Mortgage Lender Sentiment Survey®

Lenders' Experiences with Mortgage Industry Data Initiatives

Q4 2017 Topic Analysis – Published January 24, 2018
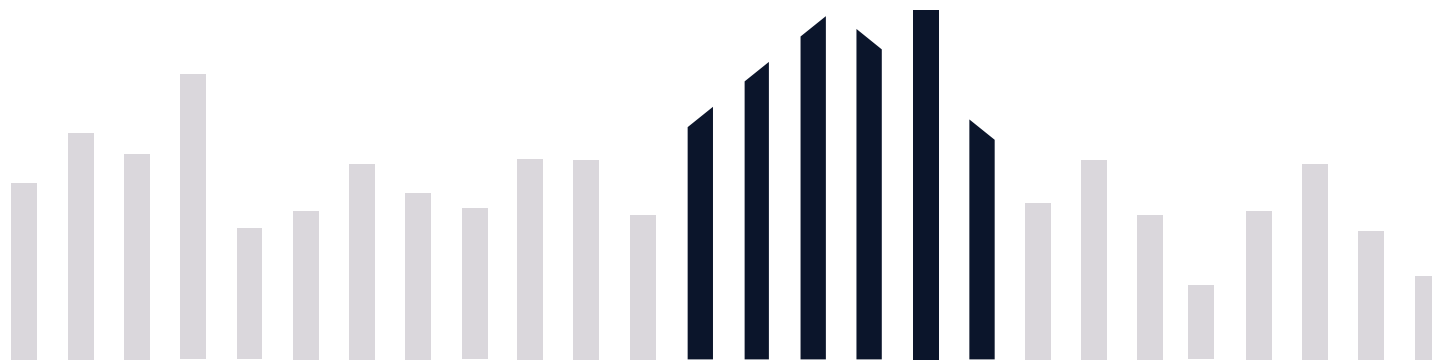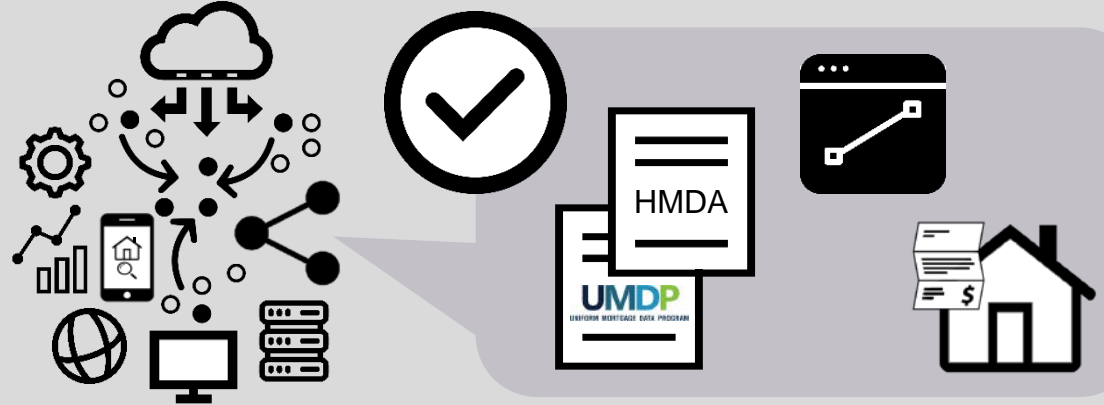
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Lenders overall find industry-wide data initiatives valuable, though integration across key players and systems remains a challenge.

Most lenders believe mortgage industry **data initiatives are valuable (74%)**.

HMDA

UMDP

Perceived Benefits of Data Initiatives

Enhancing Data Accuracy and Consistency (41%)
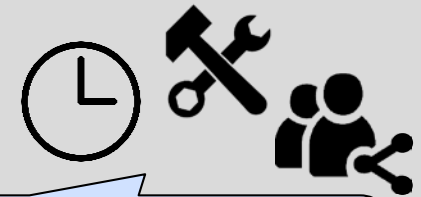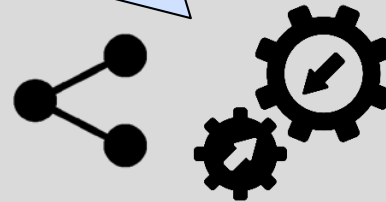
Enhancing Borrower Experience (33%)

Reducing Repurchase Risk (33%)

Challenges to Data Initiatives

Lenders see **integrating all parties (vendors, key players) and systems** to ensure data quality and consistency as a **challenge**

Lenders say **more time** to implement data standards, more **support** from venders, and **dedicated IT resources** would help

Business Context and Research Questions

Business Context

Mortgage processes involve transmitting a large volume of data among a series of interconnected players. Some data initiatives have therefore been rolled out to establish or update data standards, transmission protocols, platforms, and datasets. Examples include the Uniform Mortgage Data Program® (UMDP®) and the new Home Mortgage Disclosure Act (HMDA) data rules effective on January 2018.

Fannie Mae's Economic & Strategic Research (ESR) Group surveyed senior mortgage executives through its quarterly Mortgage Lender Sentiment Survey® to better understand lenders' views regarding data management and their experience with these data standardization initiatives.

Research Questions

1. Overall, how well do lenders think the industry is doing at managing data and preventing data breaches or cyberattacks? To what degree do lenders have cyber risk insurance for their mortgage business?

2. Overall, how valuable do lenders find these data initiatives for the mortgage industry?

3. Specifically, what benefits do lenders think these data initiatives bring to their firm? And, what challenges does their firm experience with implementing these data standards?

4. What resources do lenders need in meeting the data standards? What ideas do lenders have to derive more value from these industry-wide data initiatives?

Respondent Sample and Groups

This analysis is based on the fourth quarter of 2017 data collection. For Q4 2017, a total of 224 senior executives completed the survey during November 1-14, representing 196 lending institutions.*

Loan Origination Volume Groups**

HIGHER loan origination volume

Larger Institutions *Top 15%*	100%
Mid-sized Institutions *Top 16% - 35%*	85%
Smaller Institutions *Bottom 65%*	65%

LOWER loan origination volume
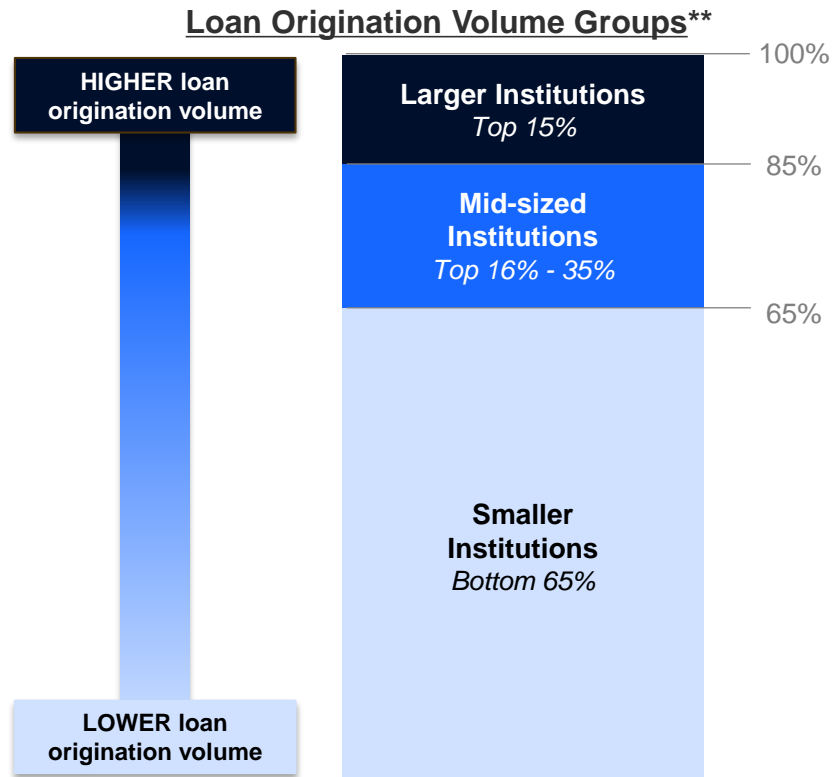
Sample Q4 2017		Sample Size
Total Lending Institutions The "Total" data throughout this report is an average of the means of the three loan origination volume groups listed below.		196
Loan Origination Volume Groups	**Larger Institutions** Fannie Mae's customers whose 2016 total industry loan origination volume was in the top 15% (above $1.01 billion)	72
	Mid-sized Institutions Fannie Mae's customers whose 2016 total industry loan origination volume was in the next 20% (16%-35%) (between $248.3 million to $1.01 billion)	55
	Smaller Institutions Fannie Mae's customers whose 2016 total industry loan origination volume was in the bottom 65% (less than $248.3 million)	69
Institution Type*	**Mortgage Banks** (non-depository)	74
	Depository Institutions	77
	Credit Unions	37

* The results of the Mortgage Lender Sentiment Survey are reported at the lending institutional parent-company level. If more than one individual from the same institution completes the survey, their responses are averaged to represent their parent institution.
** The 2016 total loan volume per lender used here includes the best available annual origination information from Fannie Mae, Freddie Mac, and Marketrac.
*** Lenders that are not classified into mortgage banks or depository institutions or credit unions are mostly housing finance agencies.
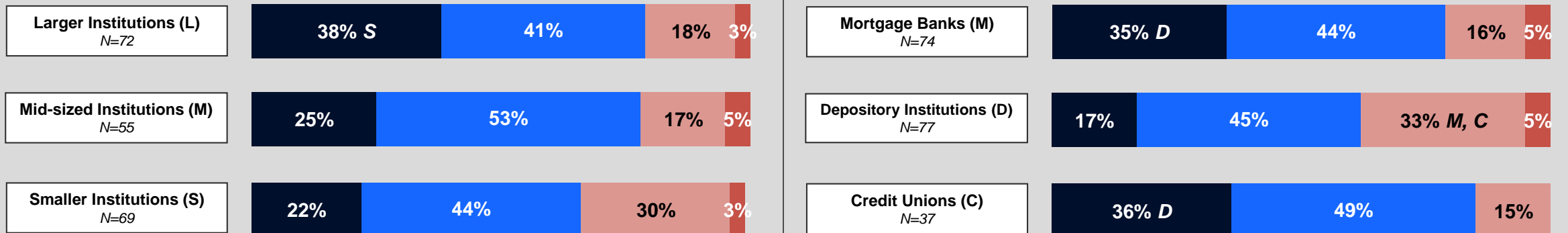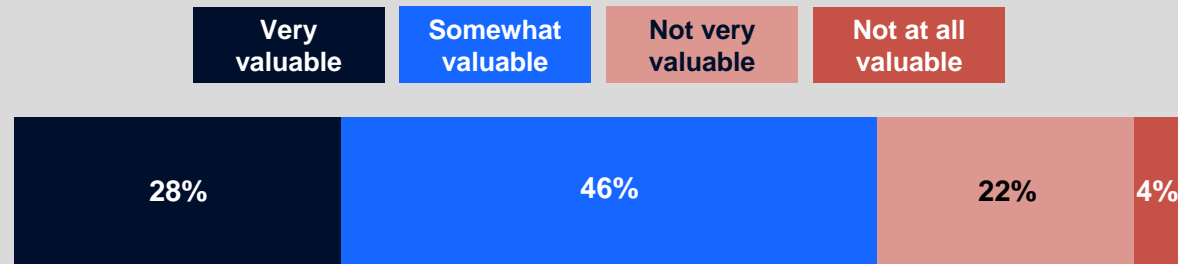
Views about Data Initiatives for the Mortgage Industry

Perceived Value of Data Initiatives for the Mortgage Industry

Overall, most lenders believe that mortgage industry data initiatives are valuable. Larger institutions are more likely than smaller ones to find these data efforts valuable. Mortgage banks and credit unions are more likely than depository institutions to perceive these efforts valuable.

How Valuable Do You Find These Data Initiatives Are for the Mortgage Industry *(N = 196)*

Very valuable	Somewhat valuable	Not very valuable	Not at all valuable

28%	46%	22%	4%

	Very valuable	Somewhat valuable	Not very valuable	Not at all valuable
Larger Institutions (L) N=72	38% *S*	41%	18%	3%
Mid-sized Institutions (M) N=55	25%	53%	17%	5%
Smaller Institutions (S) N=69	22%	44%	30%	3%

	Very valuable	Somewhat valuable	Not very valuable	Not at all valuable
Mortgage Banks (M) N=74	35% *D*	44%	16%	5%
Depository Institutions (D) N=77	17%	45%	33% *M, C*	5%
Credit Unions (C) N=37	36% *D*	49%	15%	

Display text on data initiatives: Mortgage processes involve transmitting a large volume of data among a series of interconnected players. *A number of data initiatives have been rolled out and some are underway to establish or update data standards, transmission protocols, platforms, and datasets. Some examples include the Uniform Mortgage Data Program® (UMDP®) and the Home Mortgage Disclosure Act (HMDA) data.*

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Major Concerns, if any, about Mortgage Data Initiatives

Major concerns lenders have include data security, reliance on third-party systems, and costs associated with implementing these initiatives, although some lenders are skeptical of the value of these initiatives in general.

Concerns about Data Initiatives
N=31

Data and Systems

"Data security." – *Larger Institution*

"Relying on 3rd parties for your LOS needs." – *Larger Institution*

"Data accuracy is very involved in too many aspects of a file." – *Larger Institution*

"Reliance on the vendors to implement new data standards and requirements." – *Larger Institution*

Costs

"Time and cost efforts with no apparent benefit for the providing entity." – *Smaller Institution*

"The costs associated with these initiatives will continue to drive margins lower." – *Larger Institution*

"They are expensive investments in software, implementation costs and people." – *Larger Institution*

Validity

"Too new, not proven, difficult integration." – *Mid-Sized Institution*

"Because we have the capability to track numerous data points does not mean we should. Not all data is useful for decisions and or review, some is simply monotonous data.." – Smaller Institution

"Do not believe there is a valid reason for the increased data sets." – *Larger Institution*

Q: What major concerns does your firm have, if any, with these data initiatives? (Optional)

Ideas to Derive More Value from Mortgage Data Initiatives

Lenders say that developing clear standards of practice, addressing compliance issues, and ensuring integration across all parties and systems would increase the value of these industry-wide data initiatives.

Deriving More Value from Data Initiatives
N=36

Developing Standards of Practice

"Common standards across participants from origination through servicing." – *Larger Institution*

"Build more standard interfaces." – *Larger Institution*

"Allow broad competition of vendors.." – *Larger Institution*

Addressing Cyber Risk

"Stressing security and ensuring privacy of NPI." – *Larger Institution*

"Drive the initiative on a single cyber security standard versus multiple." – *Larger Institution*

Integrating Parties and Systems

"Help set up own systems (financially or with expert labor). I think leaving it up to the vendors themselves slows down the process and results in inferior results." – *Larger Institution*

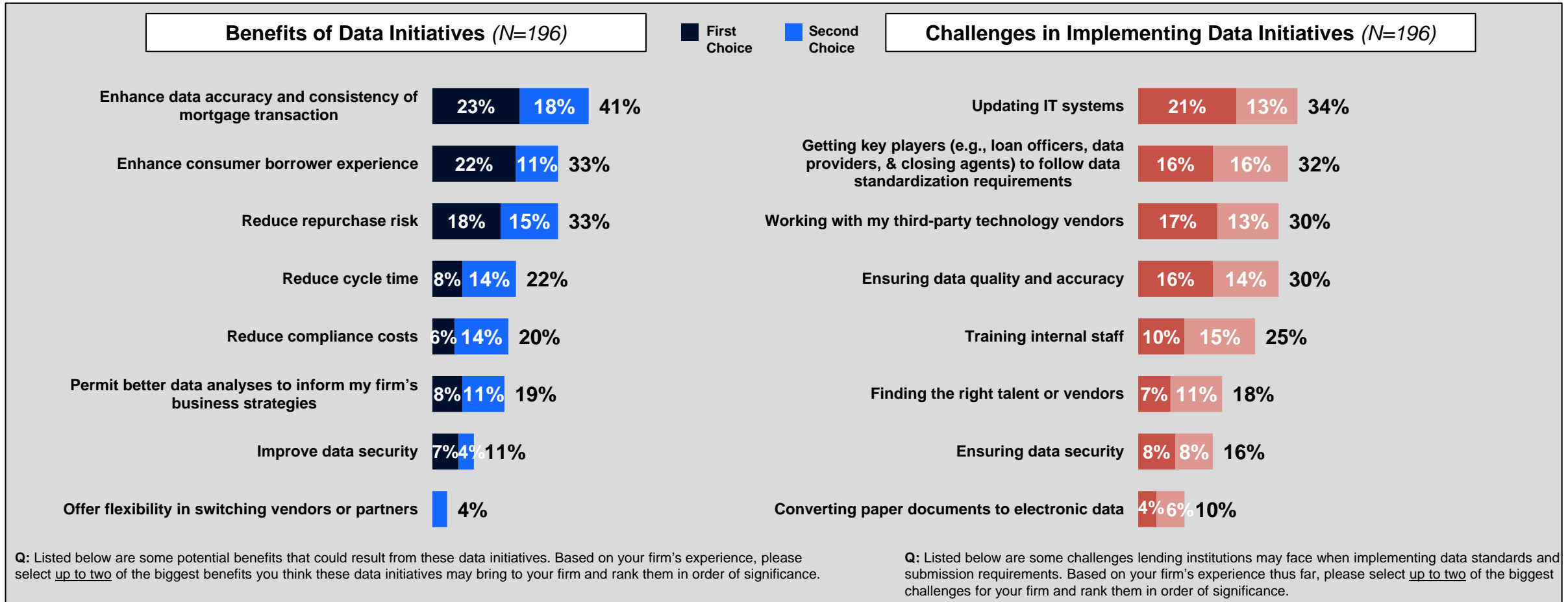"Force rules onto third party service providers and vendors." – *Mid- Sized Institution*

"Get county governments involved so that recording can be rationalized." – *Larger Institution*

Q: Any thoughts you would like to share on how to derive more value from these industry-wide data initiatives? (Optional)

Perceived Benefits and Challenges of Mortgage Data Initiatives

Lenders cite "enhancing data accuracy and consistency," "enhancing borrower experience," and "reducing repurchase risk" as the biggest benefits to data initiatives. Biggest challenges vary, including "updating IT systems," "getting key players to follow requirements," "working with vendors," and "ensuring data quality."

Benefits of Data Initiatives *(N=196)* | **First Choice** | **Second Choice** | **Challenges in Implementing Data Initiatives** *(N=196)*

Benefits	First	Second	Total
Enhance data accuracy and consistency of mortgage transaction	23%	18%	41%
Enhance consumer borrower experience	22%	11%	33%
Reduce repurchase risk	18%	15%	33%
Reduce cycle time	8%	14%	22%
Reduce compliance costs	6%	14%	20%
Permit better data analyses to inform my firm's business strategies	8%	11%	19%
Improve data security	7%	4%	11%
Offer flexibility in switching vendors or partners			4%

Challenges	First	Second	Total
Updating IT systems	21%	13%	34%
Getting key players (e.g., loan officers, data providers, & closing agents) to follow data standardization requirements	16%	16%	32%
Working with my third-party technology vendors	17%	13%	30%
Ensuring data quality and accuracy	16%	14%	30%
Training internal staff	10%	15%	25%
Finding the right talent or vendors	7%	11%	18%
Ensuring data security	8%	8%	16%
Converting paper documents to electronic data	4%	6%	10%

Q: Listed below are some potential benefits that could result from these data initiatives. Based on your firm's experience, please select up to two of the biggest benefits you think these data initiatives may bring to your firm and rank them in order of significance.

Q: Listed below are some challenges lending institutions may face when implementing data standards and submission requirements. Based on your firm's experience thus far, please select up to two of the biggest challenges for your firm and rank them in order of significance.

Explaining the Main Challenges Facing Data Initiatives

Lenders say that the time and resources necessary to update and integrate systems, working with key players and third-party technology vendors, and ensuring data quality and consistency across players and channels are the primary difficulties when it comes to data initiatives.

Explaining Main Challenges
N=131

Updating and integrating Systems	Getting key players to follow data standardization requirements	Working with my third-party technology vendors	Ensuring data quality and accuracy
"It takes money and time to update systems, and the updates often create unintended consequences that further complicate matters." – *Larger Institution*	"A lot of these players don't benefit directly from the data initiatives, so it is very hard to enforce compliance." – *Larger Institution*	"Our LOS is not always on top of changes." – *Larger Institution*	"There are still many aspects of the industry that rely on manual data entry that can negatively affect the quality of data." – *Mid-Sized Institution*
"We have been going through technology/system changes constantly over the 2-3 years, it is more than throwing in an update, these systems have to be tested, and the systems they connect to have to be tested. Staff has to do the testing. Issues and fixes are always part of the process as well." – *Smaller Institution*	"MLO Comp rules make it difficult to enforce compliance and hold MLOs responsible." – *Mid-Sized Institution*	"Learning new systems." – *Smaller Institution*	"Still many manual entered data points. While not wholly inaccurate, leaves room for errors." – *Mid-Sized Institution*
We have multiple channels of originations and multiple operating sites. We are in the process of consolidating systems as well." – *Larger Institution*	"Street level LO's are stuck in their ways and reluctant to change. Same with getting data from Third party providers like Title and Appraisal companies." – *Larger Institution*	"Enhancing technology improvements in the industry is costly. LOS systems hardly are on the same page with the technology and are slow to respond. Connectivity is always a challenge." – *Smaller Institution*	"We have found difficulty in obtaining consistency with data through our vendors when we try to connect new technology." – *Smaller Institution*
	"There are still many within our industry that are slow to adapt to change." – *Smaller Institution*	"The costs are significant in terms of both dollars and human capital required to specify, integrate and test changes produced by a party who is to a fair degree out of our control." – *Larger Institution*	"We have multiple channels of originations and multiple operating sites. We are in the process of consolidating systems as well." – *Larger Institution*

Q: Could you share some details about how or why [INSERT QR234A] is a big challenge for your firm? (Optional) / **Q:** Could you share some details about how or why [INSERT QR234B] is a big challenge for your firm?

Resources Needed

Resources that lenders say they need vary, including more time, more support from their venders, dedicated IT resources, and more training.
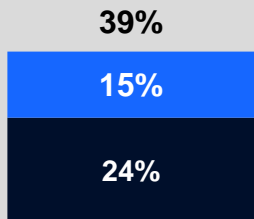
Most Needed Resources

39%
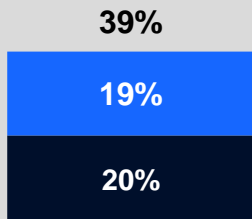say more time to implement data standards
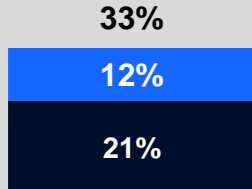
39%
say more support from my vendors

33%
say dedicated IT resources

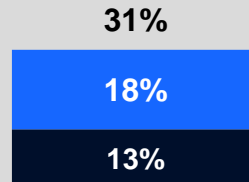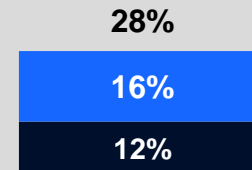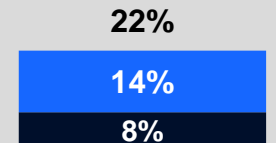|					
39%	**39%**	**33%**	**31%**	**28%**	**22%**
15%	19%	12%	18%	16%	14%
24%	20%	21%	13%	12%	8%
More time to implement data standards	More support from my vendors	Dedicated IT resources	More training and tutorials	Additional funding for these projects	Resources to find the right talent or vendors

Q: You mentioned that [INSERT QR234a/b] are big challenges for your firm. Listed below are some resources that may help. Based on your firm's experience, please select <u>up to two</u> resources you think your firm needs the most.
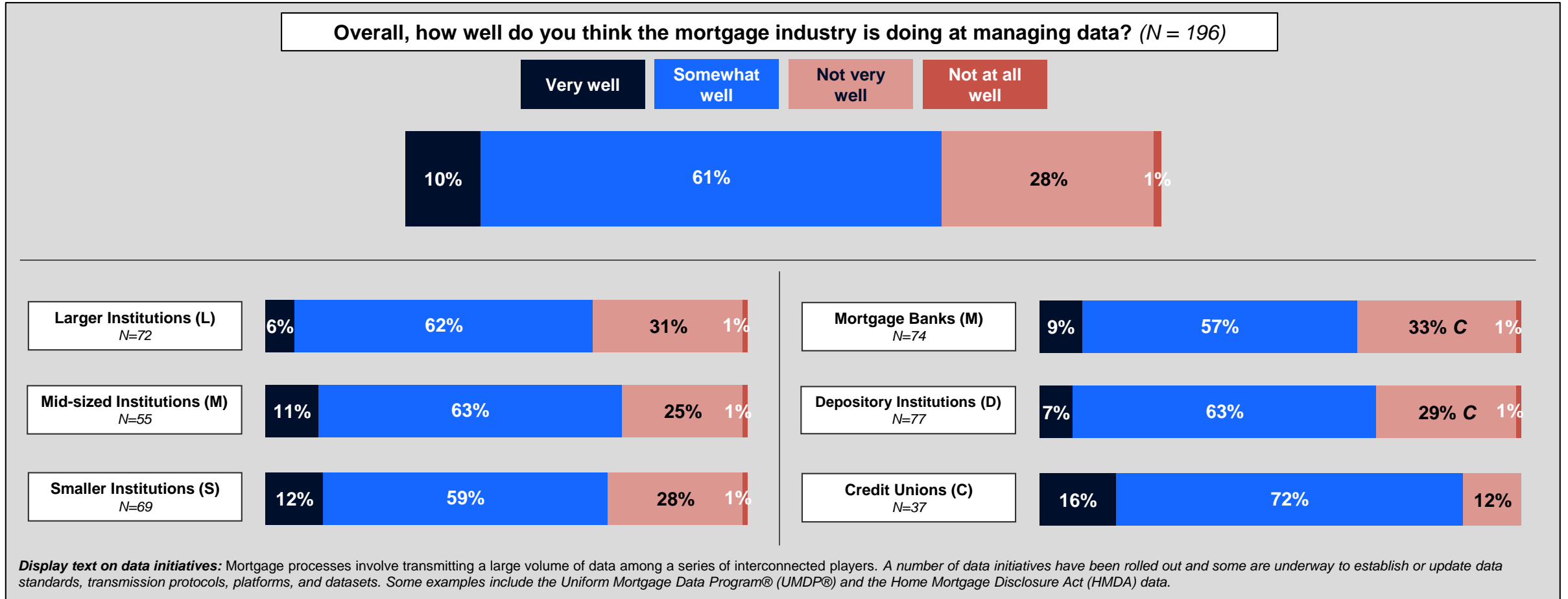
Data Security
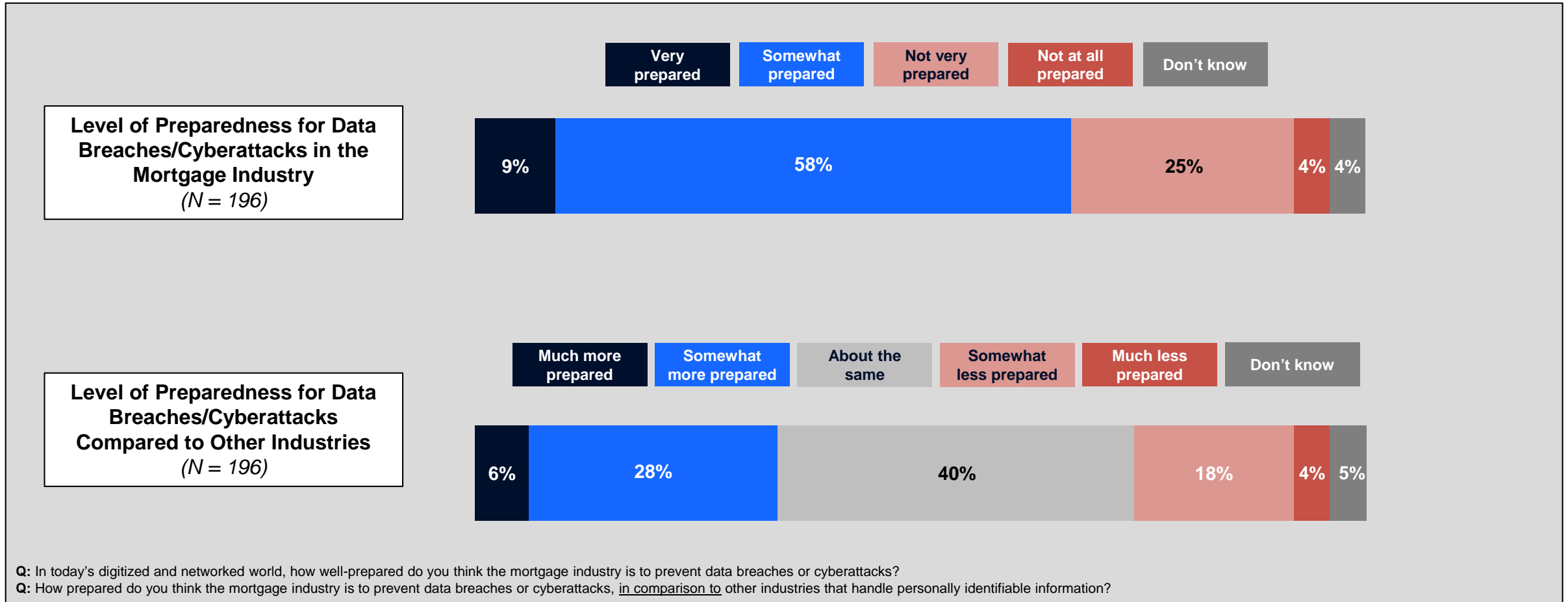
Managing Data in the Mortgage Industry

Overall, most lenders think the mortgage industry overall is doing well at managing data, although mortgage banks and depository institutions hold more negative views than credit unions.

Overall, how well do you think the mortgage industry is doing at managing data? *(N = 196)*

| Very well | Somewhat well | Not very well | Not at all well |

Overall: 10% | 61% | 28% | 1%

Group	Very well	Somewhat well	Not very well	Not at all well
Larger Institutions (L) N=72	6%	62%	31%	1%
Mid-sized Institutions (M) N=55	11%	63%	25%	1%
Smaller Institutions (S) N=69	12%	59%	28%	1%
Mortgage Banks (M) N=74	9%	57%	33% *C*	1%
Depository Institutions (D) N=77	7%	63%	29% *C*	1%
Credit Unions (C) N=37	16%	72%	12%	

Display text on data initiatives: Mortgage processes involve transmitting a large volume of data among a series of interconnected players. *A number of data initiatives have been rolled out and some are underway to establish or update data standards, transmission protocols, platforms, and datasets. Some examples include the Uniform Mortgage Data Program® (UMDP®) and the Home Mortgage Disclosure Act (HMDA) data.*

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

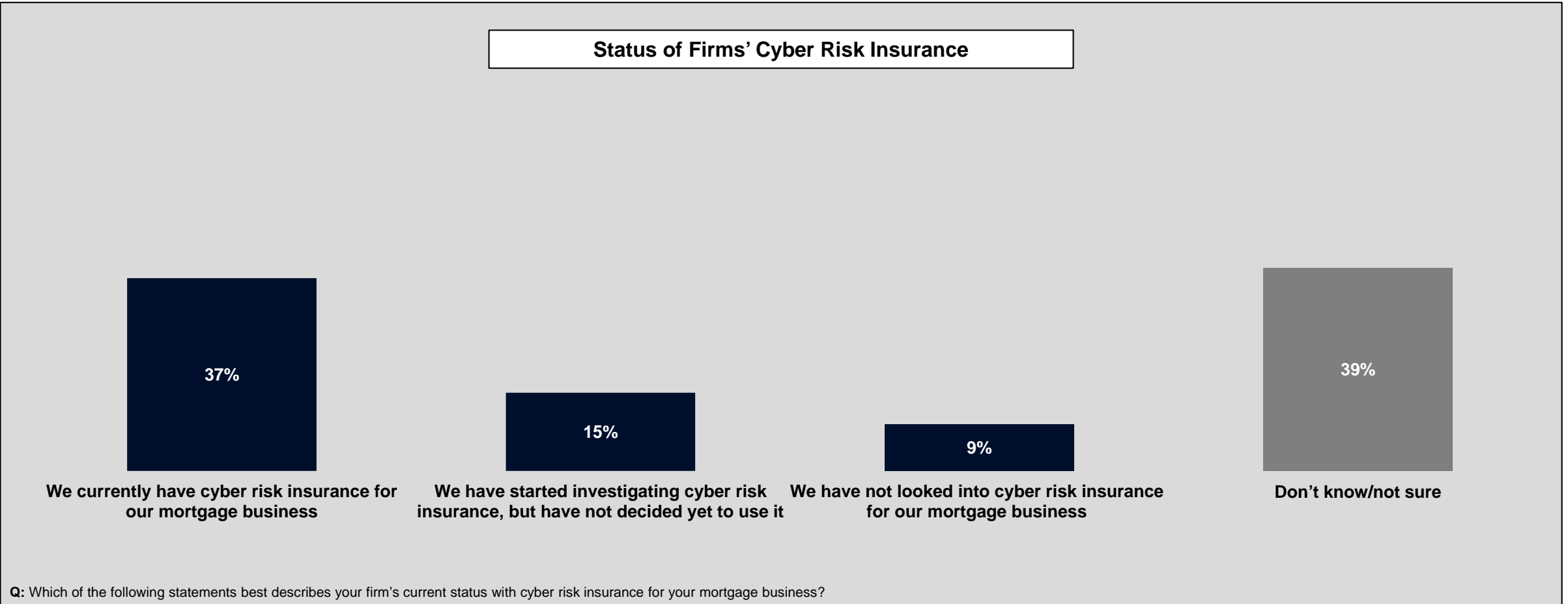# Preparedness for Data Breaches/Cyberattacks

Two-thirds of lenders think the mortgage industry is prepared to prevent data breaches, though almost three-fifths of lenders say the industry is just "somewhat prepared." When comparing the mortgage industry to other industries, a larger share say the mortgage industry is more prepared than the share who say less prepared.

Very prepared	Somewhat prepared	Not very prepared	Not at all prepared	Don't know

Level of Preparedness for Data Breaches/Cyberattacks in the Mortgage Industry
(N = 196)

9%	58%	25%	4%	4%

Much more prepared	Somewhat more prepared	About the same	Somewhat less prepared	Much less prepared	Don't know

Level of Preparedness for Data Breaches/Cyberattacks Compared to Other Industries
(N = 196)

6%	28%	40%	18%	4%	5%

Q: In today's digitized and networked world, how well-prepared do you think the mortgage industry is to prevent data breaches or cyberattacks?
Q: How prepared do you think the mortgage industry is to prevent data breaches or cyberattacks, in comparison to other industries that handle personally identifiable information?

Cyber Risk Insurance Status

Two-fifths of lenders are not sure about their cyber risk insurance status, but a little more than one-third say they currently have cyber risk insurance.

Status of Firms' Cyber Risk Insurance

37%
We currently have cyber risk insurance for our mortgage business

15%
We have started investigating cyber risk insurance, but have not decided yet to use it

9%
We have not looked into cyber risk insurance for our mortgage business

39%
Don't know/not sure

Q: Which of the following statements best describes your firm's current status with cyber risk insurance for your mortgage business?

Appendix

Research Objectives

- The survey is unique because it is used not only to track lenders' current impressions of the mortgage industry, but also their insights into the future.

- The *Mortgage Lender Sentiment Survey®*, which debuted in March 2014, is a quarterly online survey among senior executives in the mortgage industry, designed to:

Track insights and provide benchmarks into current and future mortgage lending activities and practices.

Quarterly Regular Questions	**Featured Specific-Topic Analyses**
– Consumer Mortgage Demand	– Lenders' Customer Service Channel Strategies
– Credit Standards	– Lenders' Experiences with APIs and Chatbots
– Mortgage Execution Outlook	– Next-Gen Technology Service Providers (TSPs)
– Mortgage Servicing Rights (MSR) Execution Outlook	– Mortgage Technology Innovation
– Profit Margin Outlook	– Lenders' Experiences with TRID

- A quarterly 10-15 minute online survey of senior executives, such as CEOs and CFOs, of Fannie Mae's lending institution customers.

- The results are reported at the lending institution parent-company level. If more than one individual from the same institution completes the survey, their responses are averaged to represent their parent company.

Mortgage Lender Sentiment Survey®

Survey Methodology

- A quarterly, 10- to 15-minute online survey among senior executives, such as CEOs and CFOs, of Fannie Mae's lending institution partners.
- To ensure that the survey results represent the behavior and output of organizations rather than individuals, the Fannie Mae Mortgage Lender Sentiment Survey is structured and conducted as an establishment survey.
- Each respondent is asked 40-75 questions.

Sample Design

- Each quarter, a random selection of approximately 3,000 senior executives among Fannie Mae's approved lenders are invited to participate in the study.

Data Weighting

- The results of the Mortgage Lender Sentiment Survey are reported at the institutional parent-company level. If more than one individual from the same parent institution completes the survey, their responses are averaged to represent their parent institution.

Lending Institution Characteristics

Fannie Mae's customers invited to participate in the Mortgage Lender Sentiment Survey represent a broad base of different lending institutions that conducted business with Fannie Mae in 2016. Institutions were divided into three groups based on their 2016 total industry loan volume – Larger (top 15%), Mid-sized (top 16%-35%), and Smaller (bottom 65%). The data below further describe the compositions and loan characteristics of the three groups of institutions.

Institution Type

	Larger	Mid-sized	Smaller
Other	6%	1%	2%
Mortgage Banks	54%	38%	7%
Credit Union	6%	19%	36%
Depository Institution	35%	41%	55%

Loan Types

	Larger	Mid-sized	Smaller
Government	27%	21%	7%
Jumbo	13%	11%	11%
Conforming	59%	67%	81%

Loan Purposes

	Larger	Mid-sized	Smaller
Purchase	45%	53%	45%
REFI	54%	46%	55%
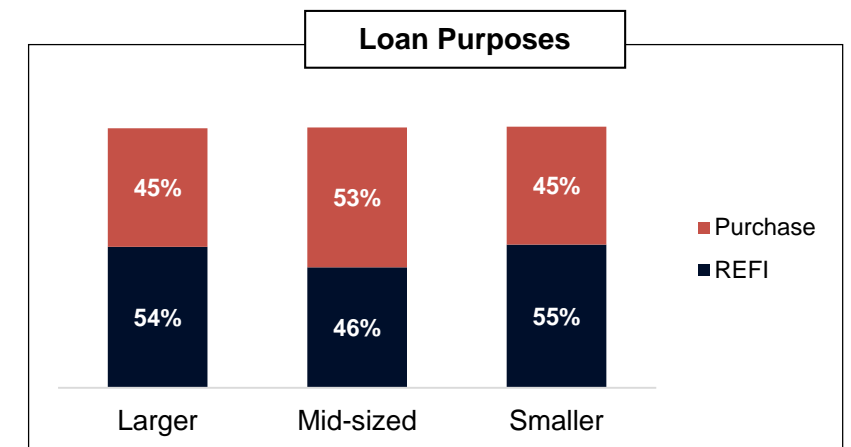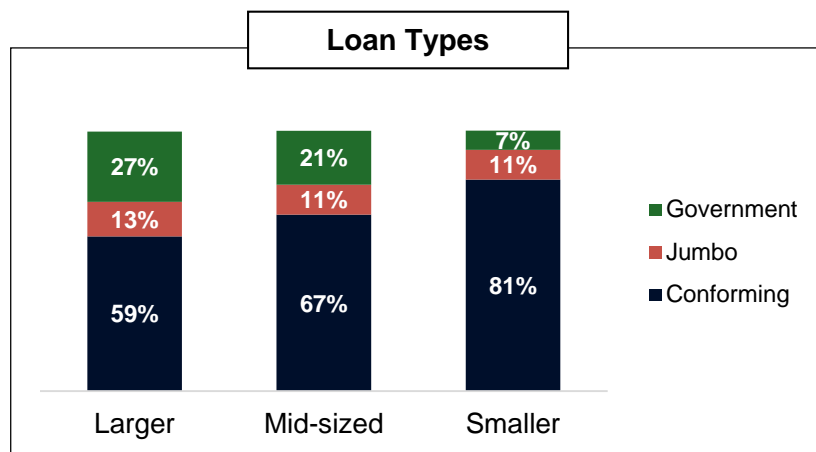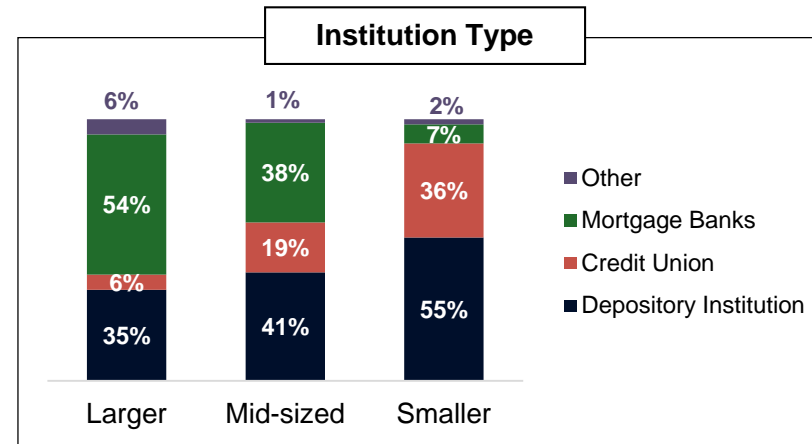
2017 Q4 Cross-Subgroup Sample Sizes

	Total	Larger Lenders	Mid-Sized Lenders	Smaller Lenders
Total	196	72	55	69
Mortgage Banks (non-depository)	74	44	25	5
Depository Institutions	77	20	20	37
Credit Unions	37	3	9	25

How to Read Significance Testing

On slides where significant differences between three groups are shown:

- Each group is assigned a letter (L/M/S, M/D/C)
- If a group has a significantly higher % than another group at the 95% confidence level, a letter will be shown next to the % for that metric. The letter denotes which group the % is significantly higher than.

Example: You mentioned that [INSERT QR234a] and [INSERT QR234b] are big challenges for your firm. Listed below are some resources that may help. Based on your firm's experience, please select up to two resources you think your firm needs the most. *Showing Biggest + Second Biggest Challenge*

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
More support from my vendors	39%	44%	39%	35%	35%	37%	54%
More time to implement data standards	39%	36%	41%	40%	38%	45%	28%
Dedicated IT resources	33%	34%	34%	31%	35%	22%	43% ^{D}
More training and tutorials	31%	13%	38% ^{L}	41% ^{L}	23%	40% ^{M}	27%
Additional funding for these projects	28%	31%	23%	28%	29%	27%	26%
Resources to find the right talent or vendors	22%	32% ^{S}	18%	16%	31% ^{C}	20%	13%

38% is significantly higher than 13% (larger institutions)

40% is significantly higher than 23% (mortgage banks)

Calculation of the "Total"

The "Total" data presented in this report is an average of the means of the three loan origination volume groups (see an illustrated example below). Please note that percentages are based on the number of financial institutions that gave responses other than "Not Applicable." Percentages may add to under or over 100% due to rounding.

Example:

Listed below are some potential benefits that could result from these data initiatives. Based on your firm's experience, please select up to two of the biggest benefits you think these data initiatives may bring to your firm and rank them in order of significance. *Showing Most + Second Most Important Benefit*

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)
N=	196	72	55	69
Enhance data accuracy and consistency of mortgage transaction	41%	48%	40%	35%
Enhance consumer borrower experience	33%	32%	39%	28%

"Total" of 41% is
(48% + 40% + 35%) / 3

Appendix

Additional Findings

Value of Data Initiatives for Mortgage Industry

Overall, how valuable do you think these data initiatives are for the mortgage industry?

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
Very valuable	28%	38% S	25%	22%	35% D	17%	36% D
Somewhat valuable	46%	41%	53%	44%	44%	45%	49%
Not very valuable	22%	18%	17%	30%	16%	33% M,C	15%
Not at all valuable	4%	3%	5%	3%	5%	5%	0%

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Managing Data

Overall, how well do you think the mortgage industry is doing at managing data?

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
Very well	10%	6%	11%	12%	9%	7%	16%
Somewhat well	61%	62%	63%	59%	57%	63%	72%
Not very well	28%	31%	25%	28%	33% C	29% C	12%
Not at all well	1%	1%	1%	1%	1%	1%	0%

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Most Important Benefits from Data Initiatives

Listed below are some potential benefits that could result from these data initiatives. Based on your firm's experience, please select up to two of the biggest benefits you think these data initiatives may bring to your firm and rank them in order of significance. *Showing Most + Second Most Important Benefit*

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
Enhance data accuracy and consistency of mortgage transaction	41%	48%	40%	35%	45%	38%	43%
Enhance consumer borrower experience	33%	32%	39%	28%	35%	26%	40%
Reduce repurchase risk	33%	27%	43%	29%	37%	29%	25%
Reduce cycle time	22%	23%	18%	26%	19%	24%	30%
Reduce compliance costs	20%	21%	17%	23%	20%	20%	16%
Permit better data analyses to inform my firm's business strategies	19%	24%	23%	13%	19%	19%	20%
Improve data security	11%	10%	13%	9%	10%	12%	5%
Offer flexibility in switching vendors or partners	4%	8%	0%	4%	6%	5%	3%
Other	1%	2%	0%	1%	0%	2%	0%
I don't see benefits	7%	2%	4%	15%[L]	3%	11%	8%

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Biggest Challenges of Data Initiatives

Listed below are some challenges lending institutions may face when implementing data standards and submission requirements. Based on your firm's experience thus far, please select up to two of the biggest challenges for your firm and rank them in order of significance. *Showing Biggest + Second Biggest Challenge*

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
Updating IT systems	34%	46% M	25%	32%	37%	28%	40%
Getting key players (e.g., loan officers, data providers, & closing agents) to follow data standardization requirements	32%	24%	41% L	31%	29%	35%	30%
Ensuring data quality and accuracy	30%	36%	27%	26%	28%	38%	22%
Working with my third-party technology vendors	30%	28%	34%	29%	26%	26%	46% M,D
Training internal staff	25%	20%	20%	35% L	21%	32%	25%
Finding the right talent or vendors	18%	21%	22%	12%	25%	14%	12%
Ensuring data security	16%	17%	19%	13%	23%	14%	8%
Converting paper documents to electronic data	10%	3%	8%	19% L	4%	12%	18% M
Other	1%	1%	0%	1%	1%	1%	0%

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Most Needed Resources to Help with Data Initiatives

You mentioned that [INSERT QR234a] and [INSERT QR234b] are big challenges for your firm. Listed below are some resources that may help. Based on your firm's experience, please select up to two resources you think your firm needs the most. *Showing Biggest + Second Biggest Challenge*

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
More support from my vendors	39%	44%	39%	35%	35%	37%	54%
More time to implement data standards	39%	36%	41%	40%	38%	45%	28%
Dedicated IT resources	33%	34%	34%	31%	35%	22%	43% D
More training and tutorials	31%	13%	38% L	41% L	23%	40% M	27%
Additional funding for these projects	28%	31%	23%	28%	29%	27%	26%
Resources to find the right talent or vendors	22%	32% S	18%	16%	31% C	20%	13%
Other	4%	3%	4%	5%	4%	4%	3%

L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Level of Preparedness for Data Breaches/Cyberattacks

In today's digitized and networked world, how well-prepared do you think the mortgage industry is to prevent data breaches or cyberattacks?

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
Very prepared	9%	6%	12%	9%	7%	13%	7%
Somewhat prepared	58%	61%	51%	62%	59%	61%	53%
Not very prepared	25%	26%	28%	19%	26%	20%	28%
Not at all prepared	4%	3%	7%	1%	5%	3%	3%
Don't know/Not sure	4%	3%	2%	8%	4%	3%	9%

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M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Level of Preparedness for Data Breaches/Cyberattacks Compared to Other Industries

How prepared do you think the mortgage industry is to prevent data breaches or cyberattacks, in comparison to other industries that handle personally identifiable information?

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
Much more prepared	6%	3%	7%	6%	4%	7%	4%
Somewhat more prepared	28%	24%	24%	35%	22%	36%	28%
About the same	40%	45%	38%	36%	41%	38%	41%
Somewhat less prepared	18%	22% ^{S}	24% ^{S}	9%	27% ^{D}	12%	15%
Much less prepared	4%	3%	2%	6%	3%	1%	5%
Don't know/Not sure	5%	2%	5%	8%	3%	6%	7%

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Cyber Risk Insurance Status

Across lender sizes and types, a little more than one-third say they currently have cyber risk insurance, but another two-fifths are unsure of their risk insurance status. Depository institutions and credit unions are significantly more likely to say they aren't sure compared to mortgage banks.

Which of the following statements best describes your firm's current status with cyber risk insurance for your mortgage business?
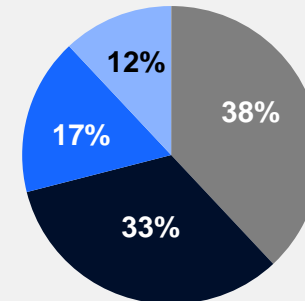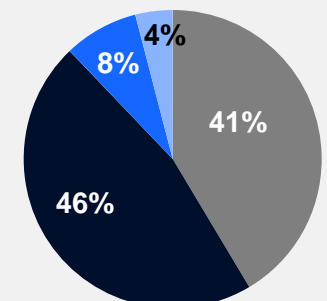
Currently have it | **Investigated it; decided not to use** | **Not looked into it** | **Don't know/ Not sure**
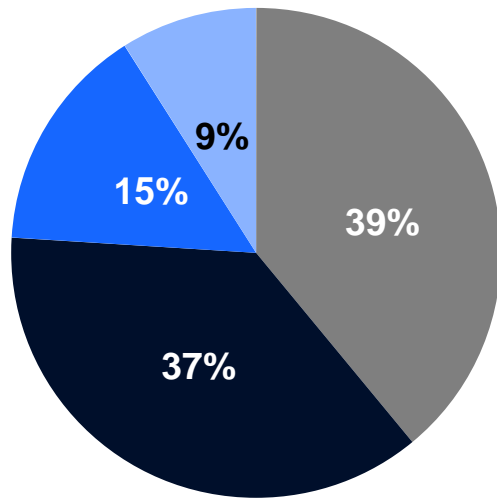
Larger Institutions (L)
N=72
- 37%
- 31%
- 20%
- 12%
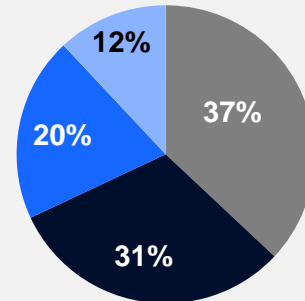
Mid-sized Institutions (M)
N=55
- 38%
- 33%
- 17%
- 12%

Smaller Institutions (S)
N=69
- 41%
- 46%
- 8%
- 4%

Mortgage Banks (M)
N=74
- 27%
- 39%
- 22% D
- 12%

Depository Institutions (D)
N=77
- 46% M
- 36%
- 10%
- 8%

Credit Unions (C)
N=37
- 46% M
- 43%
- 11%

Overall pie chart:
- 39%
- 37%
- 15%
- 9%
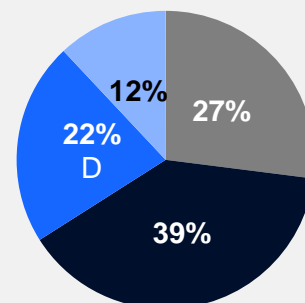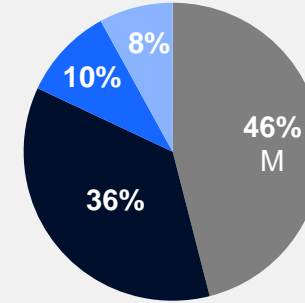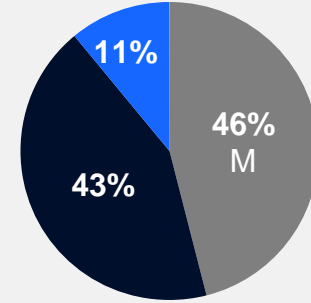
L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
M/D/C - Denote a % is significantly higher than the institution type group that the letter represents at the 95% confidence level

Cyber Risk Insurance Status

Which of the following statements best describes your firm's current status with cyber risk insurance for your mortgage business?

	Total	Larger Institutions (L)	Mid-sized Institutions (M)	Smaller Institutions (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	196	72	55	69	74	77	37
We have not looked into cyber risk insurance for our mortgage business	9%	12%	12%	4%	12%	8%	0%
We have started investigating cyber risk insurance, but have not decided yet to use it	15%	20%	17%	8%	22% D	10%	11%
We currently have cyber risk insurance for our mortgage business	37%	31%	33%	46%	39%	36%	43%
Don't know/Not sure	39%	37%	38%	41%	27%	46% M	46% M

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Question Text

qR230. Overall, how valuable do you think these data initiatives are for the mortgage industry? qR211. Does your firm directly interact with borrowers/consumers on mortgage inquiries, loan applications & processing, or servicing of mortgages?

qR231. Overall, how well do you think the mortgage industry is doing at managing data?

qR232a/b. Listed below are some potential benefits that could result from these data initiatives. Based on your firm's experience, please select up to two of the biggest benefits you think these data initiatives may bring to your firm and rank them in order of significance.

qR233. Any thoughts you would like to share on how to derive more value from these industry-wide data initiatives? (Optional)

qR234a/b. Listed below are some challenges lending institutions may face when implementing data standards and submission requirements. Based on your firm's experience thus far, please select up to two of the biggest challenges for your firm and rank them in order of significance.

qR235a. Could you share some details about how or why [INSERT QR234a] is a big challenge for your firm? (Optional)

qR235b. Could you share some details about how or why [INSERT QR234b] is a big challenge for your firm? (Optional)

qR236a/b. You mentioned that [INSERT QR234a] and [INSERT QR234b] */ are big challenges for your firm. Listed below are some resources that may help. Based on your firm's experience, please select up to two resources you think your firm needs the most.

qR237. What major concerns does your firm have, if any, with these data initiatives? (Optional)

qR238. In today's digitized and networked world, how well-prepared do you think the mortgage industry is to prevent data breaches or cyberattacks?

qR239. How prepared do you think the mortgage industry is to prevent data breaches or cyberattacks, in comparison to other industries that handle personally identifiable information?

qR240. Which of the following statements best describes your firm's current status with cyber risk insurance for your mortgage business?