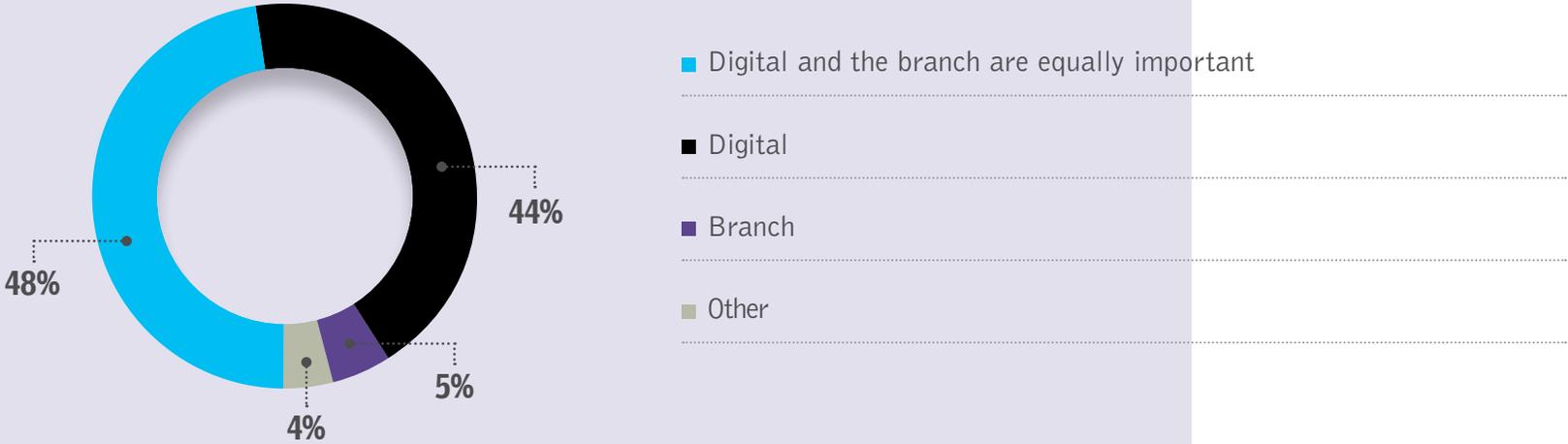
STRATEGY & ADOPTION

1. Of the following, which three do you consider to be the greatest competitive threat to your bank?

Respondents were asked to select no more than three options.



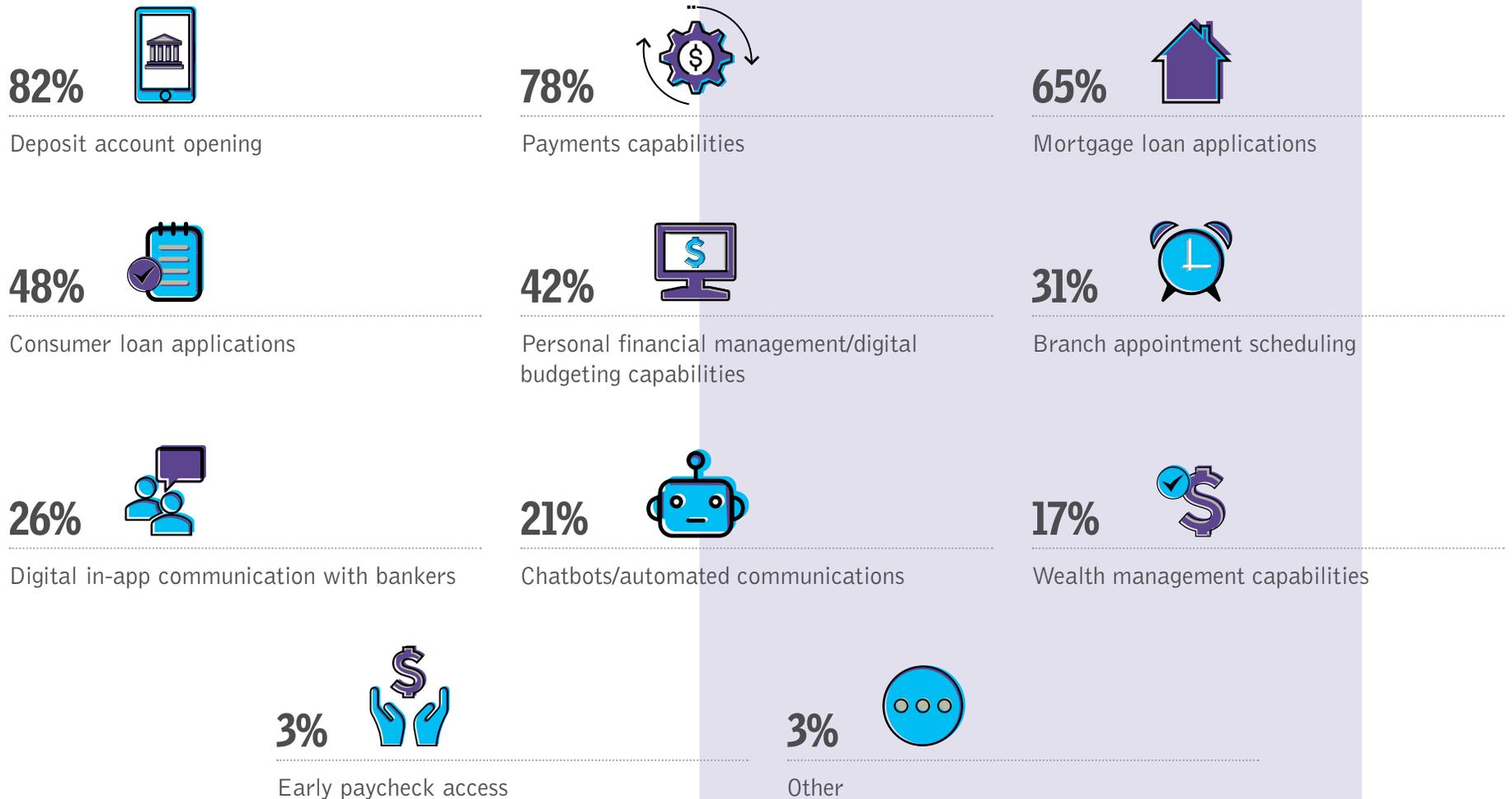
2. Which delivery channel is more critical to your bank's growth strategy?



SERVING CUSTOMERS

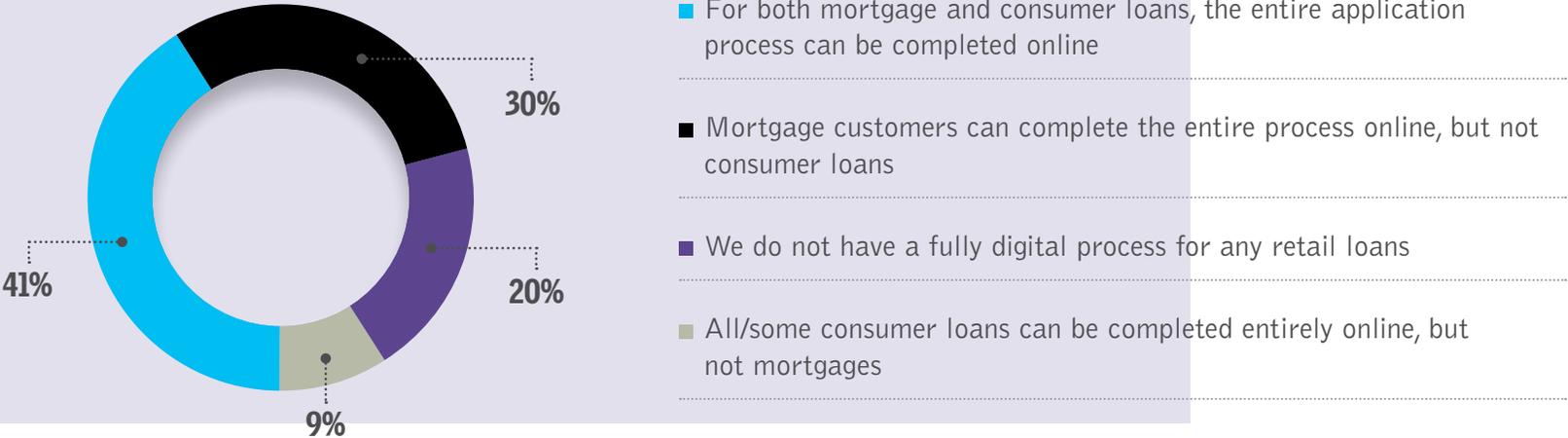
3. What digital banking capabilities does your bank offer to its retail customers?

Respondents were asked to select all that apply.

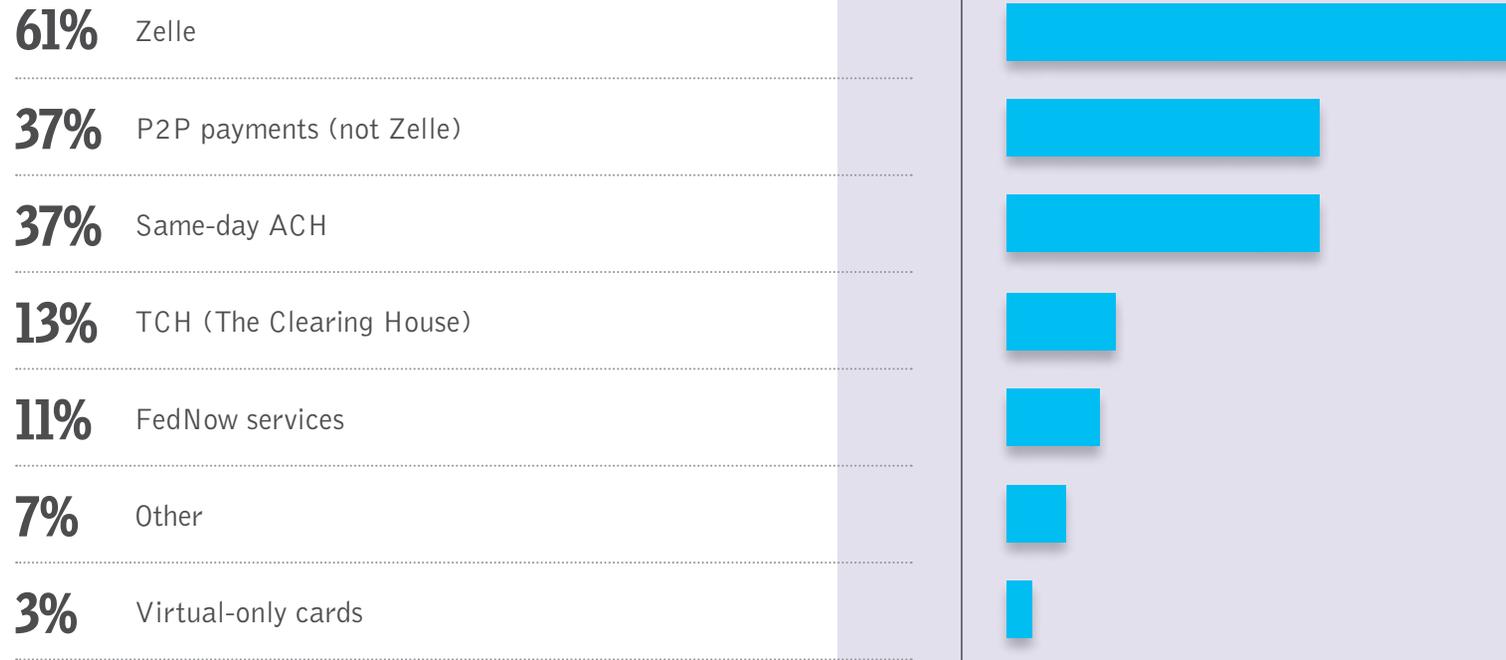


4. Does your bank offer a fully digital, end-to-end application process for mortgage and/or consumer loans?

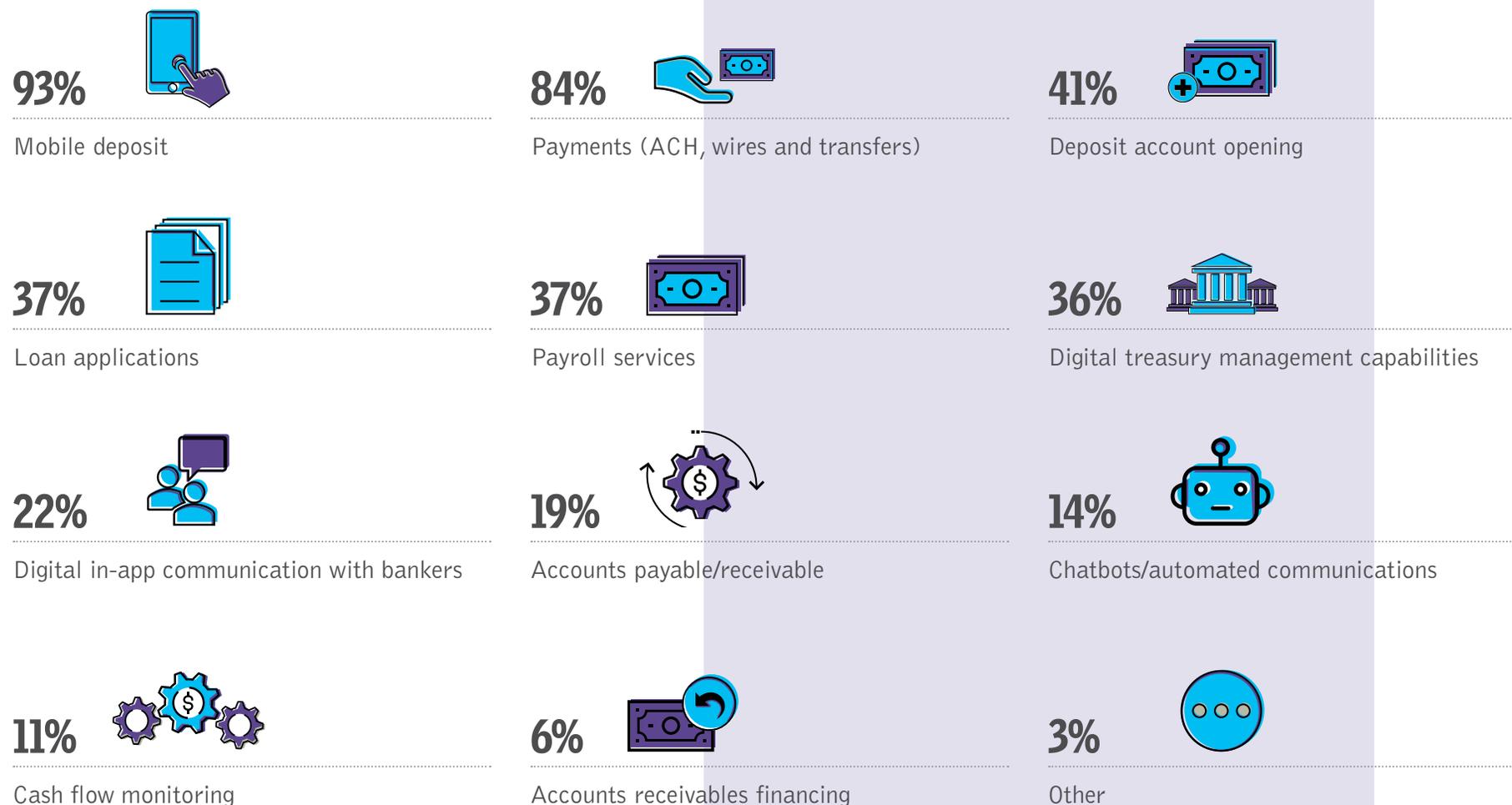
Question only asked of respondents who indicated their bank offers digital mortgage or consumer lending.



5. What type of digital payments capabilities do you offer to your retail banking customers?

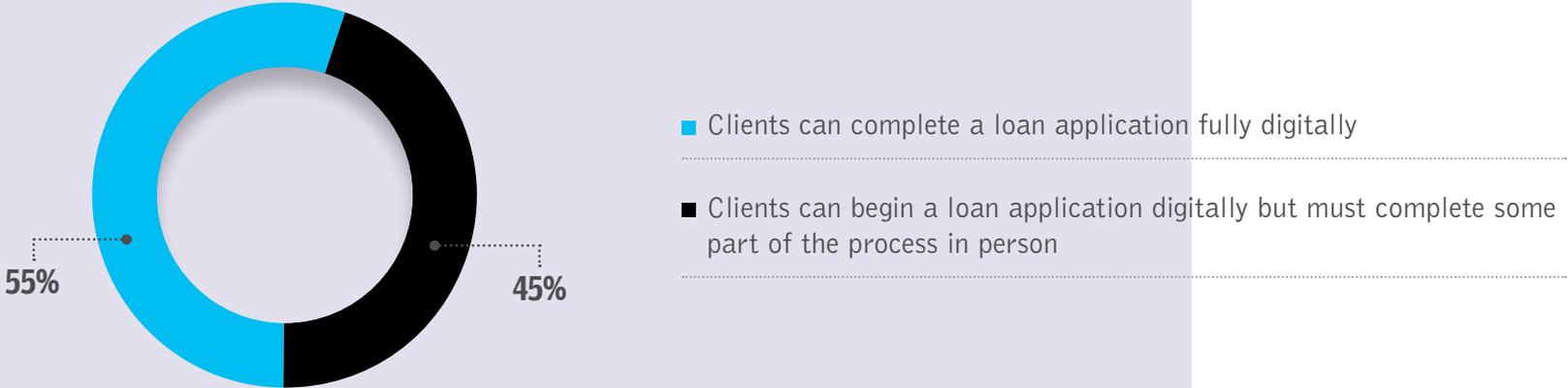


6. What digital banking capabilities does your bank offer to its small business customers?



7. Please choose the statement that best aligns with your bank's digital small business lending process.

Question only asked of respondents who indicated their bank offers digital loan applications to small business clients.



8. What digital capabilities does your bank offer to its commercial customers?

Respondents were asked to select all that apply.



9. Do you believe that your bank has the tools in place to effectively serve the following generations of customers?

Numbers don't add up to 100 due to rounding.

Gen Z (16-26 years old)



Millennials (27-42)



Generation X (43-58)



Baby Boomers (59-77)



■ Yes

■ No

■ Unsure

INVESTMENT

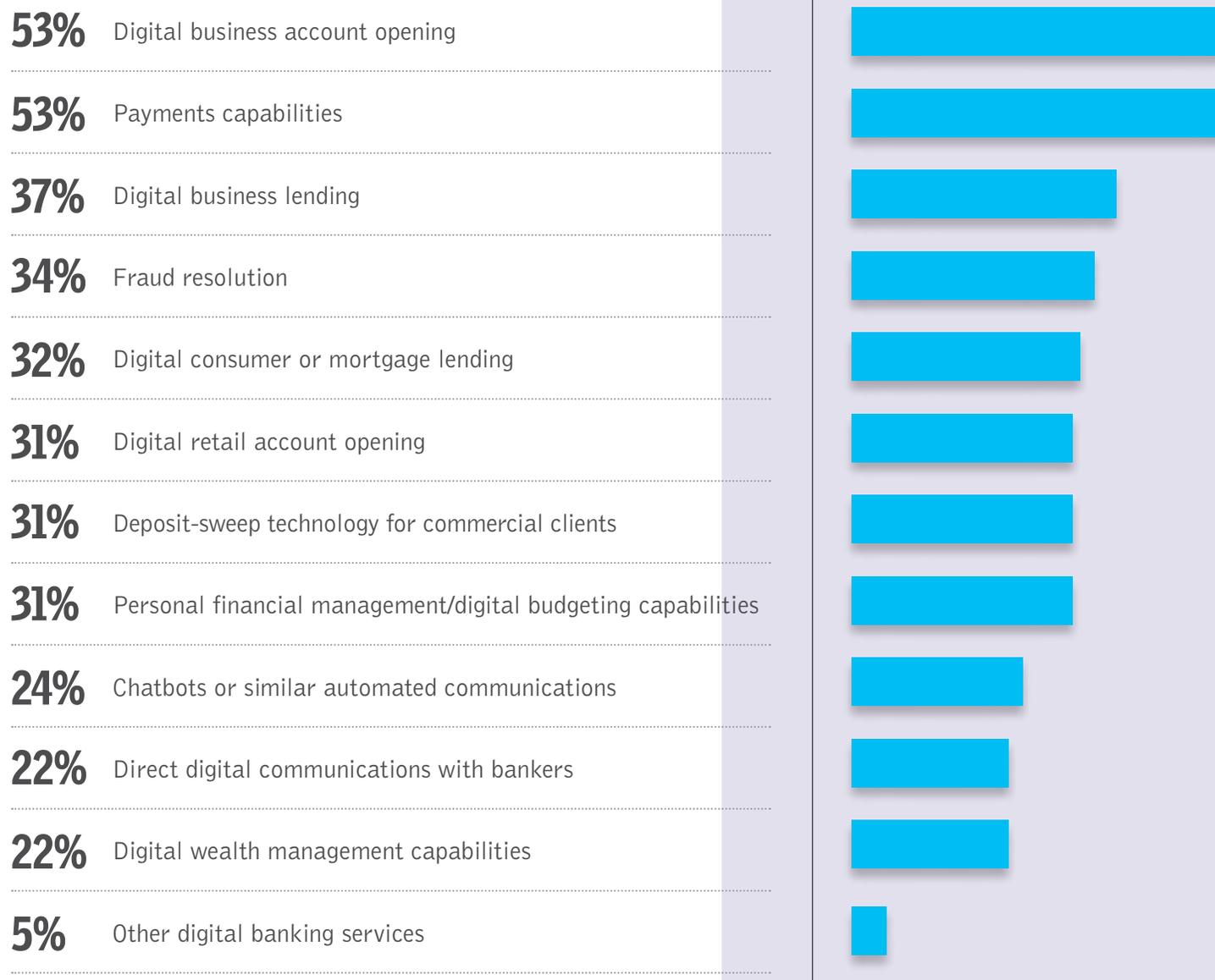
10. Over the past 18 months, has your bank upgraded or implemented any of the following to enhance customer experience?

Respondents were asked to select all that apply.

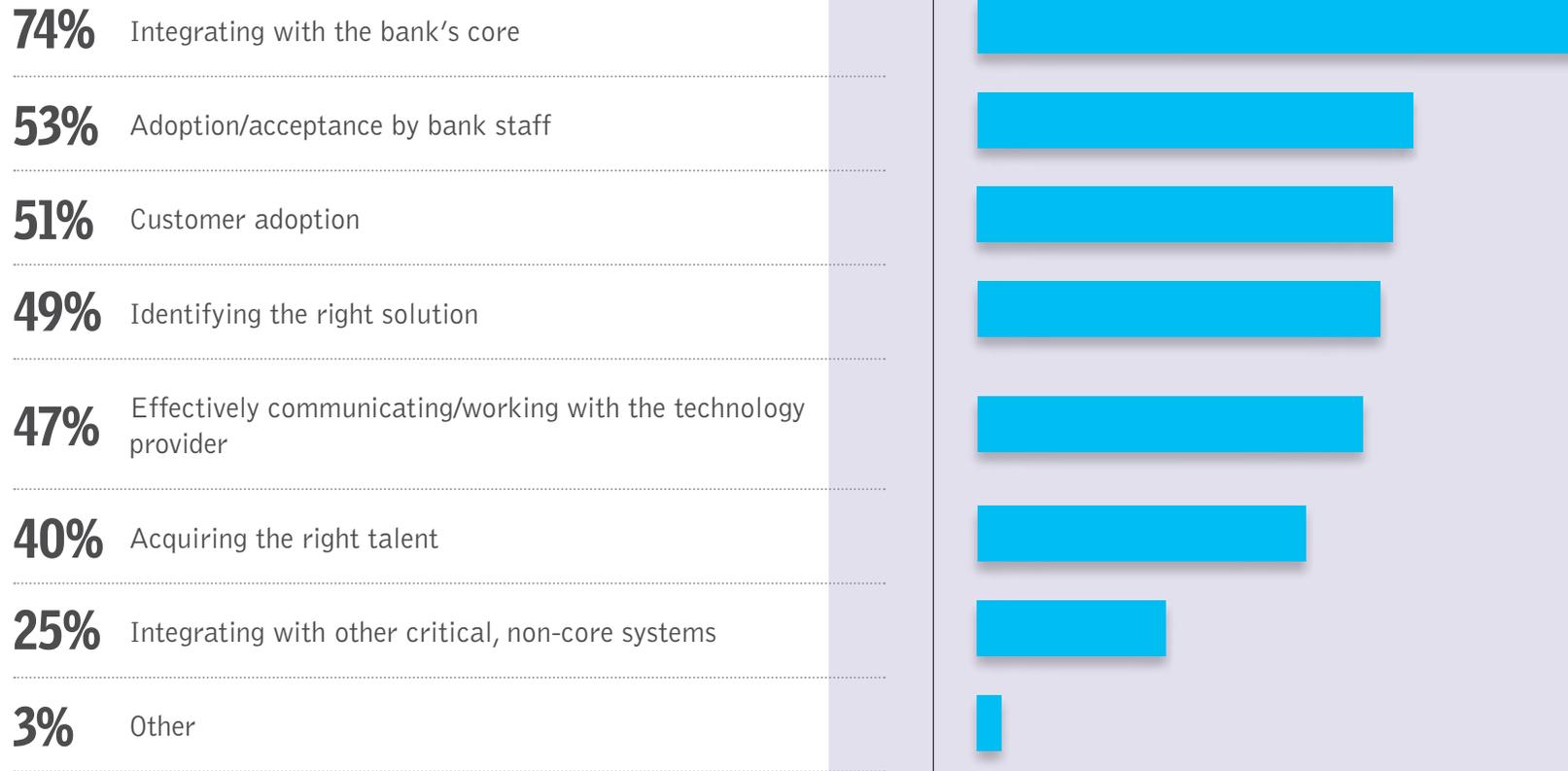


11. Does your bank plan to upgrade or implement any of the following to enhance customer experience in the next 18 months?

Respondents were asked to select all that apply. *indicates a count of less than 10 in a category.

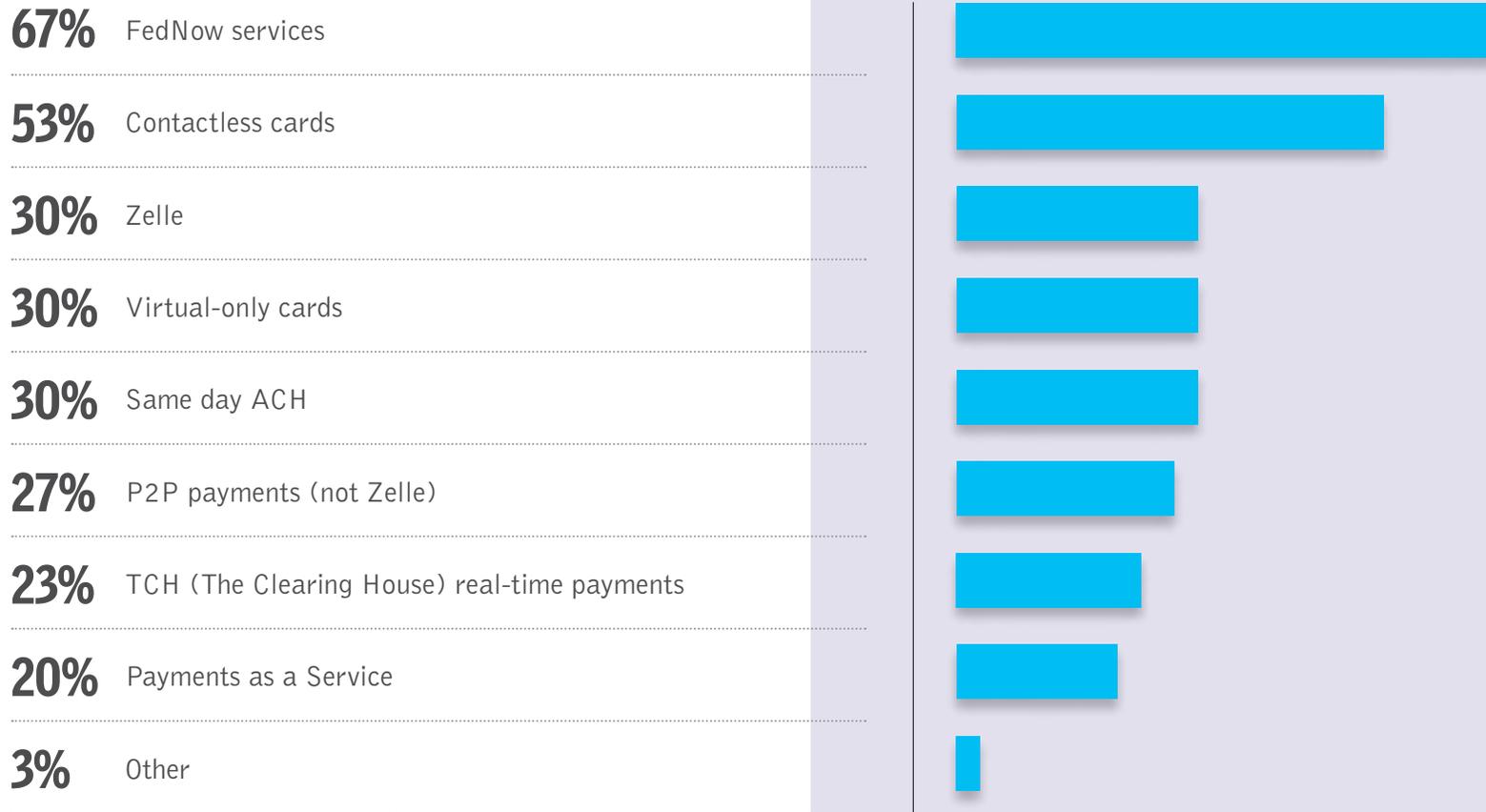


12. What challenges do you believe your bank will need to address, related to planned upgrades and implementations?



13. What types of digital payments capabilities will your bank upgrade or implement over the next 18 months?

Question only asked of respondents who indicated their bank plans to upgrade payments capabilities in the next 18 months. Respondents were asked to select all that apply.



14. What use cases for chatbots or similar automated communications is your bank considering?

Respondents were asked to select all that apply. Question only asked of respondents who indicated that their bank plans to upgrade or implement chatbots over the next 18 months.

86% Resolving basic account questions (e.g. balance inquiries, pending transactions)

64% Answering questions about products and services

36% Initiating fraud complaints

36% Recommending products and services

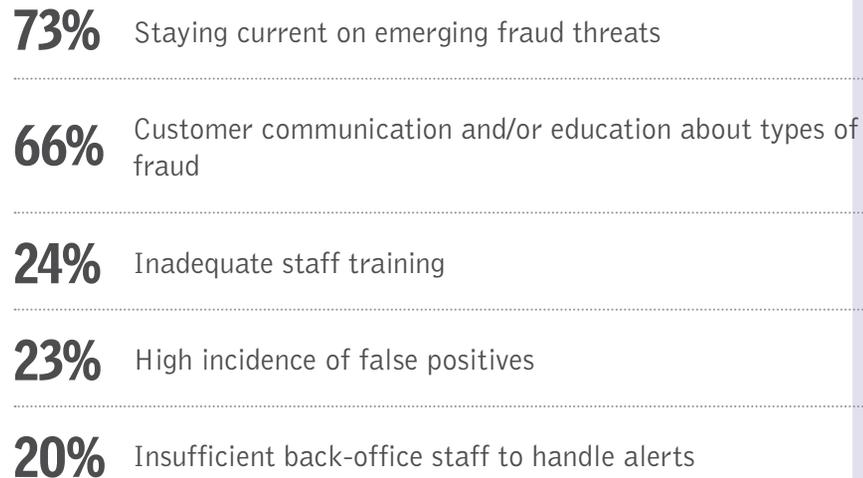
29% Financial insights or recommendations

7% Other



15. What challenges do you see in your bank's fraud prevention program?

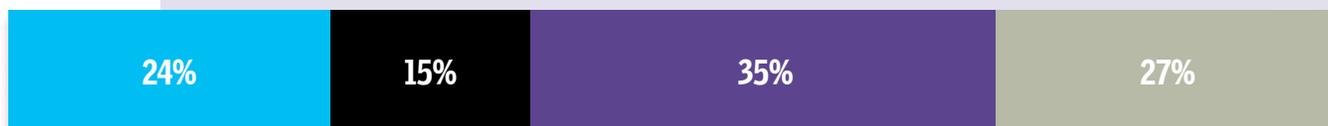
Respondents were asked to select all that apply.



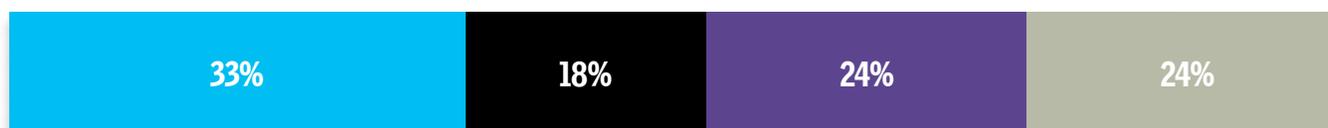
16. Does your bank use any of the following technologies for fraud detection and/or prevention?

Numbers don't add up to 100 due to rounding.

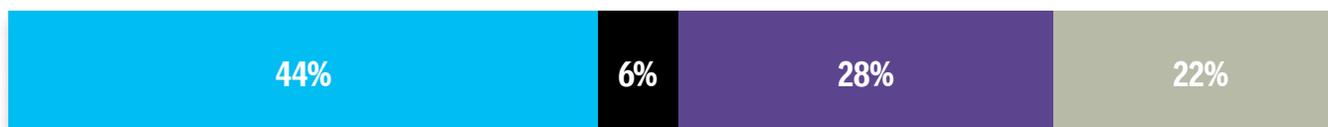
Artificial intelligence (AI)/machine learning (ML)



Alternative fraud data sources (blacklists/whitelists, consortiums, etc.)



Biometrics (facial, fingerprint, voice)



Behavioral analytics



Tokenization

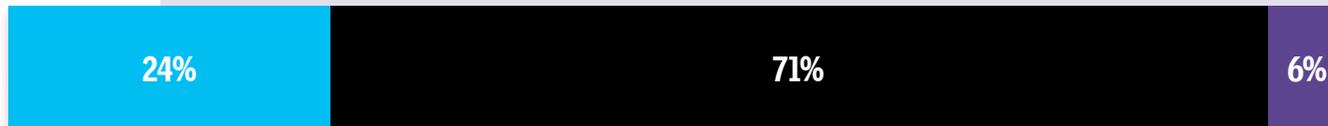


- Currently use
- Integrating into our tech stack
- Discussing, but haven't adopted
- Haven't discussed or adopted

17. Over the past 18 months, has your bank's leadership team and/or board discussed allocating budget or resources to any of the following emerging areas?

Numbers don't add up to 100 due to rounding.

Cryptocurrency/Digital Assets



Blockchain



Banking As A Service



Artificial Intelligence



Payments As A Service



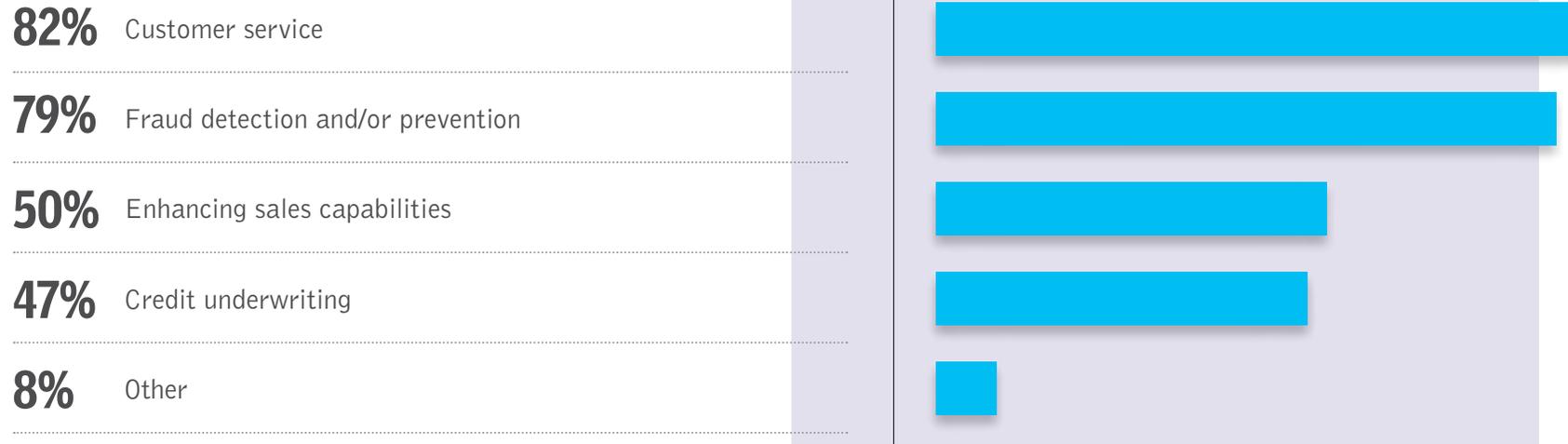
■ Yes

■ No

■ Unsure

18. What use cases for artificial intelligence is your bank exploring?

Respondents were asked to select all that apply. Question only asked of respondents who indicated their leadership team or board has discussed allocating budget or resources to artificial intelligence.



19. What use cases for blockchain is your bank exploring?

Respondents were asked to select all that apply. Question only asked of respondents who indicated their leadership team or board has discussed allocating budget or resources to blockchain.

63% Identity verification and Know Your Customer compliance

63% Payments

50% Recordkeeping

50% Smart contracts

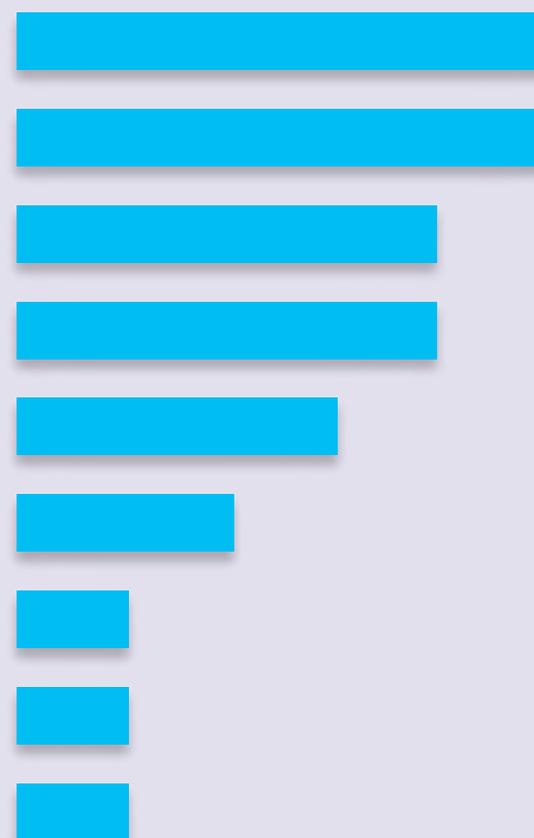
38% BSA/AML compliance

25% Lending and asset collateralization

13% Credit prediction and scoring

13% Digital currency, stablecoins or tokenized assets

13% Other



20. How much has your bank budgeted for technology in fiscal year 2023?

Median values only. Respondents were asked to report the total amount as a whole number.



\$1,500,000

Median amount budgeted for technology

21. What percentage of your technology budget is devoted to new initiatives?

Median values only.



15%

Median percentage budgeted for new technology

22. Did your bank increase or decrease its budget for technology in FY 2023 compared to its technology budget for FY 2022?



23. By what percentage did your technology budget increase for FY 2023, compared to your bank’s technology budget in FY 2022?

Question only asked of respondents who indicated their bank’s technology budget increased.

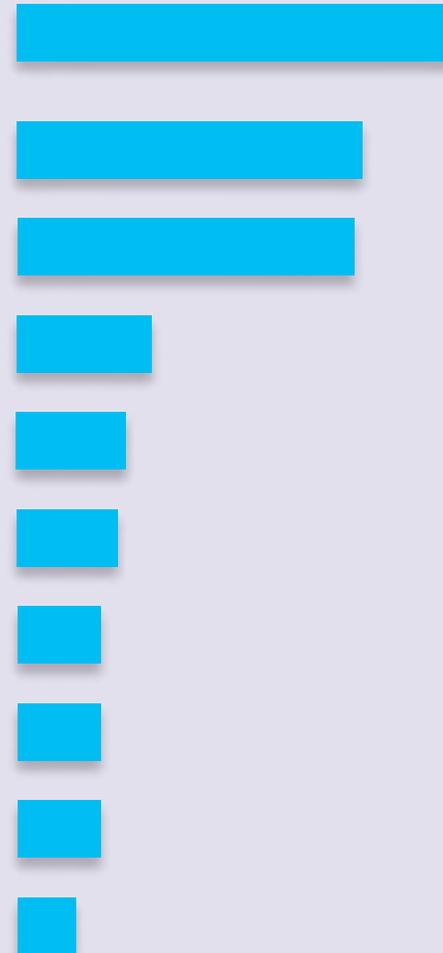
10%

Median technology budget increase

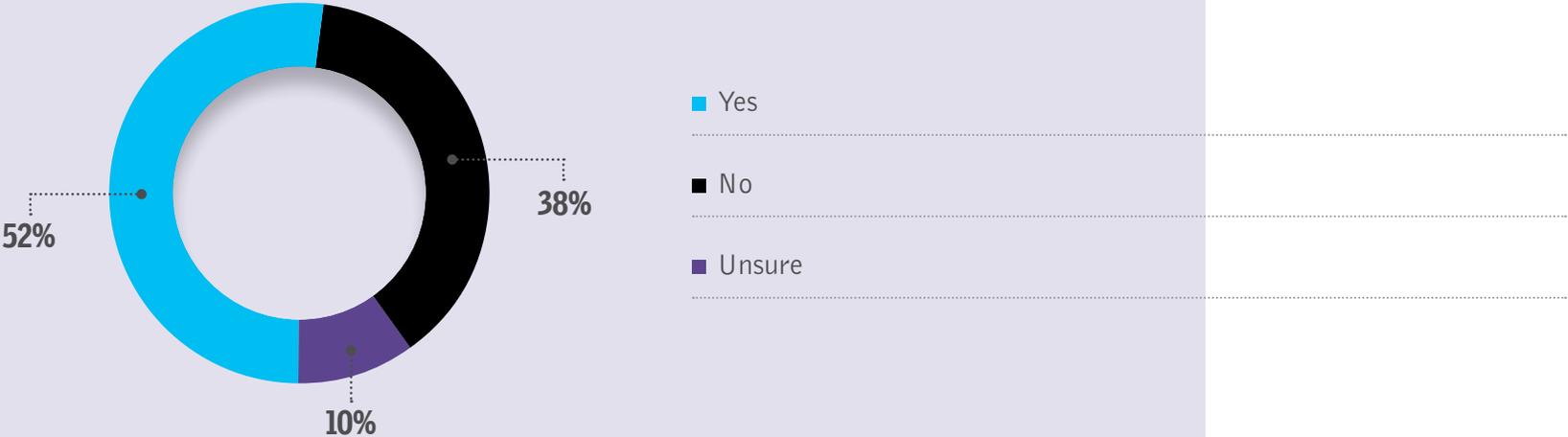
LEVERAGING RESOURCES

24. Which of the following positions do you currently have on staff at your bank?

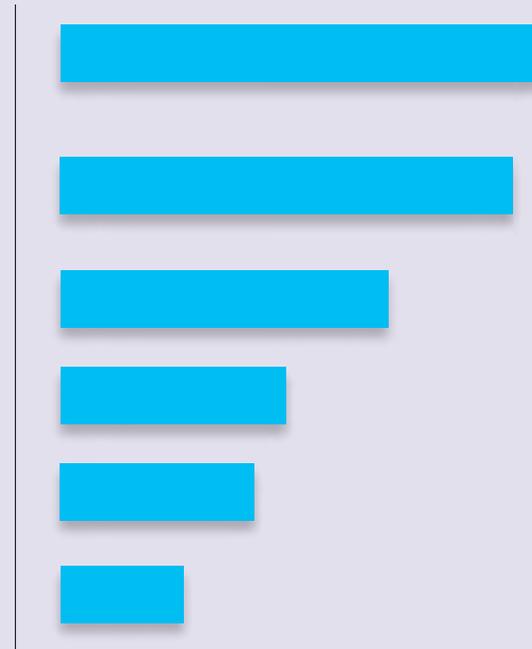
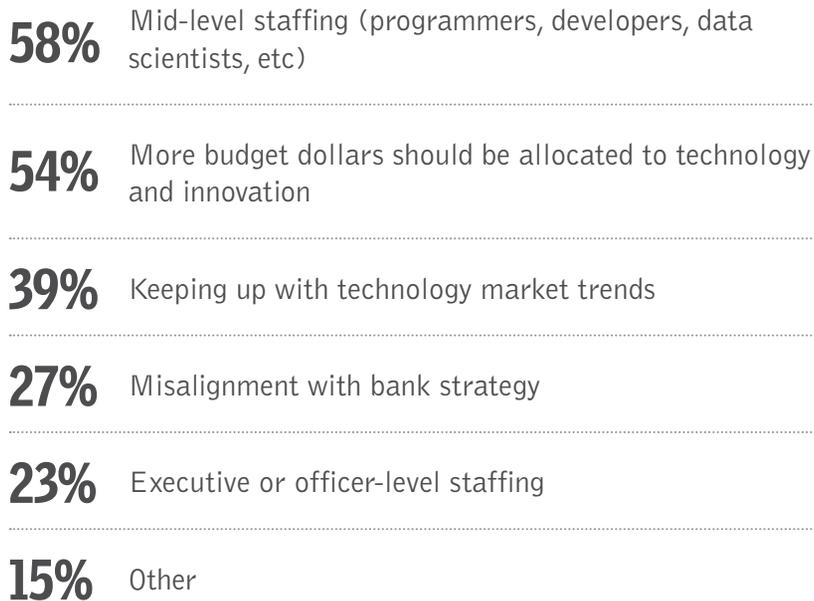
52%	Chief information security officer or equivalent executive position
41%	Chief technology officer
40%	Chief information officer
16%	Chief digital officer, or equivalent executive position
13%	Developers/programmers
12%	Data scientists
10%	Chief innovation officer or equivalent executive position
10%	Chief strategy officer or equivalent executive position
10%	None of the above
7%	Chief data officer, or equivalent executive position



25. Overall, do you believe your bank allocates sufficient resources to technology and innovation?



26. What deficiencies do you see in your bank's allocation of resources to technology and innovation?



27. How frequently does your board discuss technology?



28. What resources does your board use to inform strategic discussions around technology?

Question only asked of CEOs, board chairs and independent directors.

68% Consultants

61% Written articles and resource guides

59% Industry associations

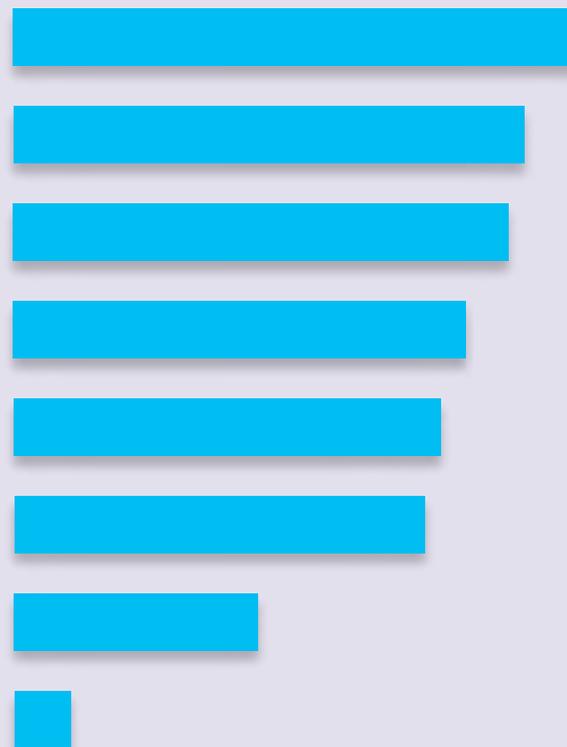
54% Third-party technology vendors (not the bank's core provider)

51% Core provider

49% External research

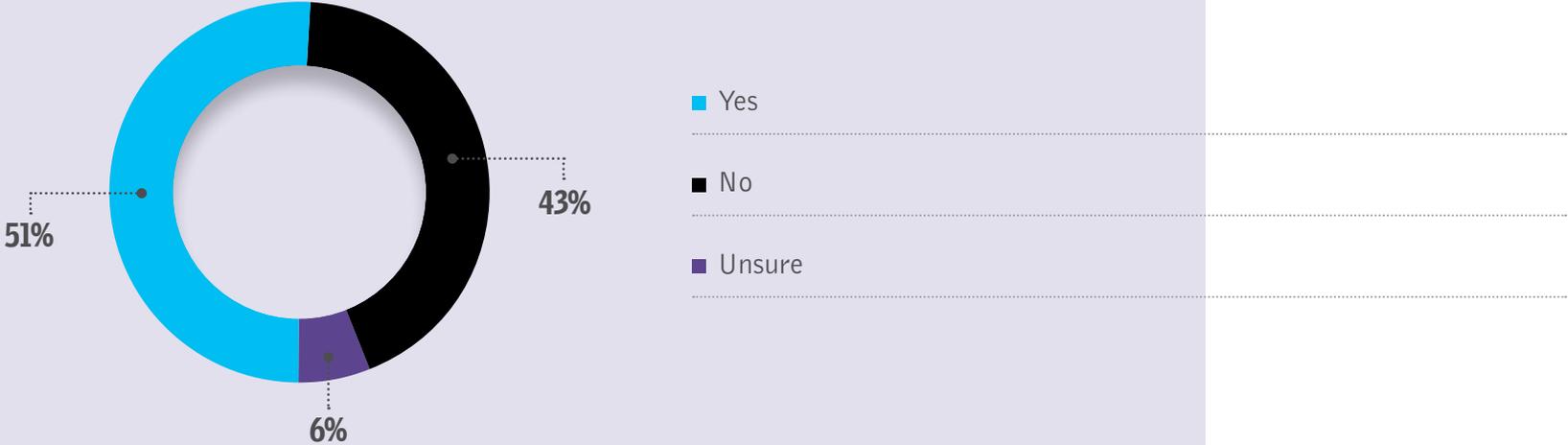
29% Fintech-focused events and webinars

7% Analyst firms



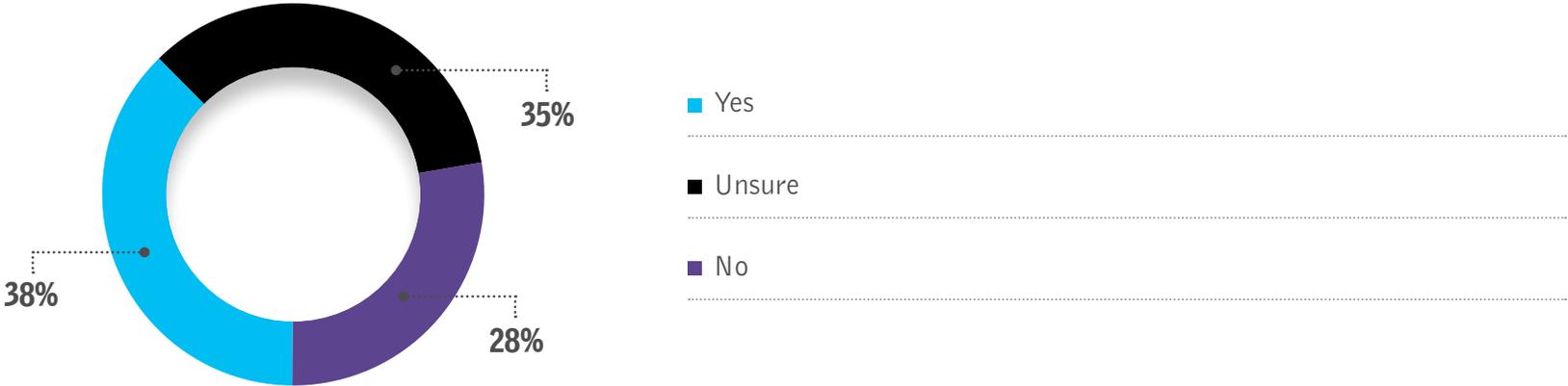
29. Do you have at least one technology expert on your board?

Numbers don't add up to 100 due to rounding.



30. Are you actively seeking to add a director with technology expertise to your board?

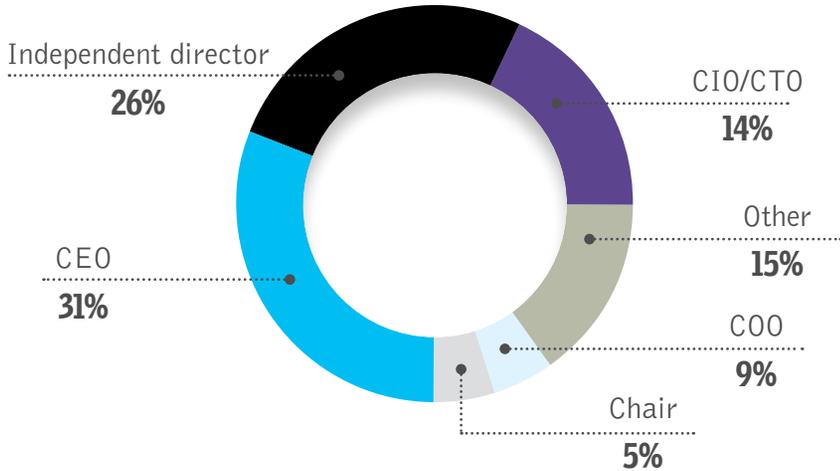
Question only asked of respondents who indicated that they did not have a technology expert on their board.



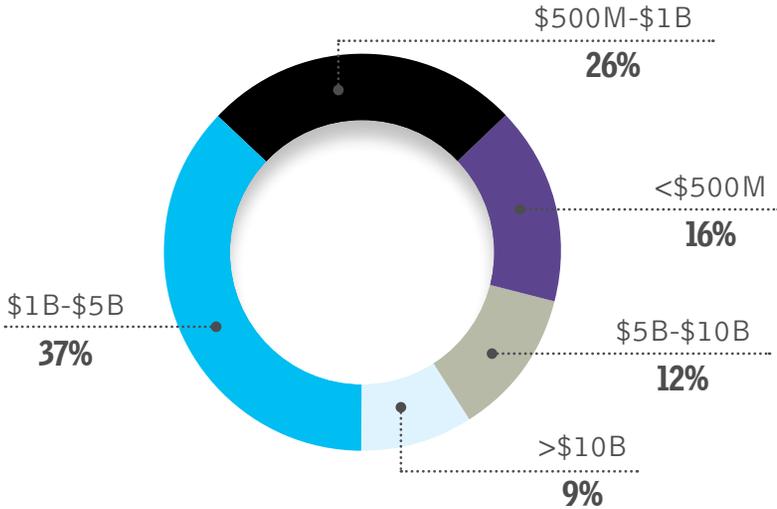
ABOUT THE SURVEY

Bank Director’s 2023 Technology Survey, sponsored by Jack Henry, surveyed 102 independent directors, chief executive officers, chief operating officers and senior technology executives of U.S. banks below \$100 billion in assets to understand how these institutions leverage technology in response to the competitive landscape. The survey was conducted in June and July 2023. Almost half of the respondents represent financial institutions with \$1 billion to \$10 billion in assets.

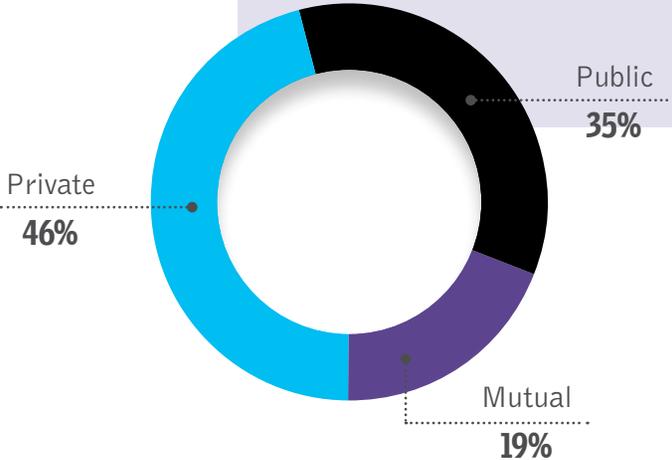
TITLE



ASSET SIZE

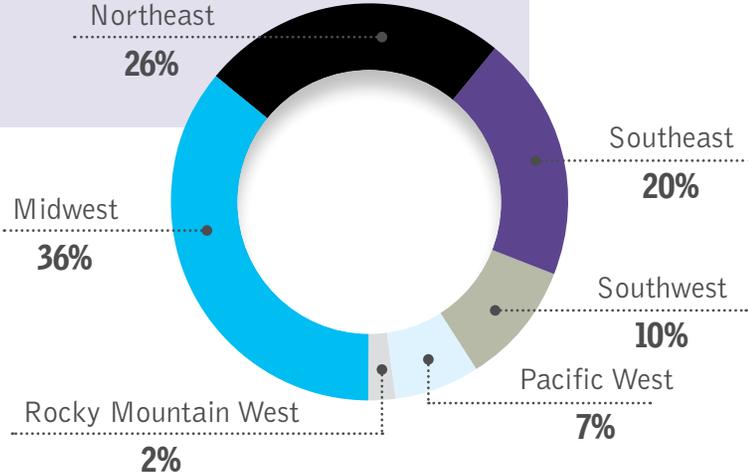


OWNERSHIP STRUCTURE



REGION*

Numbers don't add up to 100% due to rounding.



*Regions defined as follows: Midwest (IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI); Northeast (CT, ME, MA, NH, NJ, NY, PA, RI, VT); Pacific West (AK, CA, HI, OR, WA); Rocky Mountain West (CO, ID, MT, NV, UT, WY); Southeast (AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, SC, TN, VA, WV); Southwest (AZ, NM, OK, TX)