

**Bank**Director®  
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# 2017 Technology Survey

AUG 2017 | RESEARCH

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### Emily McCormick

is the director of research for Bank Director, an information resource for directors and officers of financial companies. You can follow her on Twitter or get connected on LinkedIn.

## EXECUTIVE SUMMARY

**Despite working in an industry flooded with customer data, just 13 percent of the senior executives and independent directors responding to Bank Director's 2017 Technology Survey believe that their financial institution effectively uses data to serve the needs of existing customers or identify new customers. Yet, 65 percent indicate that data analytics will impact their financial institution over the next five years.**

Sponsored by technology solutions provider CDW, the 2017 Technology Survey was conducted in June and July of 2017 and surveyed 145 chief information officers, chief technology officers, chief executives, independent directors and chairmen of U.S. banks above \$250 million in assets. Chief operating officers, chief financial officers, chief marketing officers and other senior executives also responded.

Forty percent say their bank dedicates staff exclusively to data analytics, either by hiring new employees (20 percent) or shifting current staff to focus on the issue (20 percent). Forty-four percent, all at banks below \$5 billion in assets, indicate that current staff focuses on data in addition to other duties at the bank. Ten percent rely on consultants and outside providers.

Despite increased technology budgets—53 percent report that their bank's technology budget increased between 5 and 10 percent for fiscal year 2017, and 21 percent report an increase of 15 percent or more—61 percent of responding executives say that data analytics doesn't represent a sufficient portion of the bank's technology budget. Twenty-one percent say the bank hasn't designated any money for data analytics.

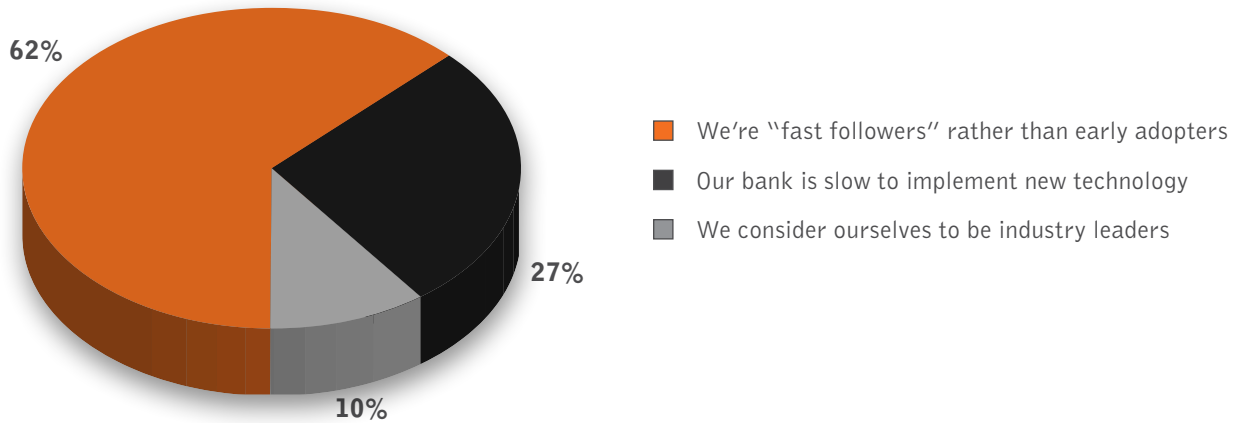
### Other key findings:

- Sixty-two percent of respondents describe their banks as "fast followers" rather than early adopters when it comes to how they approach technology.
- Forty-five percent indicate that their institution's management team and board are open to working with newer fintech startup firms to help the bank implement new products and services or create efficiencies within the organization. However, 46 percent say bank leaders haven't even considered working with startups.
- Seventy-seven percent are confident that the staff and board of the bank would be prepared to react if the institution itself experienced a cyberattack or data breach.
- Forty-four percent believe that the bank would be vulnerable if one of the bank's vendors experienced a cyberattack or data breach. Just 21 percent believe the bank would not be at risk in such an event.
- Forty-seven percent indicate that the board discusses technology at every board meeting, with 94 percent indicating cybersecurity is a current focus in the boardroom. Fifty-five percent say the board also focuses on improving processes in the bank through the use of technology.
- Fifty-six percent say the board does not have a sufficient level of expertise regarding technology.
- To better educate the board about technology in the past year, 52 percent say the board has brought in relevant bank staff, and 47 percent indicate that a management-level technology committee regularly presents to the board.
- Eighty-nine percent of bank directors and chairmen say they primarily rely on bank IT staff to stay informed of technology trends related to the banking industry.

## INNOVATION LEADERS & LAGGARDS

### 1. How would you describe your bank's approach to technology?

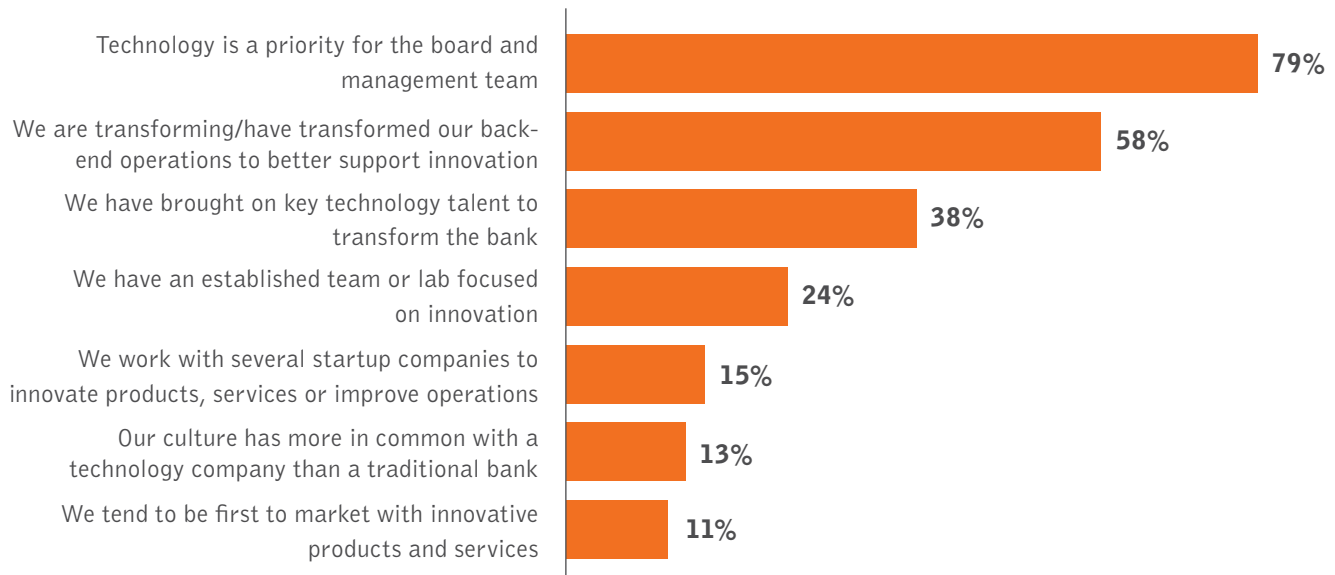
Figures don't add up to 100 percent due to rounding.



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
We're "fast followers" rather than early adopters	52%	61%	59%	74%	62%
Our bank is slow to implement new technology	38%	23%	30%	23%	27%
We consider ourselves to be industry leaders	10%	16%	11%	3%	10%

### 2. Industry leaders and fast followers: Which of the following statements about your bank is true?

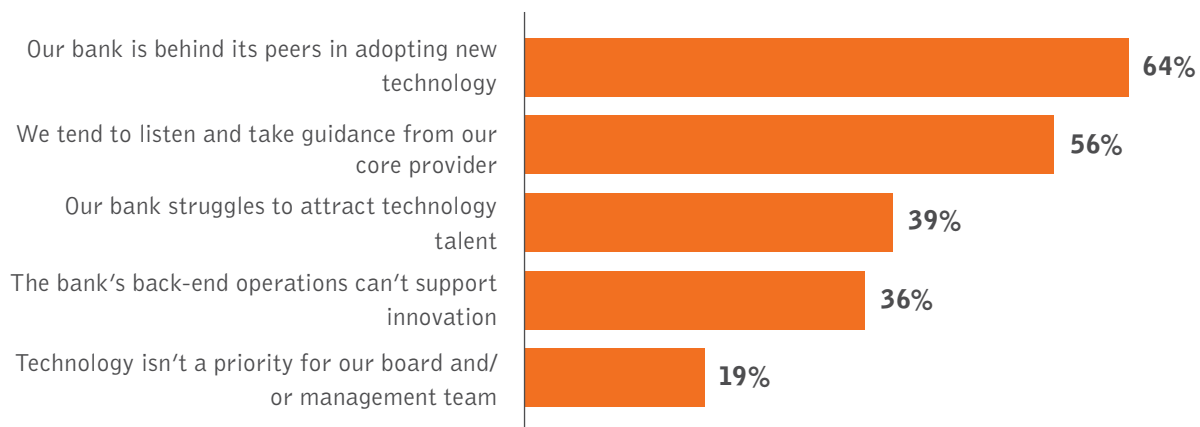
Question asked of respondents who identify their bank as a "fast follower" or "industry leader." Respondents were asked to select all that apply.



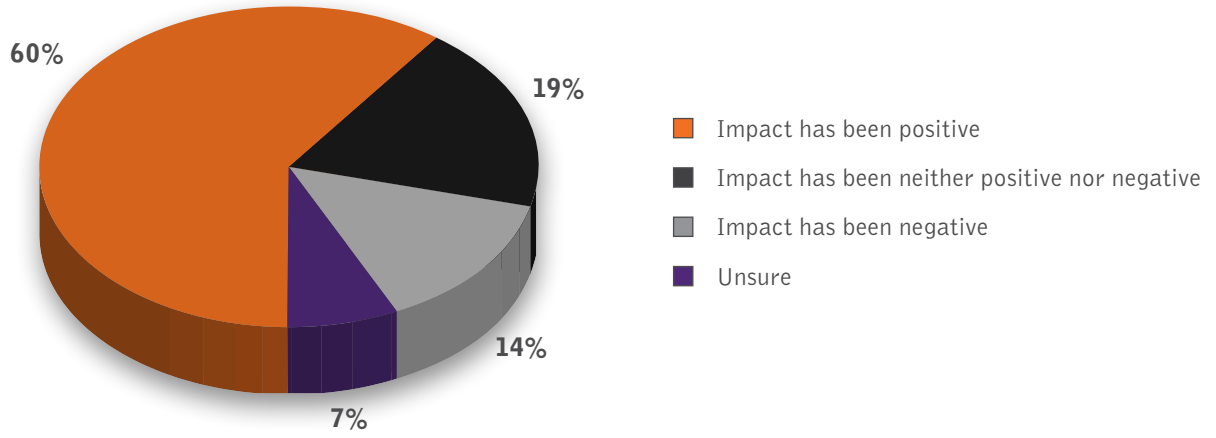
Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Technology is a priority for the board and management team	91%	78%	86%	65%	79%
We are transforming/have transformed our back-end operations to better support innovation	73%	59%	52%	57%	58%
We have brought on key technology talent to transform the bank	73%	44%	21%	35%	38%
We have an established team or lab focused on innovation	45%	31%	10%	22%	24%
We work with several startup companies to innovate products, services or improve operations	27%	19%	10%	9%	15%
Our culture has more in common with a technology company than a traditional bank	18%	16%	10%	9%	13%
We tend to be first to market with innovative products and services	-	12%	10%	13%	11%

### 3. Banks slow to implement new technology: Regarding your bank's approach to technology, which of the following statements about your bank is true?

Question asked of respondents who identify their bank as a "slow to implement new technology." Respondents were asked to select all that apply



**4. In your opinion, how has your bank’s approach to technology impacted its strategy, growth and/or profitability?**

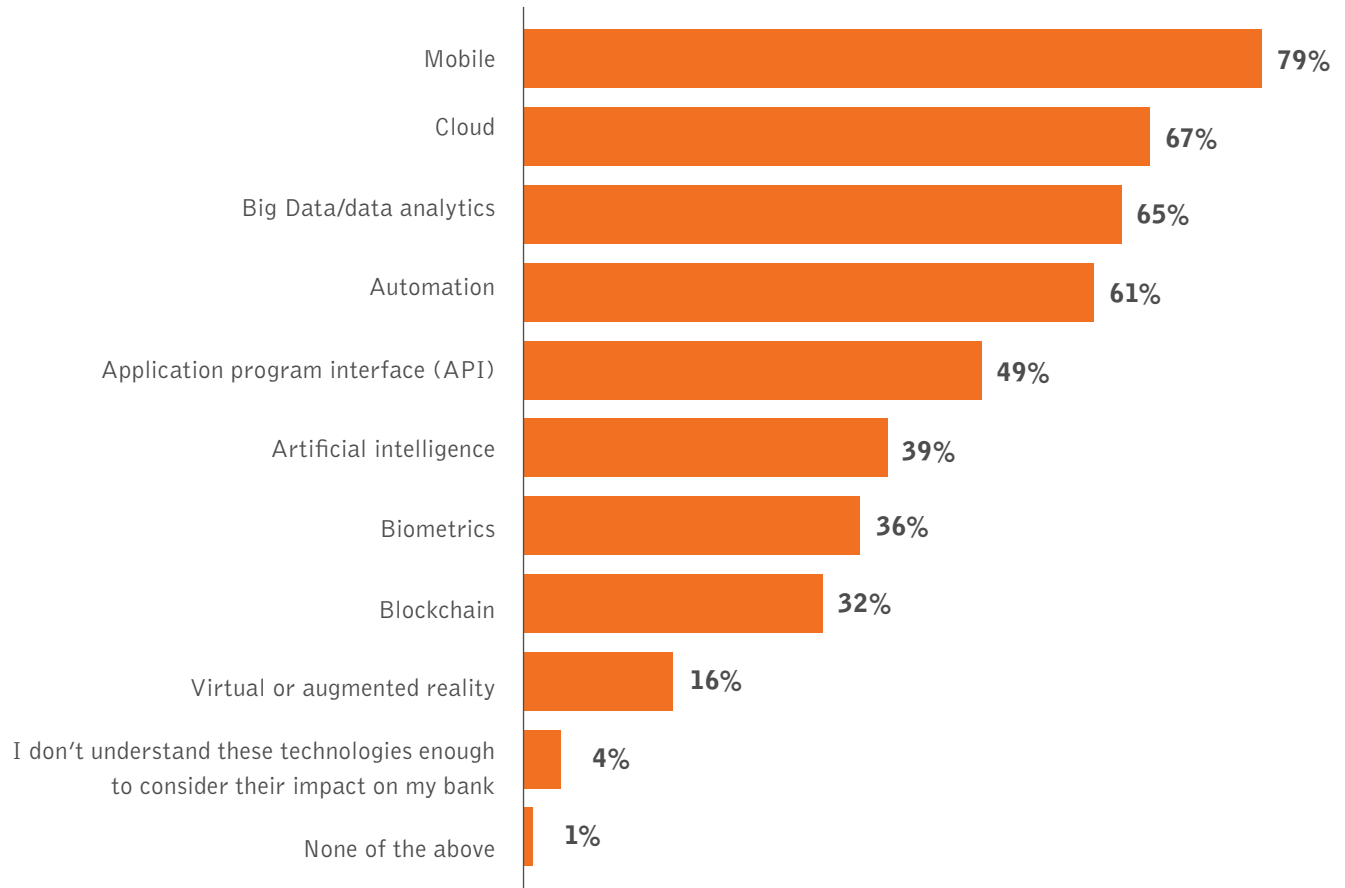


Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Impact has been positive	59%	67%	52%	62%	60%
Impact has been neither positive nor negative	12%	15%	25%	19%	19%
Impact has been negative	18%	15%	10%	16%	14%
Unsure	12%	3%	12%	3%	7%

## TECHNOLOGY & STRATEGY

### 5. Which technologies do you believe will impact your financial institution over the next five years?

Respondents were asked to select all that apply.

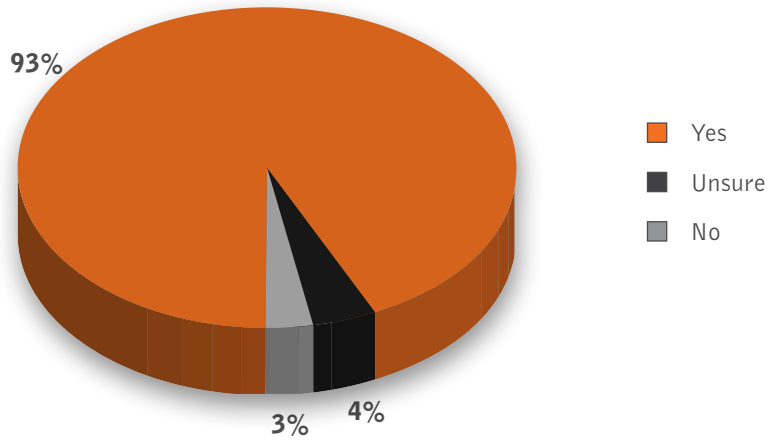


Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Mobile	76%	77%	80%	81%	79%
Cloud	76%	59%	75%	61%	67%
Big Data/data analytics	82%	72%	55%	58%	65%
Automation	65%	56%	60%	68%	61%
Application program interface (API)	65%	59%	48%	29%	49%
Artificial intelligence	53%	46%	30%	32%	39%
Biometrics	29%	41%	32%	39%	36%
Blockchain	24%	31%	42%	26%	32%
Virtual or augmented reality	6%	8%	25%	19%	16%
I don't understand these technologies enough to consider their impact on my bank	6%	3%	5%	3%	4%
None of the above	-	-	-	3%	1%

Title	CEO	CIO/CTO	Chairman or director	Other executives	Total
Mobile	78%	81%	70%	91%	79%
Cloud	83%	76%	50%	79%	67%
Big Data/data analytics	56%	67%	50%	91%	65%
Automation	78%	57%	52%	71%	61%
Application program interface (API)	39%	43%	41%	71%	49%
Artificial intelligence	56%	10%	43%	41%	39%
Biometrics	44%	38%	28%	44%	36%
Blockchain	39%	38%	30%	29%	32%
Virtual or augmented reality	22%	14%	17%	12%	16%
I don't understand these technologies enough to consider their impact on my bank	-	-	9%	-	4%
None of the above	-	-	2%	-	1%



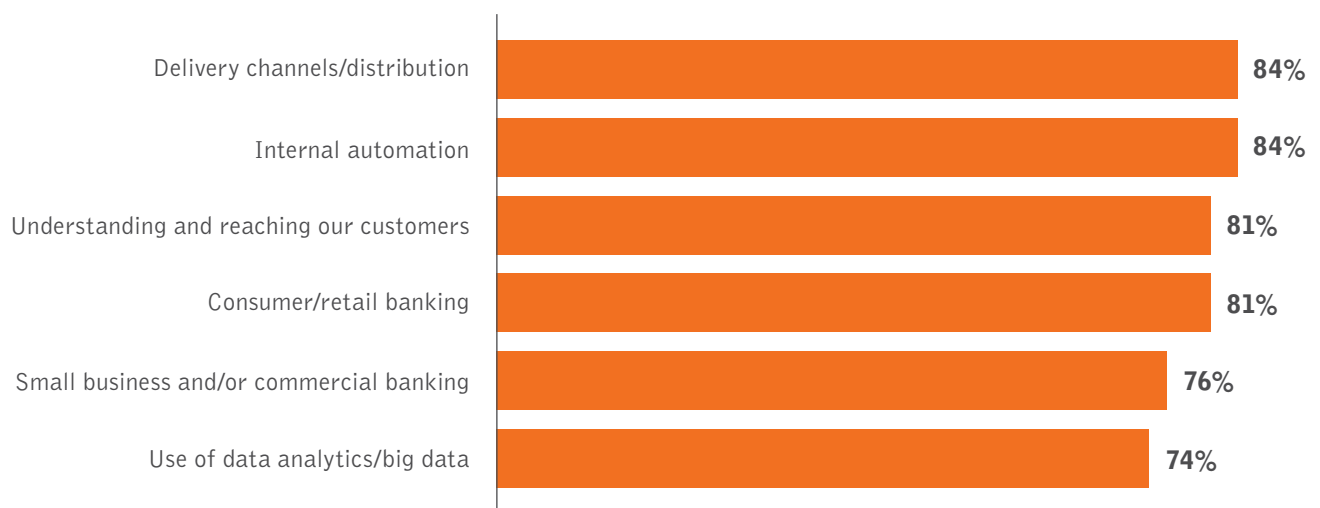
**6. Do you feel that technology will play a more prominent role in the bank’s strategy in the near future than it has in the past?**



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Yes	100%	92%	92%	91%	93%
Unsure	-	5%	5%	3%	4%
No	-	3%	2%	6%	3%

**7. Where do you think technology will play a strategic role at your bank?**

*Question asked of respondents who believe that technology will play a more prominent role in bank strategy in the near future. Respondents were asked to select all that apply.*

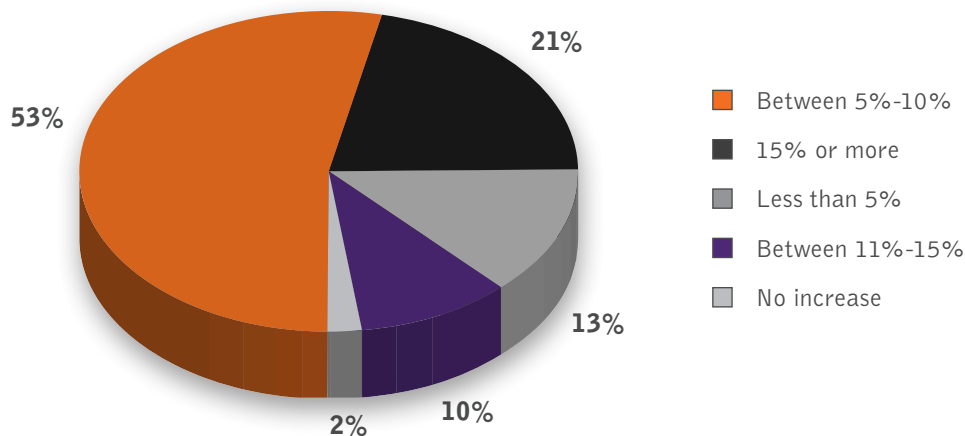


Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Delivery channels/distribution	88%	89%	84%	75%	84%
Internal automation	100%	83%	73%	89%	84%
Understanding and reaching our customers	88%	78%	86%	75%	81%
Consumer/retail banking	76%	86%	86%	68%	81%
Small business and/or commercial banking	82%	75%	73%	79%	76%
Use of data analytics/big data	88%	75%	73%	64%	74%

Title	CEO	CIO/CTO	Chairman or director	Other executives	Total
Delivery channels/distribution	94%	79%	81%	86%	84%
Internal automation	83%	68%	89%	86%	84%
Understanding and reaching our customers	78%	79%	89%	71%	81%
Consumer/retail banking	72%	89%	87%	68%	81%
Small business and/or commercial banking	83%	74%	72%	82%	76%
Use of data analytics/big data	67%	74%	70%	86%	74%

**8. How much has your bank's technology budget increased for fiscal year 2017?**

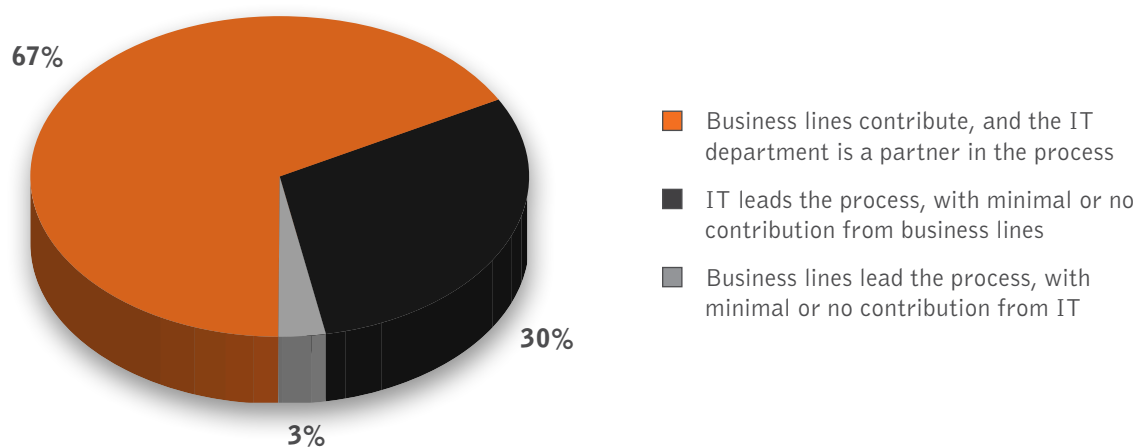
*Figures don't add up to 100 percent due to rounding.*



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Between 5%-10%	65%	44%	50%	63%	53%
15% or more	18%	23%	22%	20%	21%
Less than 5%	12%	15%	18%	7%	13%
Between 11%-15%	6%	13%	8%	10%	10%
No increase	-	5%	2%	-	2%

**9. All business lines depend on technology in some way. In your opinion, do the business lines at your bank contribute to and understand the technology budget, or does the information technology (IT) department lead and drive the process?**

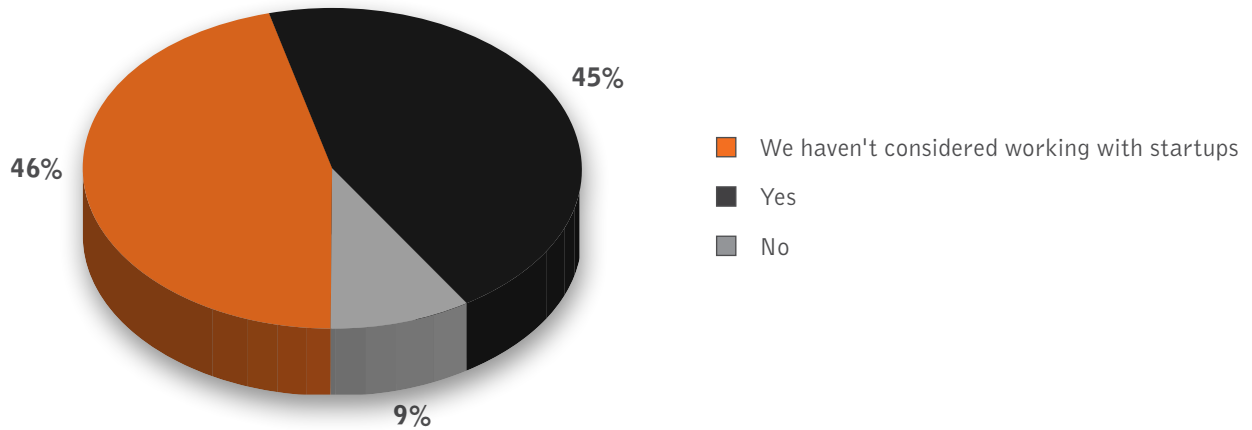
Question asked of chief executives, chief information officers, chief technology officers, chief financial officers, chief operating officers, chief marketing officers, chief retail officers and chief banking officers. Respondents were asked to select the answer that best represents their opinion.



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Business lines contribute, and the IT department is a partner in the process	62%	75%	55%	76%	67%
IT leads the process, with minimal or no contribution from business lines	38%	19%	45%	18%	30%
Business lines lead the process, with minimal or no contribution from IT	-	6%	-	6%	3%

Title	CEO	CIO/CTO	Other executives	Total
Business lines contribute, and the IT department is a partner in the process	78%	55%	70%	67%
IT leads the process, with minimal or no contribution from business lines	17%	45%	26%	30%
Business lines lead the process, with minimal or no contribution from IT	6%	-	4%	3%

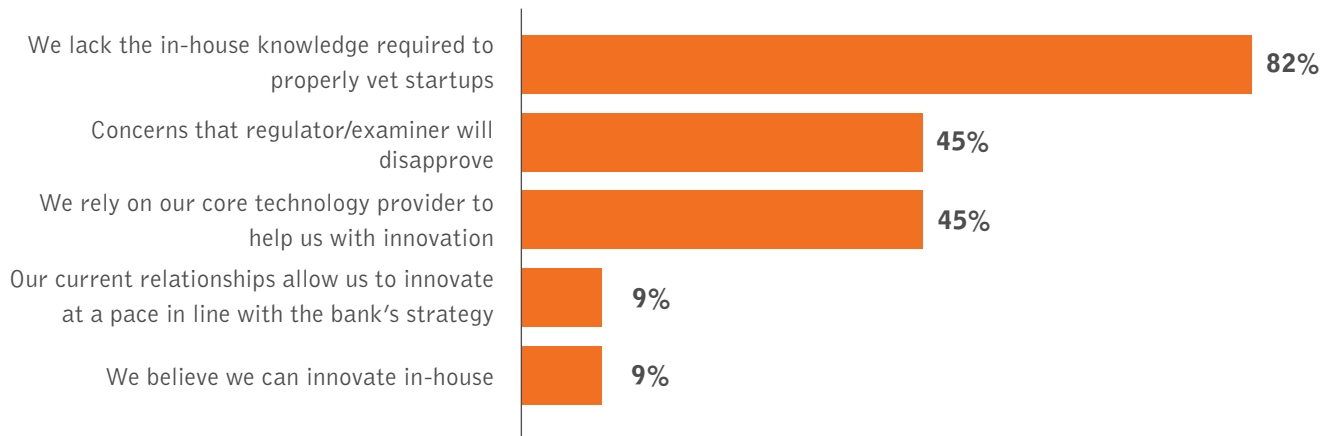
**10. Is the management team and board at your bank open to working with newer fintech startups to help the bank implement new products and services, or create efficiencies within the organization?**



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
We haven't considered working with startups	35%	42%	50%	53%	46%
Yes	59%	45%	45%	37%	45%
No	6%	13%	5%	10%	9%

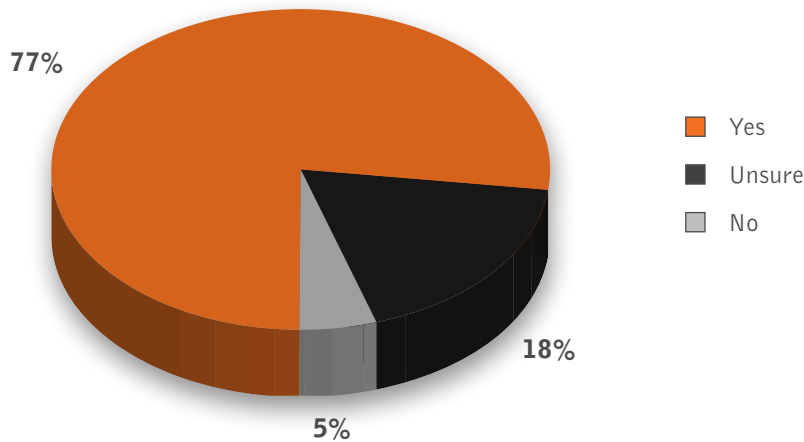
**11. Why is the bank reluctant to work with newer fintech startups?**

Question asked of respondents who indicate that their bank’s management team and board are not open to working with fintech startups. Respondents were asked to select all that apply.



**CYBERSECURITY & DATA**

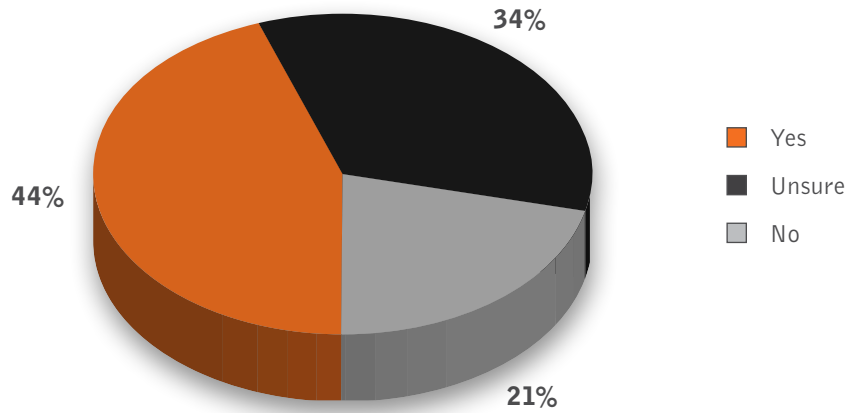
**12. If your bank were to experience a cyberattack or data breach right now, are you confident that the staff and the board would be prepared to react?**



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Yes	82%	79%	69%	80%	77%
Unsure	12%	15%	26%	17%	18%
No	6%	5%	5%	3%	5%

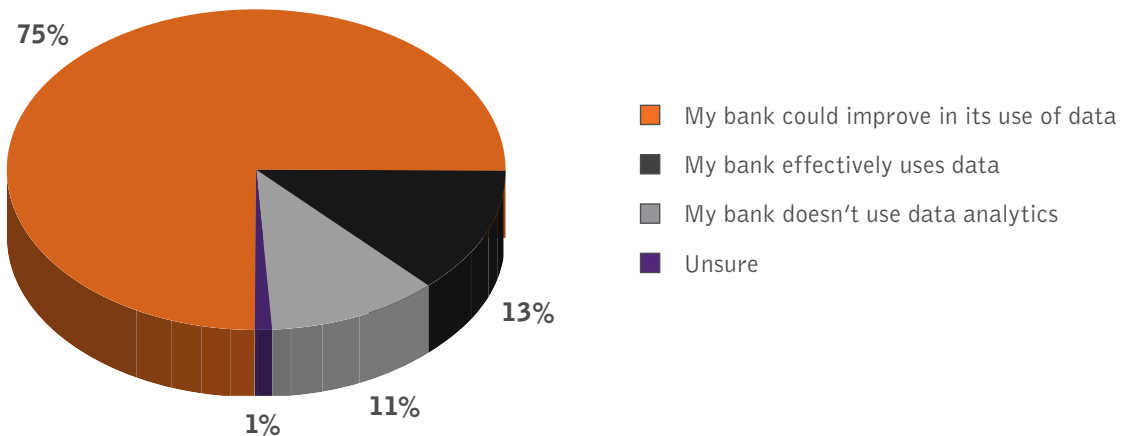
**13. If one of the bank’s vendors were to experience a cyberattack or data breach, do you believe that the bank would be vulnerable?**

Figures don’t add up to 100 percent due to rounding.



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Yes	47%	54%	40%	37%	44%
Unsure	18%	33%	35%	43%	34%
No	35%	13%	25%	20%	21%

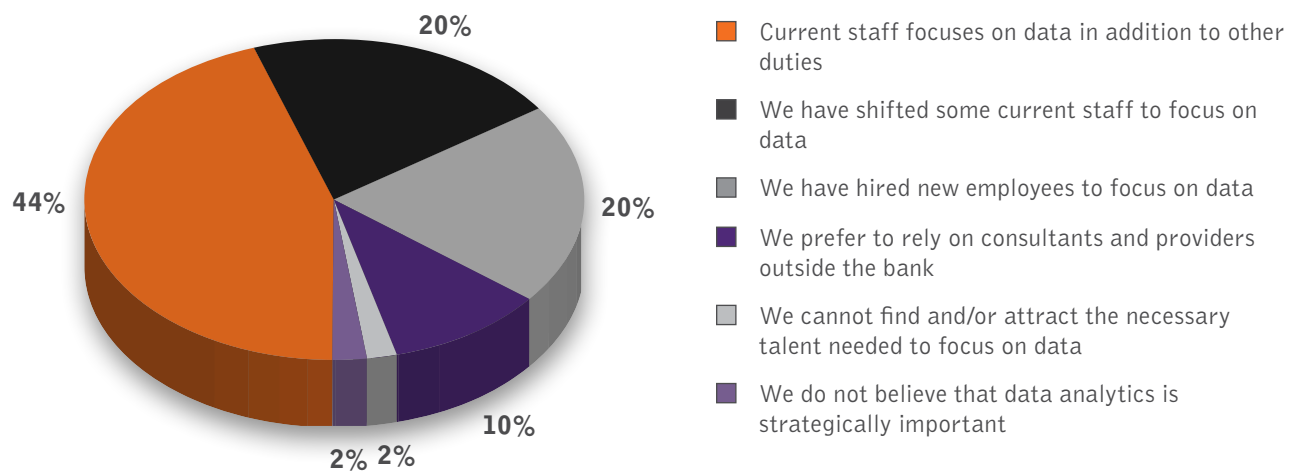
**14. How effectively does your bank use data to serve the needs of your existing customers or identify new customers?**



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
My bank could improve in its use of data	59%	87%	68%	80%	75%
My bank effectively uses data	24%	8%	18%	7%	13%
My bank doesn't use data analytics	12%	5%	15%	13%	11%
Unsure	6%	-	-	-	1%

**15. Over the past two years, has your bank hired additional staff devoted specifically to improving its usage of data?**

Figures don't add up to 100 percent due to rounding. Respondents were asked to select the answer that best represents their bank's approach regarding data analytics talent.

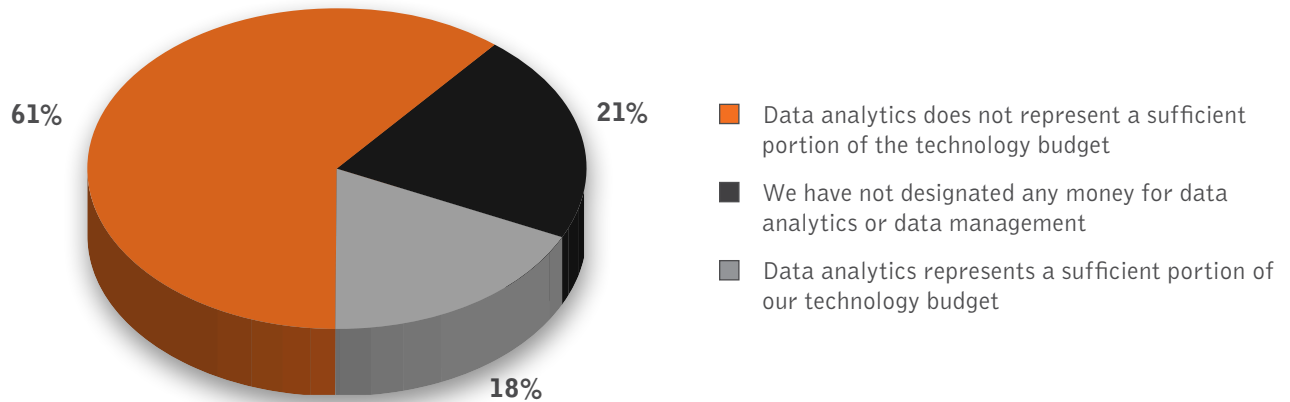


Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Current staff focuses on data in addition to other duties	-	45%	49%	60%	44%
We have shifted some current staff to focus on data	47%	24%	18%	7%	20%
We have hired new employees to focus on data	53%	21%	13%	13%	20%
We prefer to rely on consultants and providers outside the bank	-	11%	10%	13%	10%
We cannot find and/or attract the necessary talent needed to focus on data	-	-	5%	3%	2%
We do not believe that data analytics is strategically important	-	-	5%	3%	2%

**16. Has your bank dedicated what you believe is a sufficient portion of its technology budget in FY 2017 to data management and data analytics?**

Question asked of CEOs, CIOs, CTOs, CFOs, COOs, chief marketing officers, chief retail officers and chief banking officers.

\*Indicates a base count of less than 10 within a category.



Bank Asset Size	>\$5B*	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Data analytics does not represent a sufficient portion of the technology budget	62%	56%	58%	67%	61%
We have not designated any money for data analytics or data management	25%	12%	26%	22%	21%
Data analytics represents a sufficient portion of our technology budget	12%	31%	16%	11%	18%

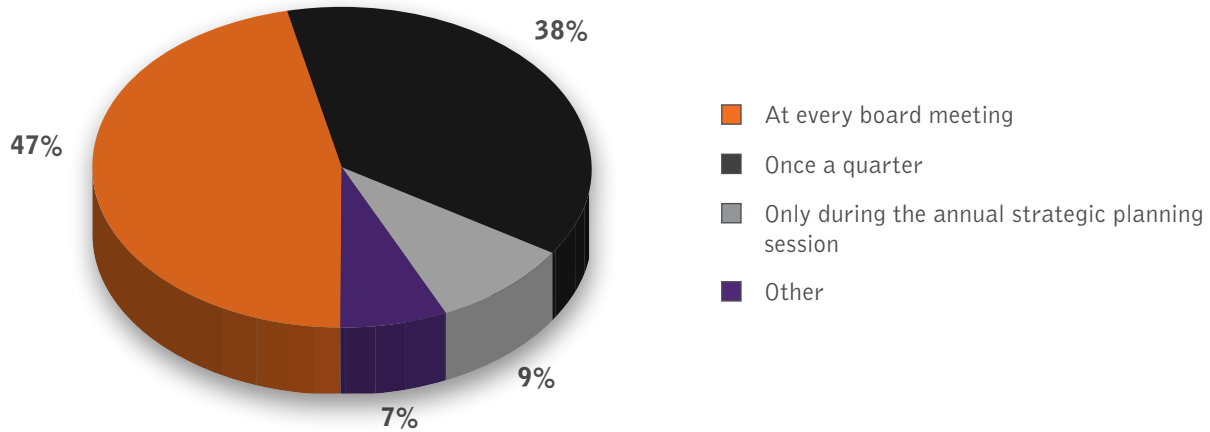
Title	CEO	CIO/CTO	Other executives	Total
Data analytics does not represent a sufficient portion of the technology budget	61%	53%	67%	61%
We have not designated any money for data analytics or data management	11%	32%	21%	21%
Data analytics represents a sufficient portion of our technology budget	28%	16%	12%	18%



## TECHNOLOGY & THE BOARD

### 17. How frequently does your board discuss technology?

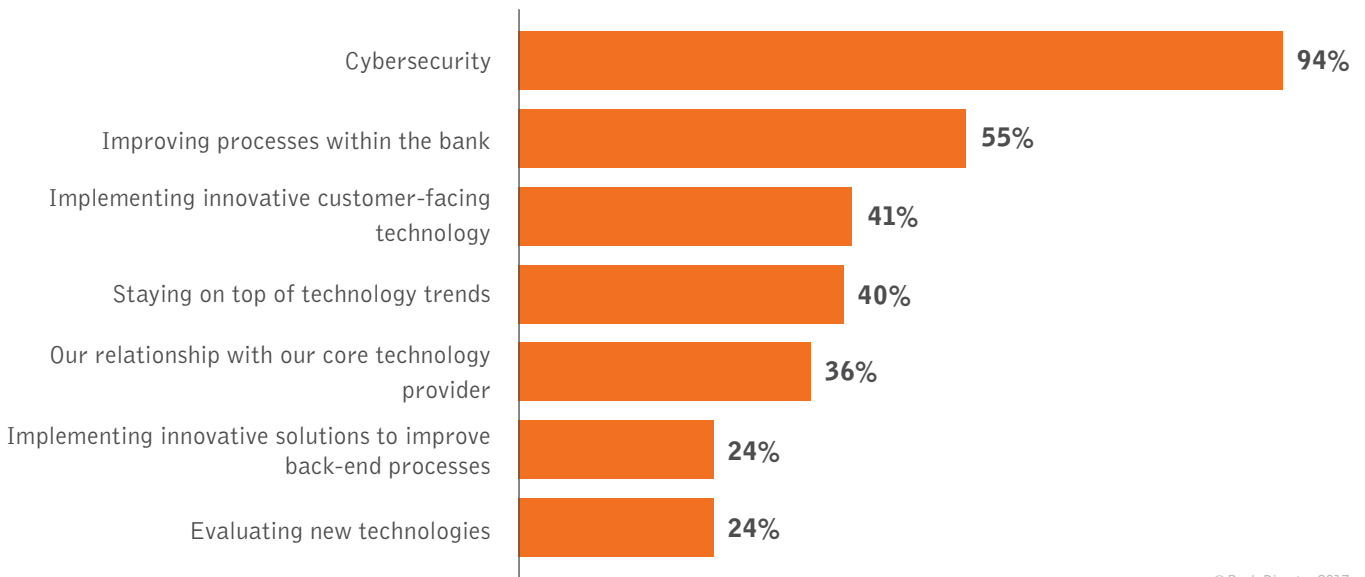
Figures don't add up to 100 percent due to rounding.



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
At every board meeting	41%	45%	49%	50%	47%
Once a quarter	47%	37%	35%	37%	38%
Only during the annual strategic planning session	6%	13%	8%	7%	9%
Other	6%	5%	8%	7%	7%

### 18. Regarding technology, what issues does the board CURRENTLY focus on?

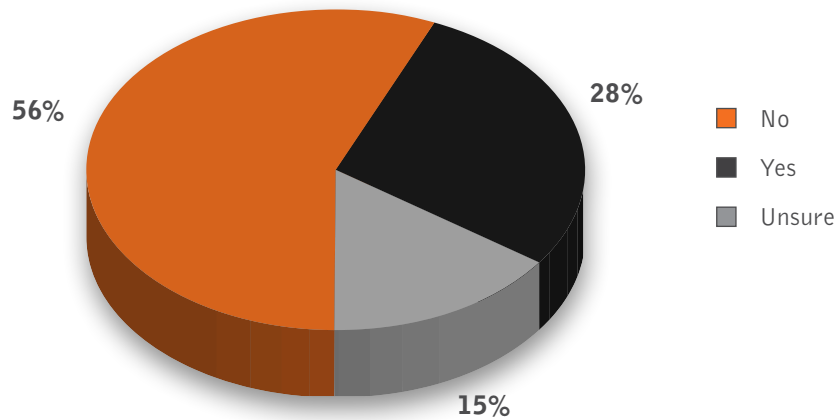
Respondents were asked to select all that apply.



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Cybersecurity	94%	95%	97%	90%	94%
Improving processes within the bank	71%	41%	62%	55%	55%
Implementing innovative customer-facing technology	41%	46%	35%	41%	41%
Staying on top of technology trends	41%	49%	35%	34%	40%
Our relationship with our core technology provider	35%	32%	35%	41%	36%
Implementing innovative solutions to improve back-end processes	12%	16%	30%	34%	24%
Evaluating new technologies	35%	27%	14%	28%	24%

**19. In your opinion, does the board have a sufficient level of expertise regarding technology?**

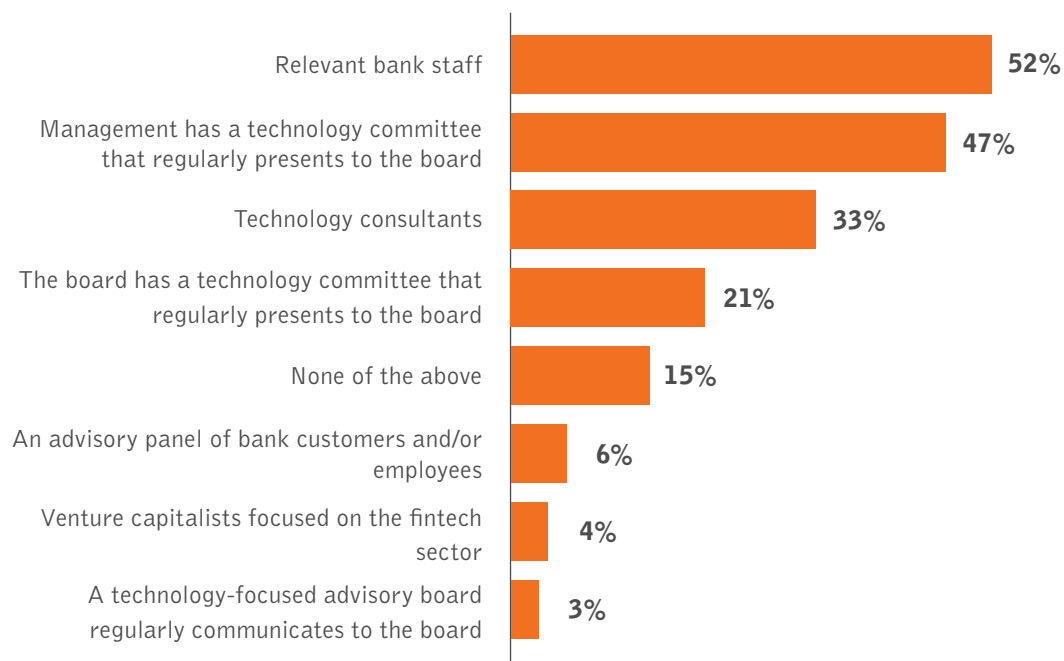
*Figures don't add up to 100 percent due to rounding.*



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
No	47%	63%	53%	57%	56%
Yes	47%	29%	24%	23%	28%
Unsure	6%	8%	24%	20%	15%

## 20. Has the board brought in any of the following within the past year to better educate itself about technology?

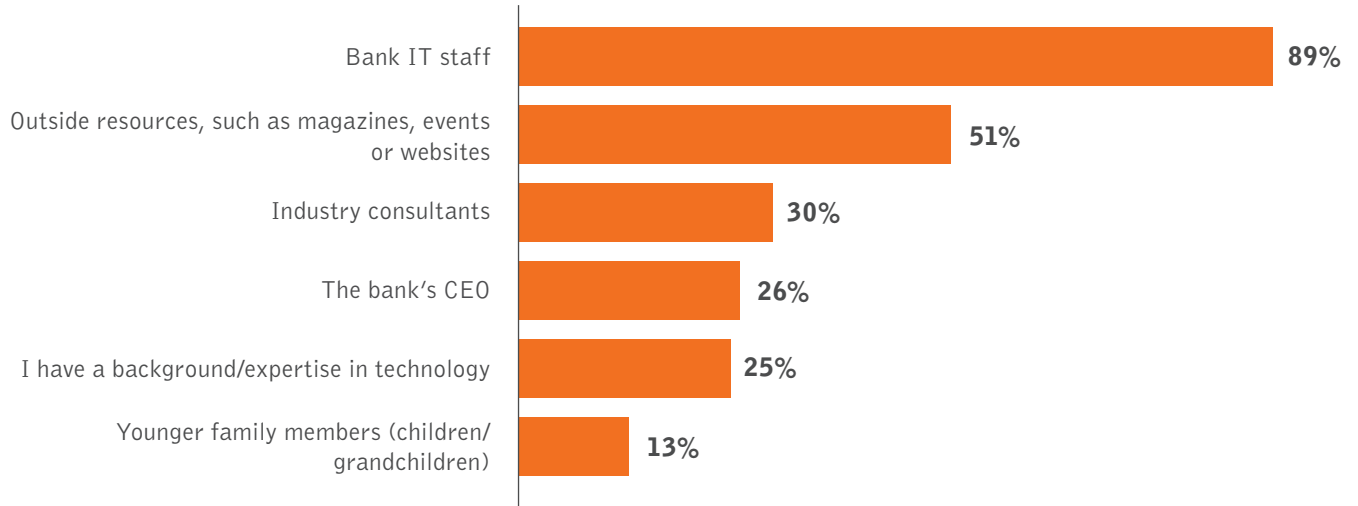
Respondents were asked to select all that apply.



Bank Asset Size	>\$5B	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Relevant bank staff	53%	66%	47%	40%	52%
Management has a technology committee that regularly presents to the board	47%	39%	45%	60%	47%
Technology consultants	53%	32%	37%	20%	33%
The board has a technology committee that regularly presents to the board	18%	24%	21%	20%	21%
None of the above	18%	11%	18%	17%	15%
An advisory panel of bank customers and/or employees	6%	5%	-	13%	6%
Venture capitalists focused on the fintech sector	6%	8%	3%	-	4%
A technology-focused advisory board regularly communicates to the board	6%	8%	-	-	3%

**21. Who do you PRIMARILY rely on to stay informed on technology trends related to the banking industry?**

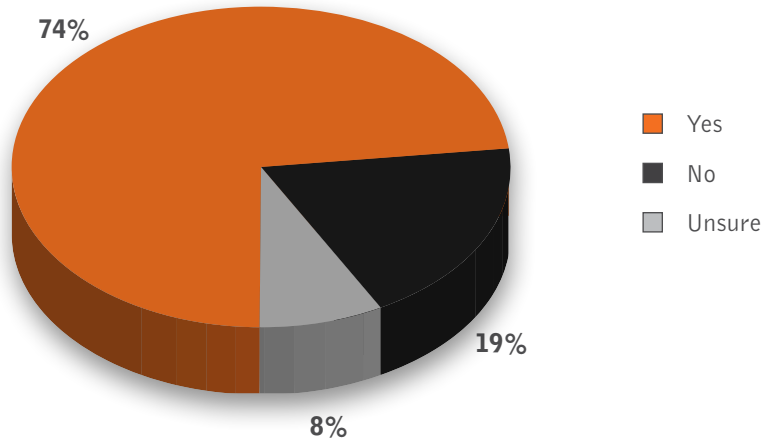
Question asked of directors and chairmen. Respondents were asked to select all that apply. \*Indicates a base count of less than 10 within a category.



Bank Asset Size	>\$5B*	\$1B-\$5B	\$500M-\$1B	<\$500M	Total
Bank IT staff	75%	94%	88%	91%	89%
Outside resources, such as magazines, events or websites	62%	47%	47%	55%	51%
Industry consultants	25%	41%	18%	36%	30%
The bank's CEO	12%	18%	29%	45%	26%
I have a background/expertise in technology	50%	29%	18%	9%	25%
Younger family members (children/grandchildren)	12%	24%	-	18%	13%

**22. Do you believe that management effectively communicates with the board regarding technology?**

*Question asked of directors and chairmen. Figures don't add up to 100 percent due to rounding.*

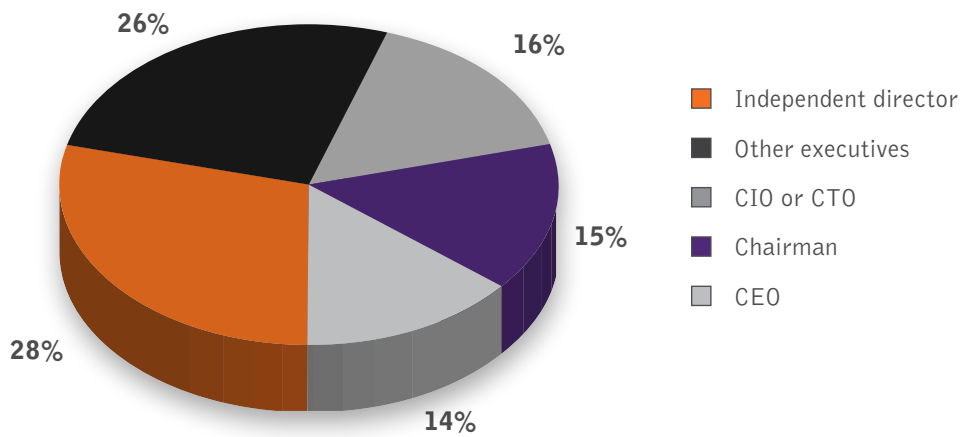


## ABOUT THE SURVEY

Bank Director’s 2017 Technology Survey, sponsored by CDW, surveyed 145 independent directors, chief information officers, chief technology officers, chief executive officers and other senior executives of U.S. banks above \$250 million in assets to examine how banks strategically approach technology. The survey was conducted in June and July 2017. Sixty percent of respondents represent financial institutions between \$500 million and \$5 billion in assets. Forty-three percent of respondents serve on the bank’s board.

### Title Breakdown

“Other executives” include COOs, CFOs and other senior executive titles. Figures don’t add up to 100 percent due to rounding.



### Size of Bank

Figures don’t add up to 100 percent due to rounding.

