

Mortgage Lender Sentiment Survey[®] Special Topics Report

Costs and Impact of Digitization Efforts on Cost Efficiency

October 2022



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Executive Summary

Personnel-related costs, including back-end operational staff, compliance/legal, and loan officers, were cited by lenders as the top areas driving the average cost per loan to go up over the past two years. Most lenders found their digitization efforts more effective at improving borrower experience and reducing cycle time, but less effective at reducing costs.

Loan Costs


(Combined % largest impact + second largest impact)

 **▲ TOP COST-INCREASE DRIVERS**
49% Back-end Operational Staff

 **37%** Compliance/Legal

 **31%** Loan Officers

 **▼ TOP COST-DECREASE DRIVERS**
37% Back-end Process Technology

 **26%** Consumer-facing Technology

TOP COST AREAS EXPECTED TO INCREASE


(Combined % increase the most + increase the second most)


32% Consumer-facing technology


28% Compliance/Legal


Cost Impact of Digitization Efforts EFFECTIVENESS


(Among those invested, Combined % very + somewhat effective)


 **79%** Improving borrower experience

 **70%** Reducing cycle time/increasing productivity

 **68%** Enhancing quality of work

 **37%** Reducing loan origination costs

 **34%** Reducing cyclical variability of staffing

 **31%** Converting fixed costs to variable costs

Outsourcing



79% say they **currently** handle their loan origination process **in-house**, and

83% of them plan to keep it **in-house** in the next 1-2 years.



Among the few who outsource, 80% say outsourcing has been effective in **converting fixed costs to variable costs**.





Business Context and Methodology



Business Context and Research Questions

Business Context

The mortgage lending industry is in a state of transition as it adjusts to the rapidly risen interest rate environment, inflationary pressure, and a general slowdown of domestic and global economic growth. Both home purchase and refinance activities have declined meaningfully in 2022. Some firms in the mortgage industry have announced layoffs and business line closures. Moreover, loan origination profitability has fallen substantially this year, as the average production cost per loan has risen to a new high.¹

With costs increasing and loan origination volumes contracting, we surveyed over 200 senior mortgage executives in August via the MLSS to better understand lenders' loan-origination cost drivers and the impact of digitization efforts on cost efficiency.

Research Questions

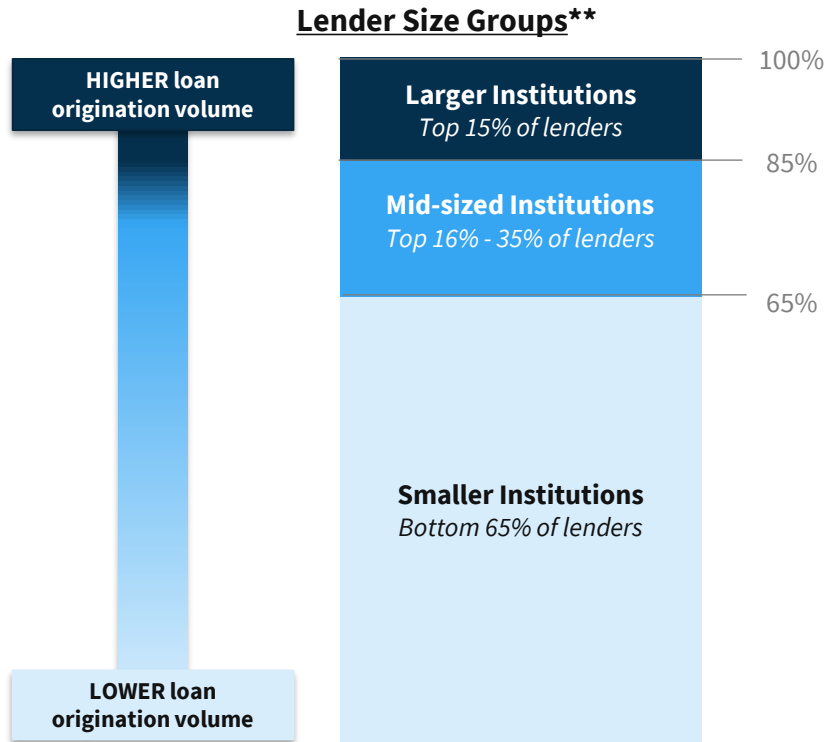
1. What types of costs (e.g., technology, personnel, legal/compliance) have gone up the most over the past two years? What types of costs have gone down the most over the past two year? Moving forward, what types of costs do lenders expect to increase the most over the next two years?
2. To what extent have lenders invested in digitization efforts over the past two years? And, how much more or less do they plan to invest in digitization efforts over the next two years?
3. What's the impact of digitization efforts on cost savings? In particular, how effective have lenders' digitization efforts been in achieving different goals (e.g., reducing cycle time, reducing loan origination costs, lowering compliance costs, reducing cyclical variability of staffing, and converting fixed costs to variable costs)?
4. What are lenders' current practices with outsourcing? How interested are they in outsourcing in the near future? What's their experience regarding the impact of outsourcing on converting fixed costs to variable costs?

1. According to the Mortgage Bankers Association's August 2022 **Quarterly Mortgage Bankers Performance Report**, independent mortgage banks (IMBs) and mortgage subsidiaries of chartered banks reported a net loss of \$82 on each loan they originated in the second quarter of 2022, down from a reported gain of \$223 per loan in the first quarter of 2022, and a reported gain of \$1,099 per loan in the fourth quarter of 2021, reaching its lowest level since the fourth quarter of 2018. <https://www.mba.org/news-and-research/newsroom/news/2022/08/18/imbs-report-losses-in-the-second-quarter-of-2022>



Respondent Sample and Groups

For the current study, a total of 206 senior executives completed the survey between August 2 and August 15, representing 187 lending institutions.*



Sample Q3 2022		Sample Size
Total Lending Institutions The “Total” data throughout this report is an average of the means of the three lender-size groups listed below.		187
Lender Size Groups	Larger Institutions Lenders in the Fannie Mae database who were in the top 15% of lending institutions based on their total 2021 loan origination volume (above \$2.264 billion)	50
	Mid-sized Institutions Lenders in the Fannie Mae database who were in the next 20% (16%-35%) of lending institutions based on their total 2021 loan origination volume (between \$607 million and \$2.263 billion)	38
	Smaller Institutions Lenders in the Fannie Mae database who were in the bottom 65% of lending institutions based on their total 2021 loan origination volume (less than \$607 million)	99
Institution Type***	Mortgage Banks (non-depository)	74
	Depository Institutions	75
	Credit Unions	38

* 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 weighted to represent their parent institution.

** The 2021 total loan volume per lender used here includes the best available annual origination information from Fannie Mae, Freddie Mac, and Marketrac. Lenders in the Fannie Mae database are sorted by their firm’s total 2020 loan origination volume and then assigned into the size groups, with the top 15% of lenders being the “larger” group, the next 20% of lenders being the “mid-sized” group and the rest being the “small” group.

*** Lenders that are not classified into mortgage banks or depository institutions or credit unions are mostly housing finance agencies or investment banks.





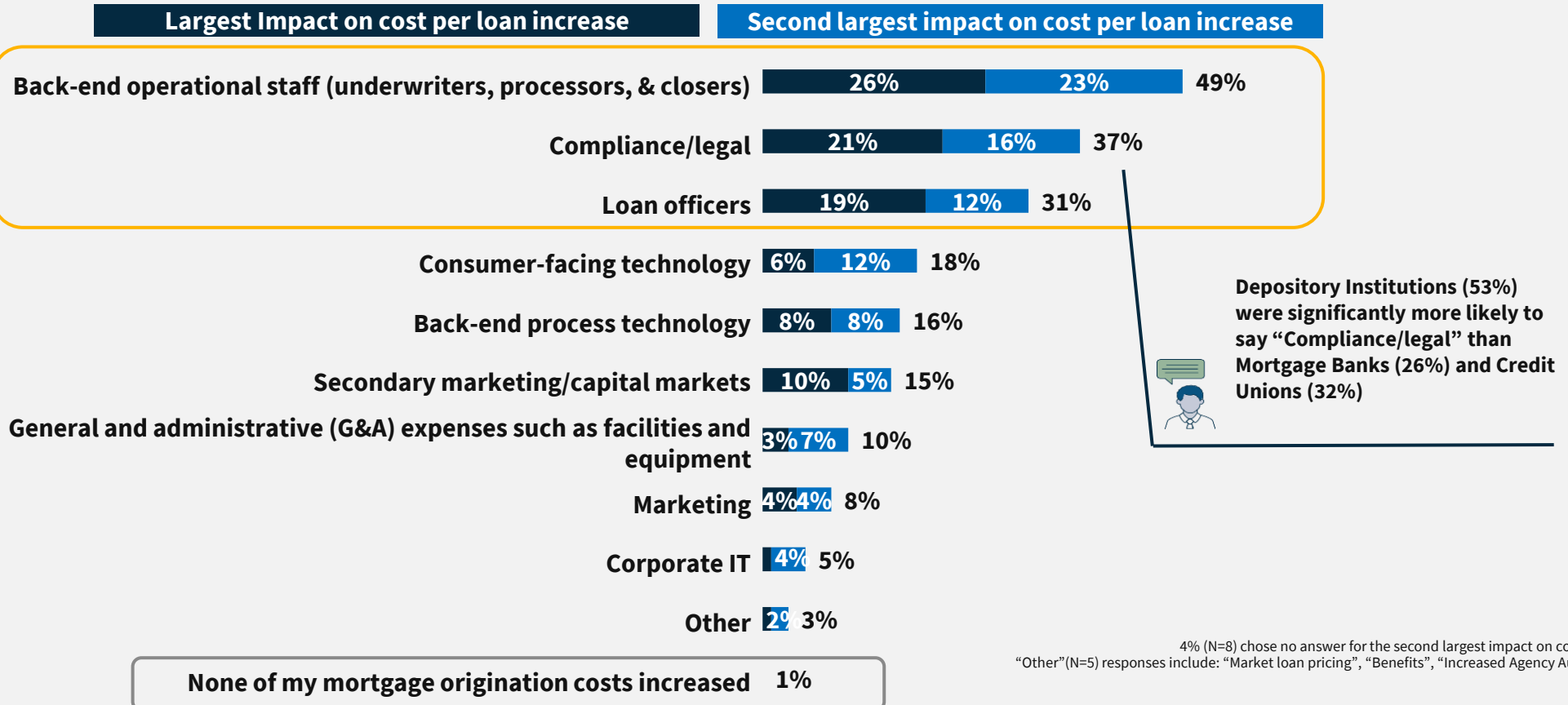
Mortgage Loan Origination Costs



Factors Driving the Average Cost per Loan to Go Up Over the Past Two Years

Personnel-related costs, including back-end operational staff, compliance/legal, and loan officers, were cited by lenders as the top areas driving the average cost per loan to go up over the past two years. Depository institutions were more likely to cite “compliance/legal” than mortgage banks and credit unions.

Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go up? Please select up to two areas.



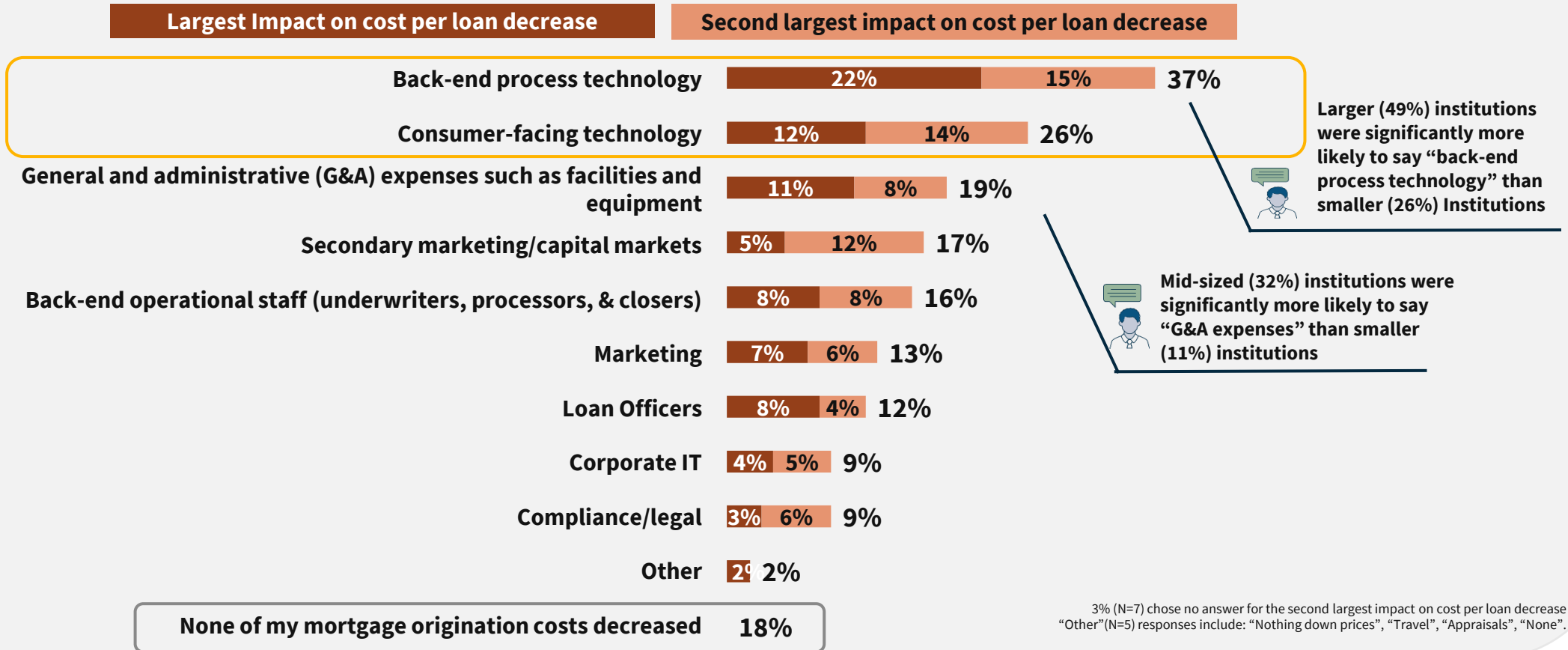
Q: Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go up? Please select up to two areas.



Factors Driving the Average Cost per Loan to Go Down Over the Past Two Years

Technology areas, including back-end process technology and consumer-facing technology, were cited by lenders as the top areas driving the average cost per loan to go down over the past two years. Notably, nearly 1 in 5 lenders reported no decrease in mortgage origination costs.

Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go down? Please select up to two areas.



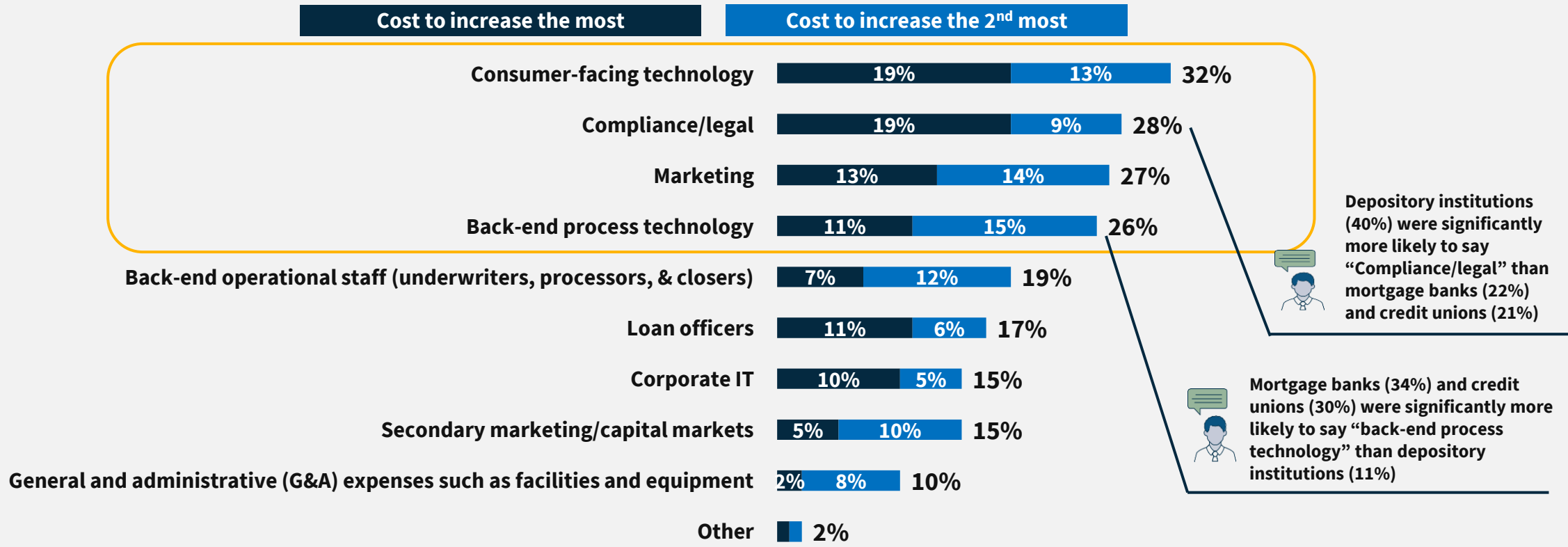
Q: Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go down? Please select up to two areas.



Cost Areas Anticipated to Increase the Most in the Future

Looking ahead, lenders anticipate that the costs of consumer-facing technology and compliance/legal will increase the most, followed by marketing and back-end process technology.

Now, thinking of the next two years, which of the following cost areas do you anticipate will likely increase the most?
Please select up to two areas.



I do not expect any of my origination costs to increase over the next two years 4%

3% (N=6) chose no answer for the second most cost to increase
"Other"(N=3) responses include: "Market driven pricing", "Benefits", "The cost of acquiring the customers...given the overall level of competition vs. the size of the overall market".

Q: Cost to increase the most: Now, thinking of the next two years, which of the following cost areas do you anticipate will likely increase the most? Please select up to two areas.



Comments on Future Cost Increases in “Consumer-Facing Technology” and “Compliance/Legal”

Lenders who expected “consumer-facing technology” costs to increase the most pointed to their continued investments in technology and security in order to meet consumer demand and improve efficiency. Lenders who anticipated “compliance/legal” costs to increase the most cited increased regulatory pressures and training.

You mentioned that you expect the cost for [cost area] will increase the most over the next two years. Could you share your views? For example, what do you think will drive the costs higher? (Optional)

Open ended responses (Total question responses n=146)

▲ CONSUMER-FACING TECHNOLOGY COSTS WILL INCREASE

Technology and Security Cost

“The average age of home buying is reaching into the age of technology. Now **if people can't do it from their phone, then they don't want to do it**. So, the Mortgage industry is going to have to spend the money buying or creating the apps for this to happen.” – Larger Institution

“I think the **demand for cutting-edge tech will continue to increase**, forcing companies to invest in more technology.”
– Mid-sized Institution

“You have to **continually improve your existing technology while looking for new technology to improve efficiency** to keep up with your competitors and provide ease of use to your customers.” – Smaller Institution

“The major providers of POS and LOS technologies **ratchet up their costs every year**.” – Smaller Institution

Lower Mortgage Volume

“As **overall volumes go down and margins slim**, there will be **more of an effort to better tech** in order to keep market share.”
– Mid-sized Institution

▲ COMPLIANCE / LEGAL COSTS WILL INCREASE

Regulatory Compliance

“**Compliance requirements and risk controls have become stricter and much more scrutinized** by federal agencies.” – Smaller Depository Institution

“More regulation and requirements from regulatory agencies is creating **additional burden to comply**.” – Smaller Depository Institution

“Ambiguity in compliance rules and regulations can make for **overly conservative decisions regarding reserves and reinvestment**.” – Mid-sized Mortgage Bank

“Higher levels **of regulatory scrutiny**.” – Larger Depository Institution

Personnel and Training Costs

“**Training, exam prep time, length of time to onboard** new mort staff due to complexity of compliance.” – Smaller Depository Institution

“More aggressive federal agency requires more work and **more people dedicated to compliance initiatives**.” – Larger Mortgage Bank

Q: You mentioned that you expect the cost for ## INSERT QR484a CHOICE ## will increase the most over the next two years. Could you share your views? For example, what do you think will drive the costs higher? (Optional)



Comments on Future Cost Increases in “Marketing,” “Back-End Process Tech,” and “Loan Officers”

Some lenders noted ramping up marketing efforts as the housing market slows. Lenders expected to continue investing in back-end process technology to automate and enhance efficiency. Lenders who anticipated “loan officer” costs to increase the most cited wage growth and talent recruit challenges.

You mentioned that you expect the cost for [cost area] will increase the most over the next two years. Could you share your views? For example, what do you think will drive the costs higher? (Optional)

Open ended responses (Total question responses n=146)

MARKETING

“Market is more competitive. More lenders competing for every loan. **Marketing expenses will increase to get in front of consumers early and often.**” – Smaller Institution

“Due to the increase of interest rates **more marketing will have to be done to capture the purchase market since the refinance market has slowed.**” – Smaller Institution

“**Anytime volume decreases the need to utilize a CRM, creation of materials, purchasing leads, TV advertising etc. will all increase.**” – Mid-sized Institution

“Going to **be harder to identify customers** who have a financial incentive to refinance.” – Larger Institution

“**Will need to ramp up marketing efforts** as overall origination **market has shrunk.**” – Larger Institution

BACK-END PROCESS TECHNOLOGY

“We are **investing in automation technologies** for long-term cost reduction, but this will require an **up front investment.**” – Smaller Institution

“In order to get to a 25 day closing we'll need to invest in some sort of **AI or Machine Learning** to be **more efficient.** This technology is **not inexpensive** and will take some time to implement.” – Smaller Institution

“New required systems to **automate.**” – Mid-sized Institution

“**As the value of BPO increases, the cost of such services will likely also increase.** With the consolidation of providers in the industry (ICE) **we see prices increase** for the same service year over year. We have also seen **a large jump in consulting service fees.**” – Larger Institution

LOAN OFFICERS

“**Competition for production continues to result in large signing bonuses** and increased MLO compensation relative to gross margins.” – Smaller Institution

“**Inflation pressures** are extreme in comparison to normal times. Expect this **cause wages to increase** as well. – Smaller Institution

“As **veteran loan officers retire, it's difficult to replace at the same rate of pay.**” – Mid-sized Institution

“**Higher home prices** have resulted in significant increases in loan amounts. **Loan officer incentive is loan amount driven.**” – Larger Institution

Q: You mentioned that you expect the cost for ## INSERT QR484a CHOICE ## will increase the most over the next two years. Could you share your views? For example, what do you think will drive the costs higher? (Optional)





Impact of Digitization Efforts on Cost Efficiency

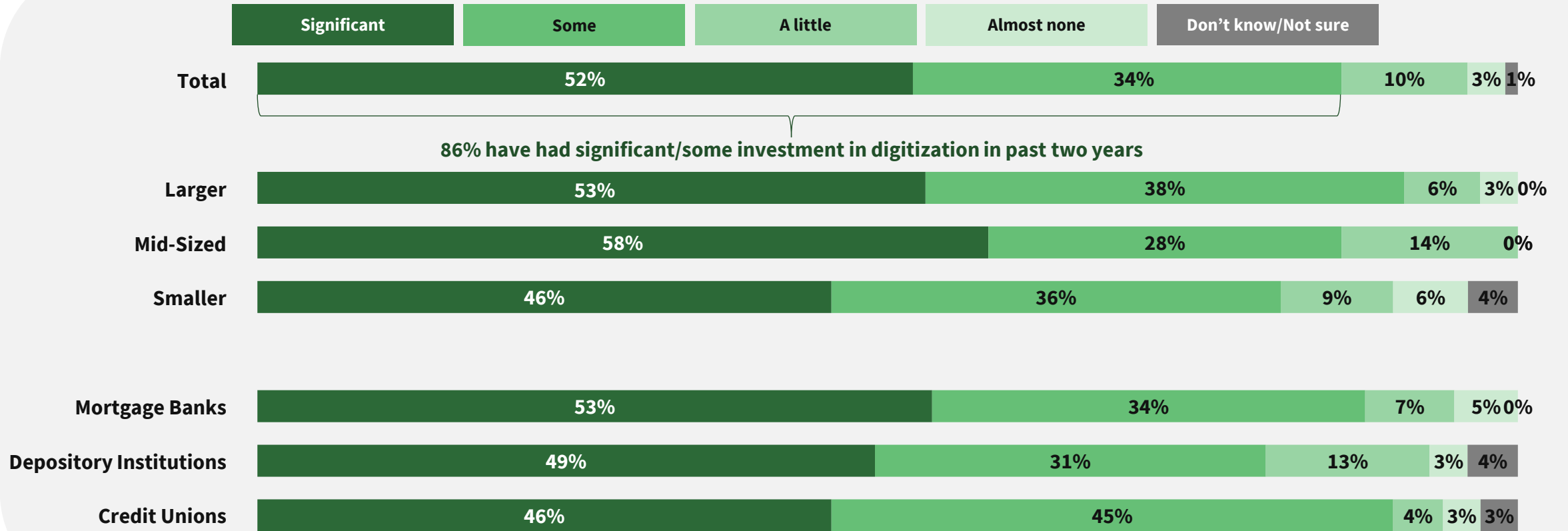


Lender Investment in Digitization Efforts over the PAST Two Years

A vast majority of lenders said they have invested in digitization efforts over the past two years.

How much has your firm invested in digitization efforts over the past two years for your mortgage business?

(N=187)



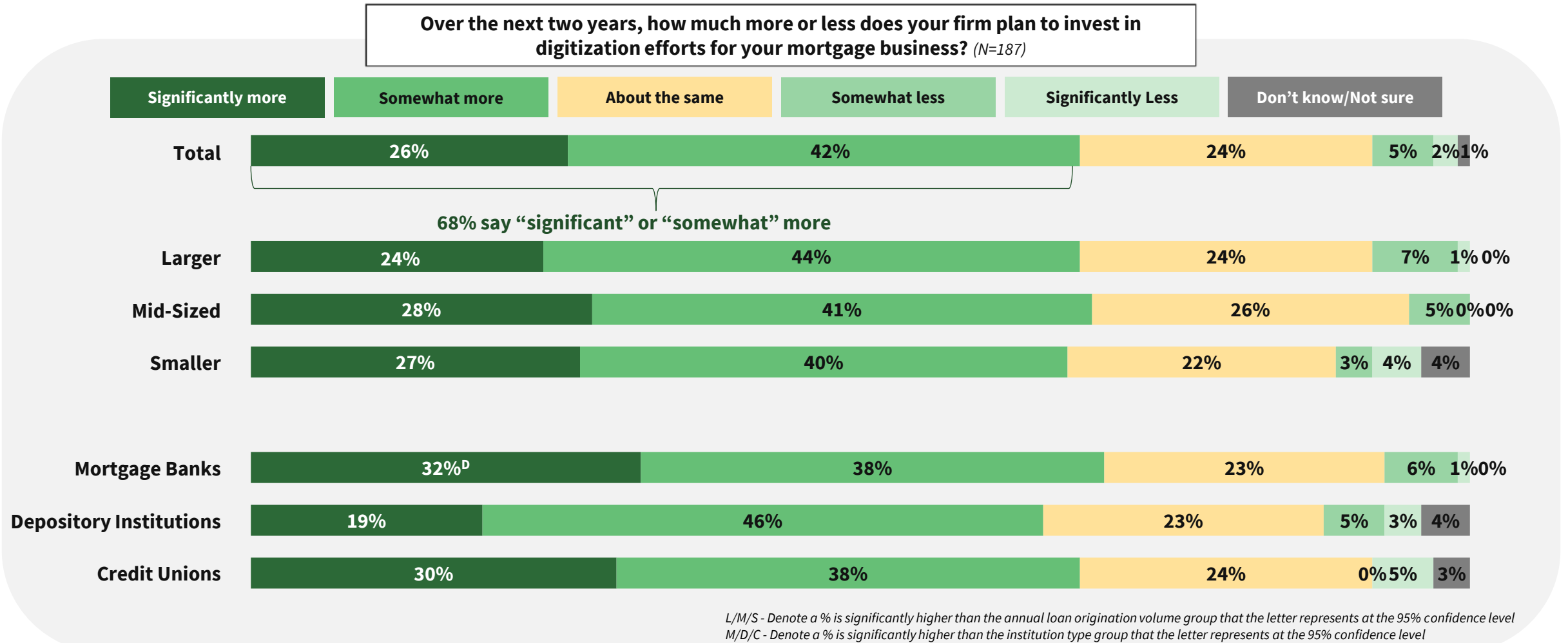
L/M/S - Denote a % is significantly higher than the annual loan origination volume group that the letter represents at the 95% confidence level
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Q: How much has your firm invested in digitization efforts over the past two years for your mortgage business?



Future Investment in Digitization Efforts for the NEXT Two Years

Similarly, a majority of lenders said they plan to invest more in digitization efforts over the next two years.



Q: Now, thinking of the next two years, how much more or less does your firm plan to invest in digitization efforts for your mortgage business?



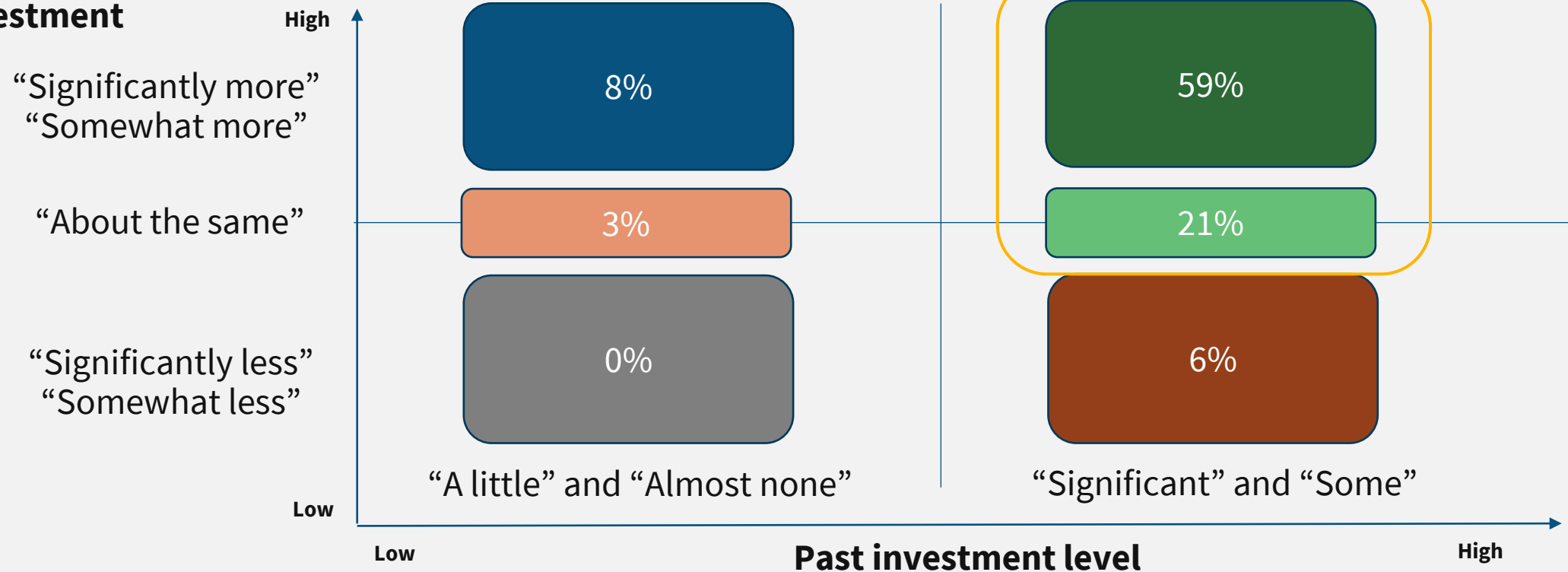
Past Investments vs. Future Plans

A vast majority of lenders said they have invested in digitization efforts in the past AND plan to continue investing in the future.

Over the next two years, how much more or less does your firm plan to invest in digitization efforts for your mortgage business?

(N=187)

Future investment



How much has your firm invested in digitization efforts over the past two years for your mortgage business?

2% of respondents said “Don’t know/Not sure” for past or future digitization investment level

Q: How much has your firm invested in digitization efforts over the past two years for your mortgage business?

Q: Now, thinking of the next two years, how much more or less does your firm plan to invest in digitization efforts for your mortgage business?

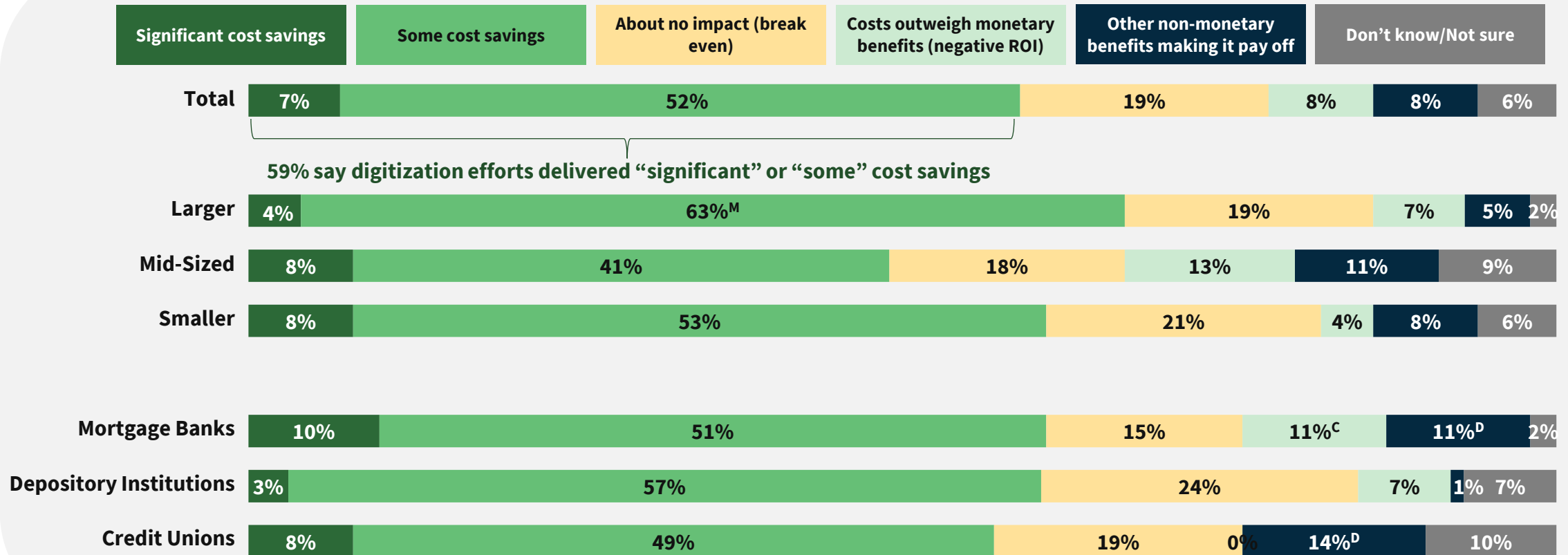


Cost Savings From Digitization Efforts *(Among Lenders who invested at least a little in digitization efforts in the past)*

About 60% of lenders acknowledged some cost savings from their digitization efforts, although roughly 20% say “no impact/breakeven”. Mortgage banks and credit unions were significantly more likely than depository institutions to say that they invested in digitization for “non-monetary benefits”.

Based on your firm’s experience, to what extent have digitization efforts delivered cost savings for your mortgage business?

Showing those whose firm has invested at least a little in digitization (N=176)



*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*

Q: Based on your firm’s experience, to what extent have digitization efforts delivered cost savings for your mortgage business?



Effectiveness of Digitization at Achieving Goals

Among lenders who have invested in digitization, most found their digitization efforts more effective at improving borrower experience, reducing cycle time/increasing productivity, and enhancing quality of work, but less effective at reducing costs or converting fixed costs to variable costs.

Based on our firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below? Please choose one answer per row.

Showing those whose firm has invested at least a little in digitization (N=176), Ranked by "Very effective"



Q: Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below? Please choose one answer per row.



Reasons for the Effectiveness of Digitization Efforts in Converting Fixed Costs to Variable Costs

Converting fixed costs to variable costs has been found effective in terms of efficiency, productivity, and outsourcing. Lenders who say it has been ineffective pointed to high costs, limited benefits, and a lower-margin business environment.

You mentioned that your firm's digitization efforts have been [effective/ineffective] in converting fixed costs to variable costs. Could you share your experience? For example, what did your firm want to achieve? What worked? Or, what if anything could have been done to make your digital transformation efforts more effective?

Open ended responses total n=85

[This open-end question about why is asked only for the "converting fixed costs to variable costs" goal.]

EFFECTIVE

Efficiency and Productivity

"Efforts to **move repetitive and repeatable processes to RPA** have been somewhat effective and provided some benefit in reducing FTE expense." – Smaller Institution

"The **use of bots and offshoring for the most simple mortgage process tasks** has helped to reduce costs, particularly in the very busy refinance / pandemic market." – Larger Institution

Outsourcing

"We converted to a **third-party compliance review**. In months of higher production, the costs are still lower than hiring a full time FTE. In months where production has been lower, **the cost is significantly less**." – Smaller Institution

"We **outsourced all technology to a pay by the unit pricing to variabilize the costs to actual volume**." – Larger Institution

INEFFECTIVE

Digitization Cost and ROI

"**All supplementary costs have sky-rocketed** and are out of control. Part of purveyors inflation costs and this is including new technology costs." – Larger Institution

"Additional digitization has not met our ROI requirements **due to the higher costs and limited benefits**." – Smaller Institution

Market/ Business Conditions

"Due to the **lower margins in 2022**, we have been unable to invest in technology as much as we would like." – Smaller Institution

"Market conditions and volume loads have **delayed or mitigated the impacts**, but savings are expected going forward." – Larger Institution

Q: You mentioned that your firm's digital transformation efforts have been ## INSERT QR490g CHOICE ## in converting fixed costs to variable costs. Could you share your experience? For example, what did your firm want to achieve? What worked? Or, what, if anything, could have been done to make your digital transformation efforts more effective?





In-House vs. Outsourcing

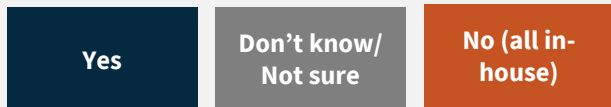
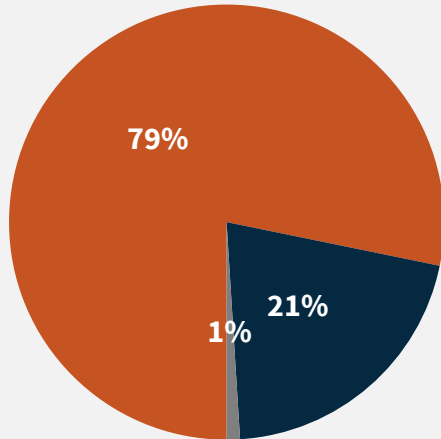


Whether Mortgage Lenders Outsource Loan Origination Process

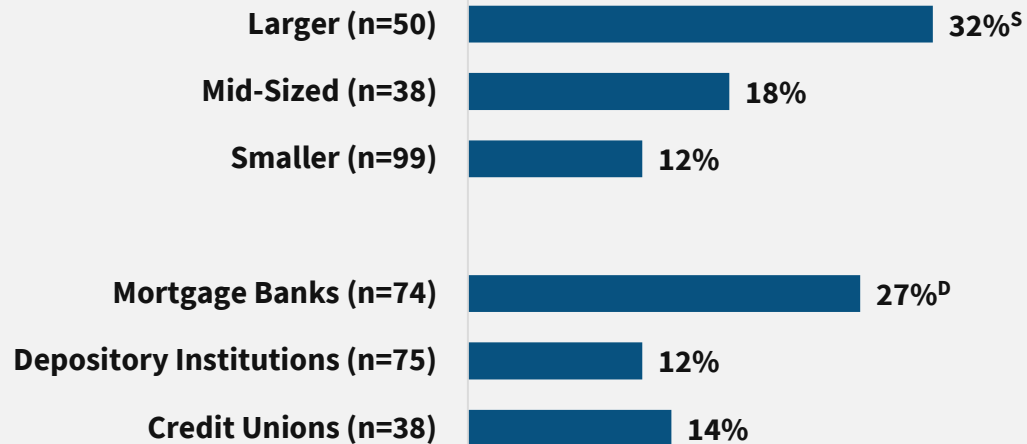
Most lenders reported keeping their loan origination process in-house. Larger institutions were more likely to outsource than smaller institutions; and mortgage banks were more likely to outsource than depository institutions.

Does your mortgage business currently outsource any part of loan origination process?

(N=187)



% Yes (Outsource) by Sub-Audience



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Q: Does your mortgage business currently outsource any part of loan origination process?



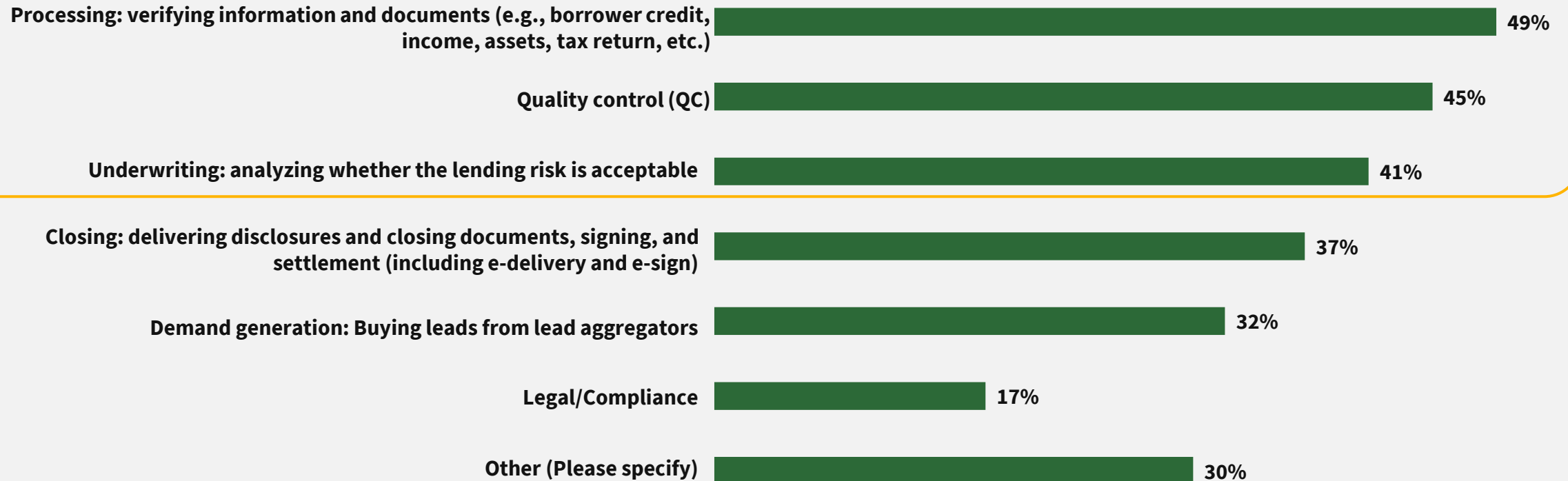
Loan Origination Components that are Outsourced

Among the few lenders who said they outsource a part of the loan origination process, verification, quality control, and underwriting were outsourced more often than other loan origination functions.

Loan Origination Process Outsourced (“Select all that Apply”)

Among those who have outsourced any part of loan origination process (N=34)

* Caution: Results are directional due to small sample size.



“Other”(N=11) responses include: “Automatically contacting all leads”, “Origination through 3rd party partners”, “application portal”, etc.

Q: Which part(s) of loan origination process does your firm outsource to a third-party? Please check all that apply.

Note: Please note results were from a smaller sample size and should be interpreted directionally



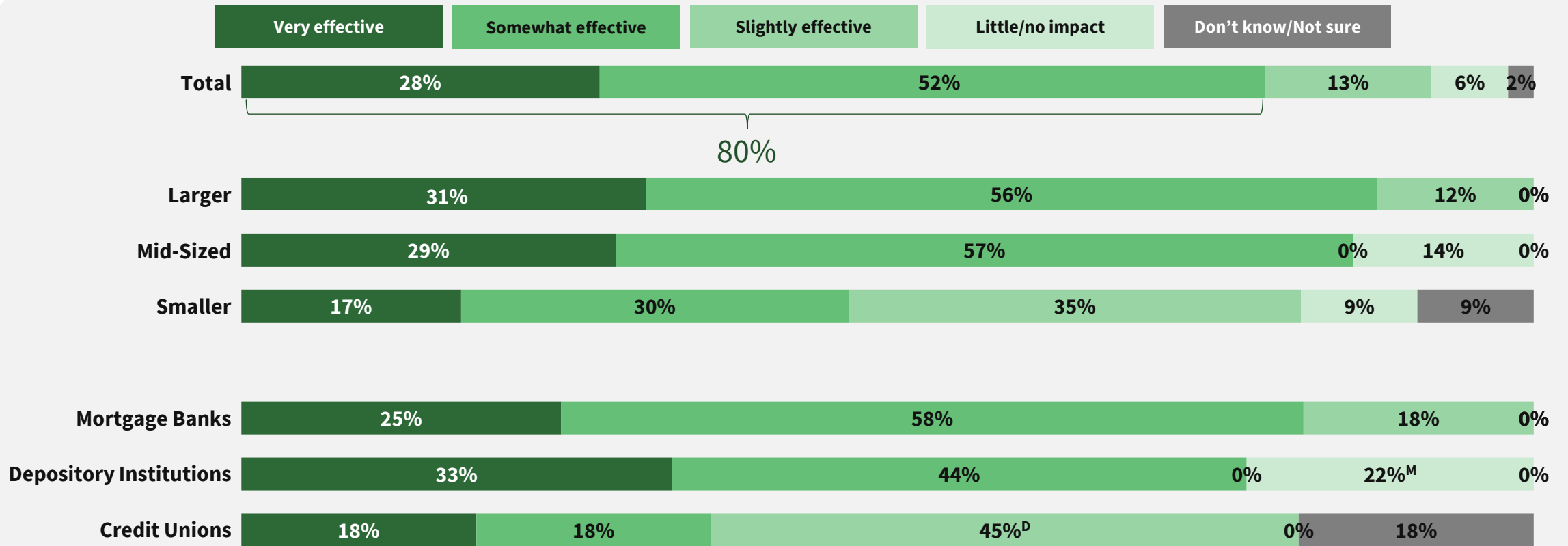
Effectiveness of Outsourcing Resulted in Converting Fixed Costs to Variable Costs

Among the very few lenders who have outsourced a part of the loan origination process, most found outsourcing effective at converting fixed costs to variable costs.

Effectiveness of Outsourcing Resulted in Converting Fixed Costs to Variable Costs

Among those who have outsourced any part of loan origination process (N=34)

* Caution: Results are directional due to small sample size.



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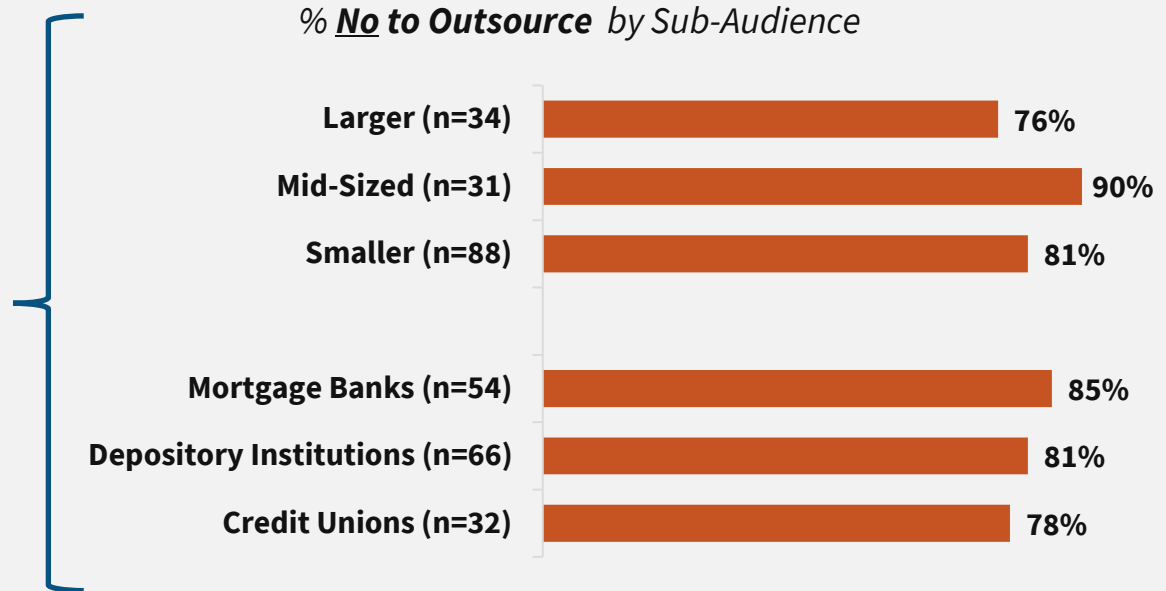
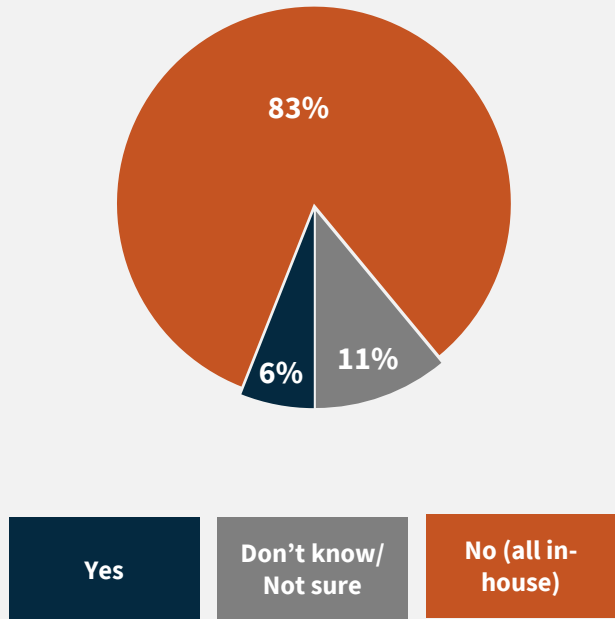
Q: Based on your firm's experience, how effective has the outsourcing resulted in converting fixed costs to variable costs?



Future Plans of Outsourcing

Among those who have not outsourced, most of them said they do not plan to outsource any part of the loan origination process over the next 1-2 years.

Whether respondent's firm plans to outsource any part of loan origination process
Among those whose firm has not outsourced any part of loan origination process (N=152)



*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*

Q: Over the next 1-2 years, does your mortgage business plan to outsource any part of loan origination process?





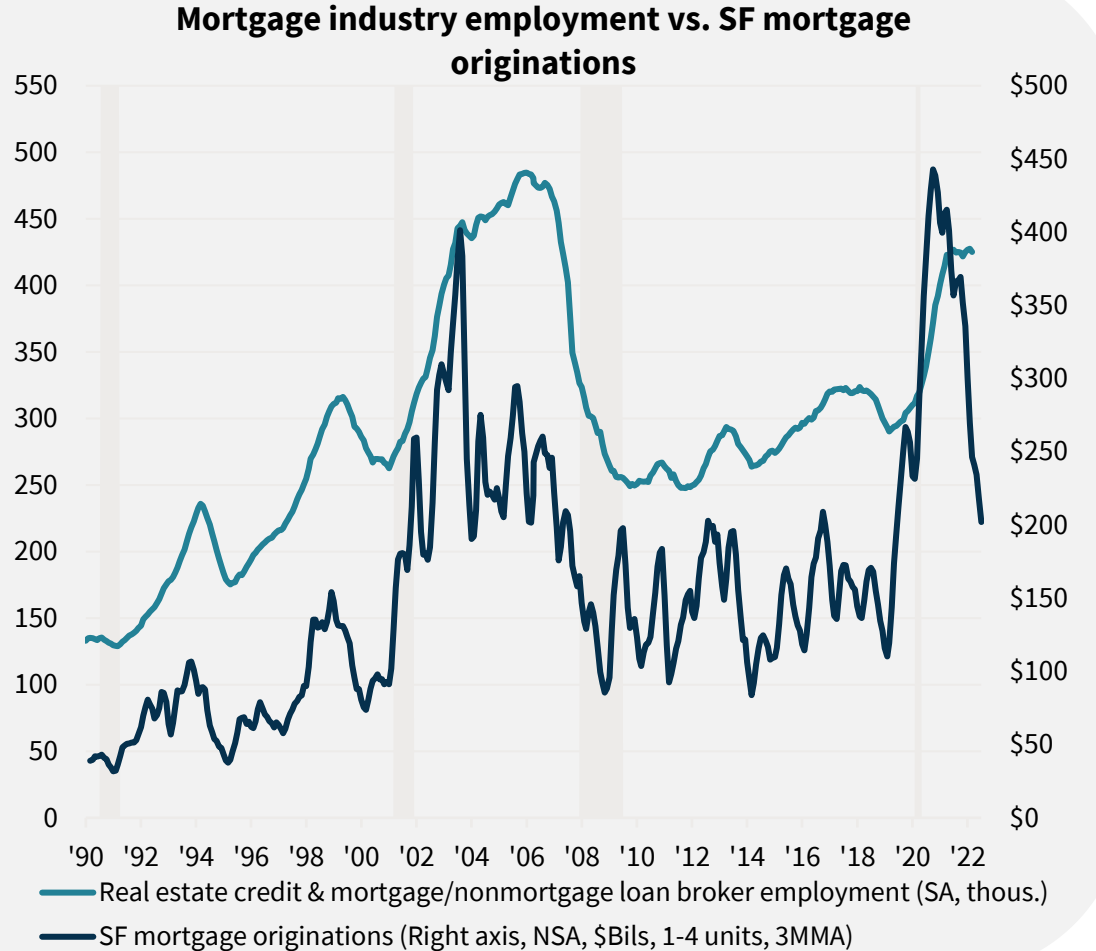
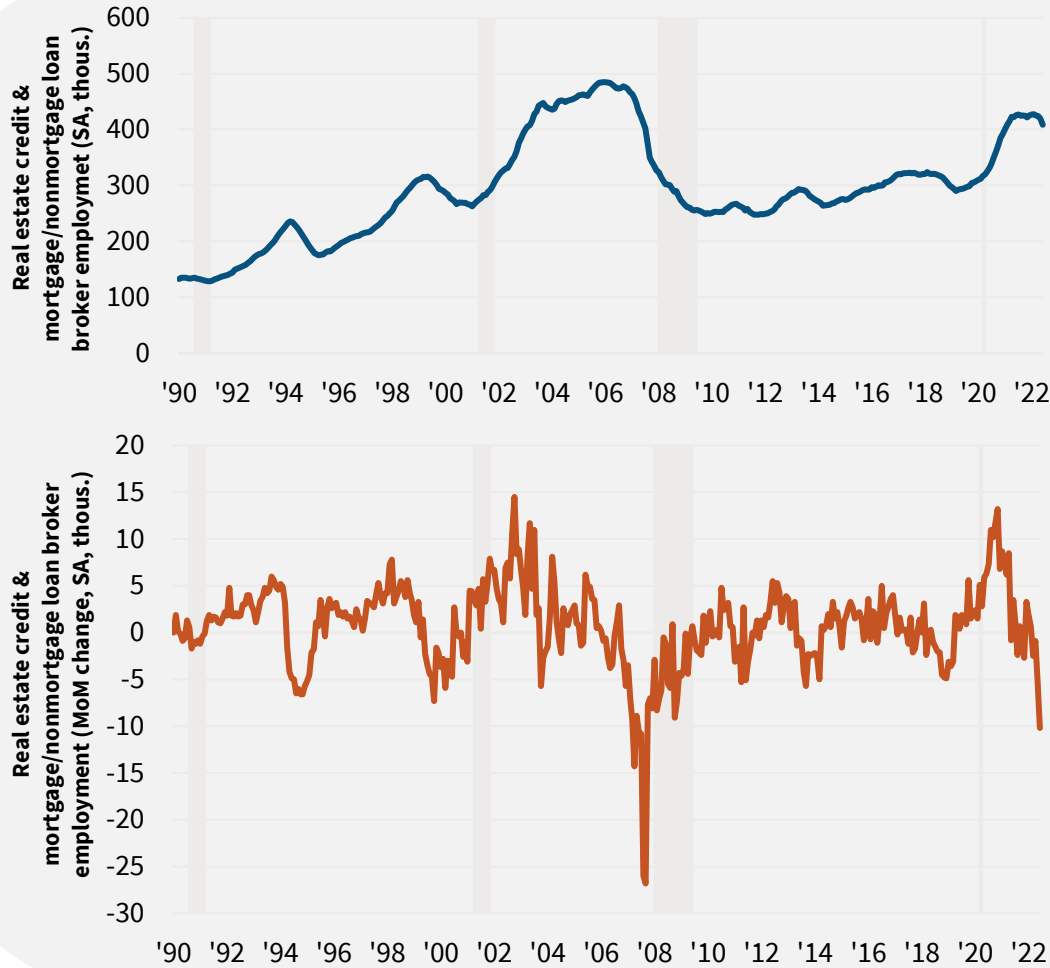
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Mortgage Industry Employment Overview

The increase in mortgage rates has led to a decline in origination volumes, leading to some layoffs in the mortgage industry as lenders have begun to cut costs, indicated by the month-over-month changes below. However, compared to 2019, employment levels remain relatively high currently.

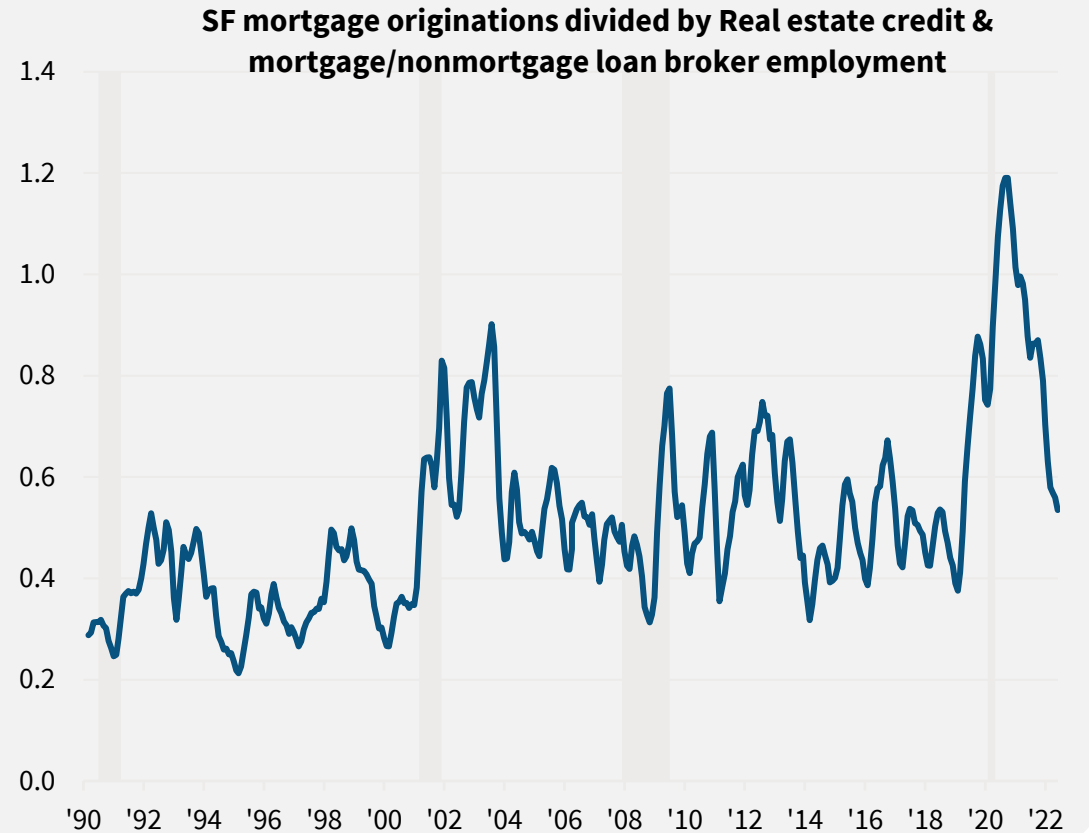
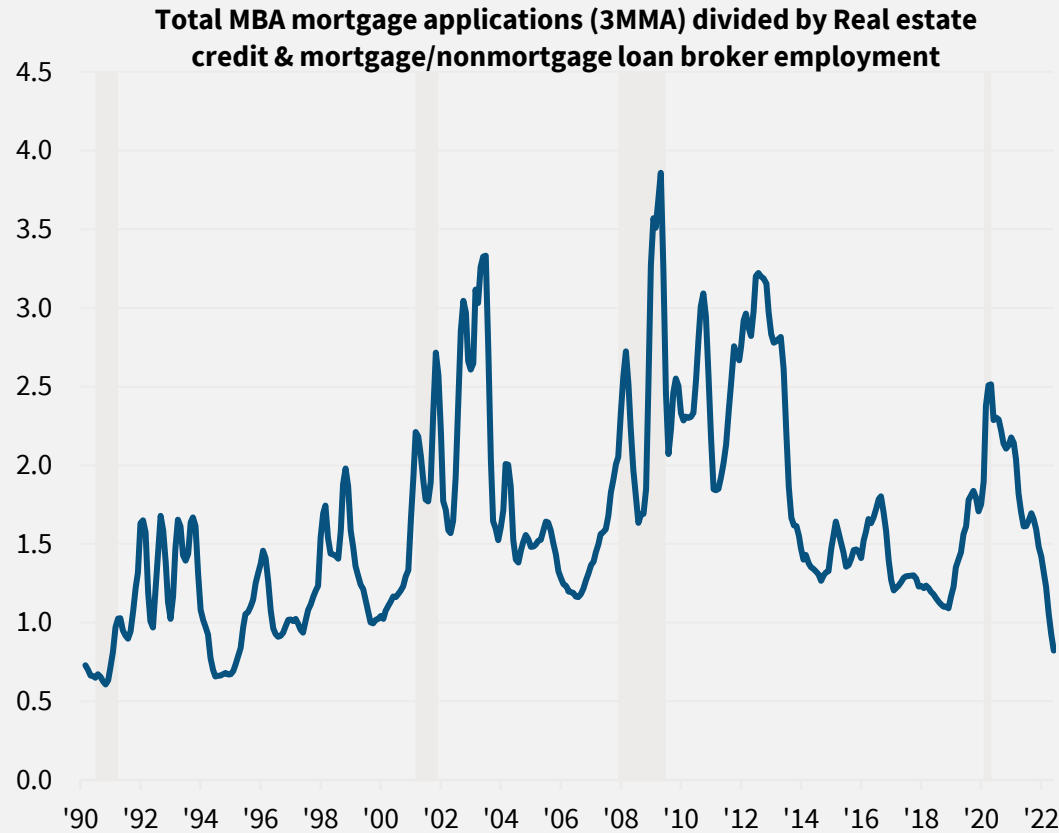


Source: Bureau of Labor Statistics, Fannie Mae analysis



Productivity

The average amount of origination volume per employee* spiked at the end of 2020 before retreating through 2021 and 2022 as mortgage rates increased and volumes declined. Loan applications per employee* followed a similar pattern.

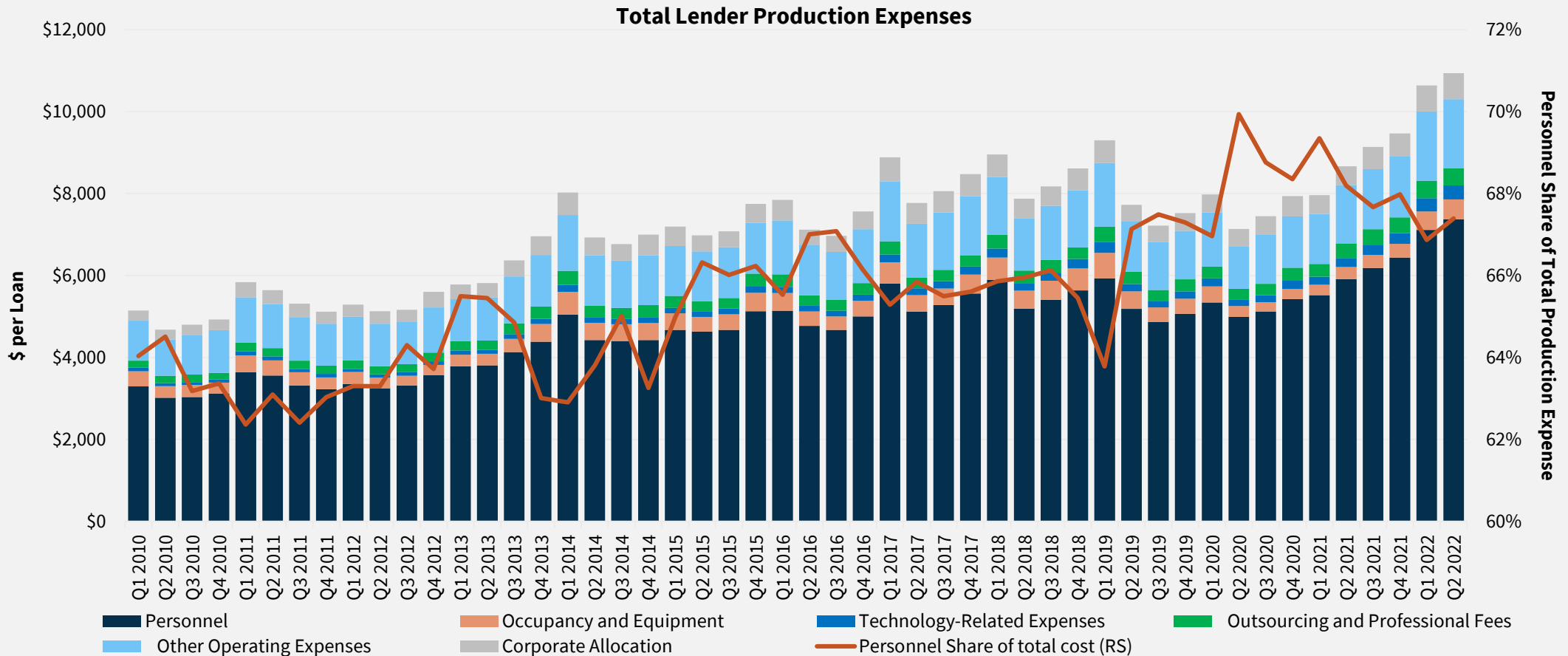


* Based on total mortgage industry employment, not specific to specific roles
Source: Mortgage Bankers Association, Bureau of Labor Statistics, Fannie Mae analysis



Loan Origination Cost

The average origination cost per loan has steadily increased since Q2 2020 and reached a study-high of \$10,397 per loan in Q2 2022. The majority of lender expense is for personnel, and the share of personnel cost to total expenses has also increased over time, from about 64% in Q1 2010 to a peak of 70% in Q2 2020.



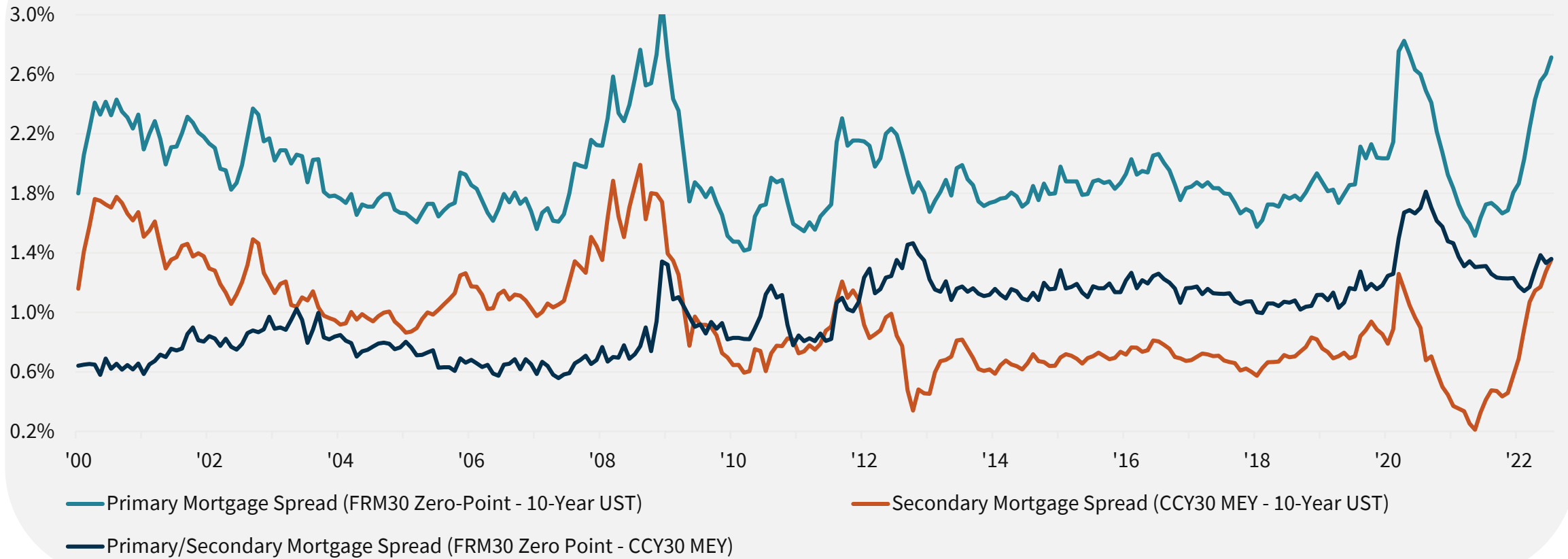
Source: Mortgage Bankers Association, Mortgage Bankers Performance Reports - Quarterly and Annual



Mortgage Spreads

Primary and secondary spreads have widened sharply as the mortgage rate has risen much faster than the 10-year Treasury, though the primary/secondary spread has only risen slightly.

Mortgage Spreads





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Methodology of Mortgage Lender Sentiment Survey[®]

Survey Methodology

- A 5-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 about ~10 questions.

Sample Design

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

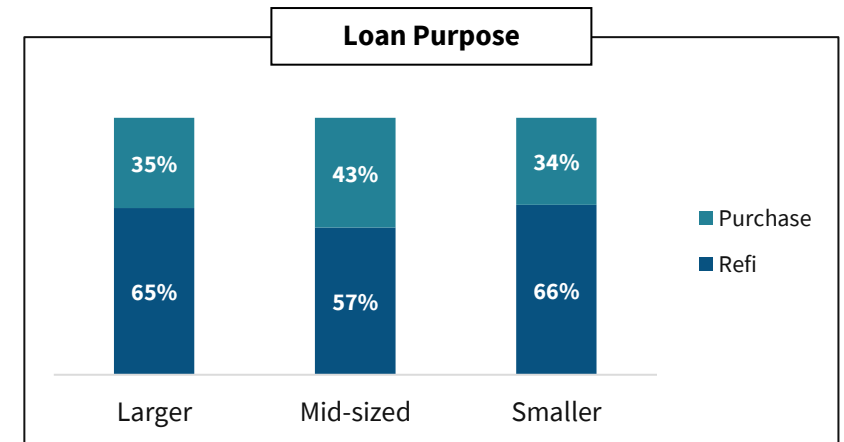
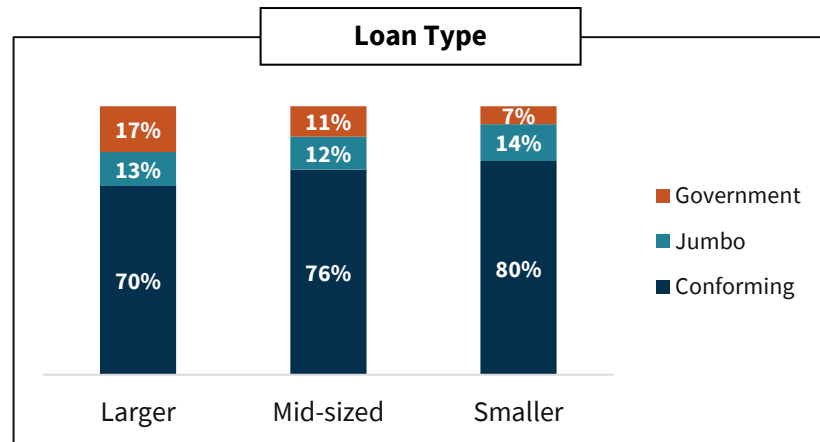
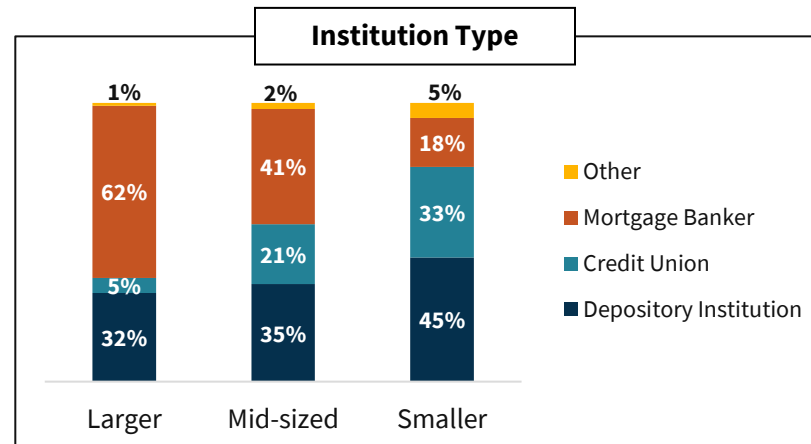
Data Weighting

- 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 2021. Institutions were divided into three groups based on their 2021 total industry loan volume – Larger (top 15%), Mid-sized (top 16%-35%), and Smaller (bottom 65%). The data below further describe the composition and loan characteristics of the three groups of institutions.



Note: Government loans include FHA loans, VA loans and other non-conventional loans from Marketrac.



Q3 2022 Cross-Subgroup Sample Sizes

	Total	Larger Lenders	Mid-Sized Lenders	Smaller Lenders
Total	187	50	38	99
Mortgage Banks (non-depository)	74	32	19	23
Depository Institutions	75	14	13	48
Credit Unions	38	4	6	28





Appendix

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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:

Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go up? Please select up to two areas.
Showing Largest impact on cost per loan increase + Second largest impact on cost per loan increase

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Back-end operational staff (underwriters, processors, & closers)	49%	56%	43%	48%	55%	41%	55%
Compliance/legal	37%	27%	42%	42%	26%	53% ^{M,C}	32%
Loan officers	31%	35%	37%	23%	38%	24%	21%
Consumer-facing technology	18%	19%	16%	21%	17%	21%	22%
Back-end process technology	16%	8%	21%	20%	15%	19%	16%
Secondary marketing/capital markets	15%	16%	13%	15%	11%	15%	22%
General and administrative (G&A) expenses such as facilities and equipment	10%	9%	11%	10%	9%	10%	11%
Marketing	8%	11%	5%	6%	10%	3%	11%
Corporate IT	5%	9%	3%	6%	8%	4%	5%
Other (Please specify)	3%	0%	7%	2%	2%	3%	3%
None of my mortgage origination costs increased	1%	2%	0%	2%	1%	3%	0%

53% is significantly higher than 26% (mortgage banks) and 32% (credit unions)



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 below may add not sum to 100% due to rounding.

Example:

How much has your firm invested in digitization efforts over the past two years for your mortgage business?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Significant	52%	53%	58%	46%	53%	49%	46%
Some	34%	38%	28%	36%	34%	31%	45%
A little	10%	6%	14%	9%	7%	13%	4%
Almost none	3%	3%	0%	6%	5%	3%	3%
Don't know/Not sure	1%	0%	0%	4%	0%	4%	3%

“Total” of 34% is
 $(38\% + 28\% + 36\%) / 3$



Factors Driving the Average Cost per Loan to Go Up

Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go up? Please select up to two areas.
Showing Largest impact on cost per loan increase + Second largest impact on cost per loan increase

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Back-end operational staff (underwriters, processors, & closers)	49%	56%	43%	48%	55%	41%	55%
Compliance/legal	37%	27%	42%	42%	26%	53% ^{M,C}	32%
Loan officers	31%	35%	37%	23%	38%	24%	21%
Consumer-facing technology	18%	19%	16%	21%	17%	21%	22%
Back-end process technology	16%	8%	21%	20%	15%	19%	16%
Secondary marketing/capital markets	15%	16%	13%	15%	11%	15%	22%
General and administrative (G&A) expenses such as facilities and equipment	10%	9%	11%	10%	9%	10%	11%
Marketing	8%	11%	5%	6%	10%	3%	11%
Corporate IT	5%	9%	3%	6%	8%	4%	5%
Other (Please specify)	3%	0%	7%	2%	2%	3%	3%
None of my mortgage origination costs increased	1%	2%	0%	2%	1%	3%	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



Factors Driving the Average Cost per Loan to Go Down

Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go down? Please select up to two areas.
Showing Largest impact on cost per loan decrease + Second largest impact on cost per loan decrease

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Back-end process technology	37%	49% ^S	36%	26%	42%	27%	33%
Consumer-facing technology	26%	31%	24%	24%	24%	28%	26%
General and administrative (G&A) expenses such as facilities and equipment	19%	15%	32% ^S	11%	19%	15%	13%
Secondary marketing/capital markets	17%	23%	13%	14%	18%	15%	14%
Back-end operational staff (underwriters, processors, & closers)	16%	19%	21%	11%	19%	14%	9%
Marketing	13%	13%	9%	18%	6%	20% ^M	21% ^M
Loan officers	12%	12%	13%	8%	9%	11%	12%
Corporate IT	9%	13%	11%	5%	11%	6%	5%
Compliance/legal	9%	5%	8%	16% ^L	8%	14%	13%
Other (Please specify)	2%	2%	0%	4%	1%	4%	3%
None of my mortgage origination costs decreased	18%	8%	16%	29% ^L	20%	20%	24%

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



Areas with largest impact on decrease of average cost per loan

Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go down? Please select up to two areas.
Cost to increase the most + Cost to increase the second most

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Consumer-facing technology	32%	34%	33%	27%	30%	27%	34%
Compliance/legal	28%	30%	25%	30%	22%	40% ^{M,C}	21%
Marketing	27%	30%	32%	21%	29%	27%	17%
Back-end process technology	26%	24%	30%	22%	34% ^D	11%	30% ^D
Back-end operational staff (underwriters, processors, & closers)	19%	15%	17%	25%	11%	29% ^M	24%
Loan officers	17%	16%	12%	22%	19%	19%	16%
Corporate IT	15%	18%	14%	11%	16%	10%	16%
Secondary marketing/capital markets	15%	15%	12%	17%	13%	15%	21%
General and administrative (G&A) expenses such as facilities and equipment	10%	4%	13%	12%	8%	10%	13%
Other (Please specify)	2%	2%	4% ^S	0%	3%	0%	0%
I do not expect any of my origination costs to increase over the next two years	4%	5%	3%	5%	5%	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



Interacting Directly with Consumers

Does your firm directly interact with borrowers/consumers on mortgage inquiry, loan application, or underwriting?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Yes	96%	94%	97%	98%	97%	96%	97%
No	4%	6%	3%	2%	3%	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



Digitization Investment Level Over Past Two Years

How much has your firm invested in digitization efforts over the past two years for your mortgage business?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Significant	52%	53%	58%	46%	53%	49%	46%
Some	34%	38%	28%	36%	34%	31%	45%
A little	10%	6%	14%	9%	7%	13%	4%
Almost none	3%	3%	0%	6%	5%	3%	3%
Don't know/Not sure	1%	0%	0%	4%	0%	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



Digitization Investment Level Over the Next Two Years

Based on your firm's experience, to what extent have digitization efforts delivered cost savings for your mortgage business?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Significantly more	26%	24%	28%	27%	32% ^D	19%	30%
Somewhat more	42%	44%	41%	40%	38%	46%	38%
About the same	24%	24%	26%	22%	23%	23%	24%
Somewhat less	5%	7%	5%	3%	6%	5%	0%
Significantly less	2%	1%	0%	4%	1%	3%	5%
Don't know/Not sure	1%	0%	0%	4%	0%	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



Costs Savings From Digitization

Based on your firm's experience, to what extent have digitization efforts delivered cost savings for your mortgage business?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Significant cost savings	7%	5%	8%	7%	10%	3%	8%
Some cost savings	50%	61%	41%	49%	49%	55%	46%
About no impact (break even)	20%	20%	18%	22%	18%	23%	21%
Costs outweigh monetary benefits (negative ROI)	8%	7%	13%	5%	11% ^C	7%	0%
Other non-monetary benefits making it pay off (e.g., table stakes; competition forced it)	8%	5%	11%	7%	10% ^D	1%	13% ^D
Don't know/Not sure	7%	2%	9%	10%	2%	11% ^M	12% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
Showing % "Very effective"

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Improving borrower/consumer experience	33%	26%	41%	31%	26%	37%	32%
Reducing cycle time/Increasing productivity	21%	16%	28%	18%	22%	21%	13%
Enhancing quality of work (e.g., reducing data errors)	19%	15%	28%	14%	19%	17%	13%
Reducing loan origination costs	6%	2%	8%	7%	11% ^D	3%	3%
Reducing cyclical variability of staffing	6%	1%	13% ^L	5%	7%	5%	3%
Converting fixed costs to variable costs	6%	11% ^S	4%	2%	7%	4%	3%
Lowering regulatory compliance costs or risks	5%	3%	7%	6%	7%	2%	8%
My organization's digitization efforts did not meet/achieve any of the goals listed above.	3%	1%	0%	8%	1%	5%	9% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Reducing Cycle Time/Increasing Productivity" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	21%	16%	28%	19%	23%	22%	11%
Somewhat effective	49%	56%	47%	43%	51%	40%	54%
Slightly effective	20%	25%	14%	22%	19%	23%	24%
Little/no impact	8%	3%	11%	11%	7%	12%	4%
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Reducing Loan Origination Costs" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	6%	2%	8%	7%	10%	3%	3%
Somewhat effective	31%	38%	29%	25%	28%	35%	22%
Slightly effective	37%	43%	30%	36%	36%	34%	44%
Little/no impact	25%	16%	33%	27%	26%	26%	24%
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Improving Borrower/Consumer Experience" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	33%	27%	41%	32%	28%	39%	31%
Somewhat effective	46%	60% ^M	33%	44%	54%	39%	46%
Slightly effective	14%	13%	18%	11%	16%	10%	14%
Little/no impact	5%	0%	8% ^L	7% ^L	2%	10% ^M	3%
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Lowering Regulatory Compliance Costs or Risks" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	5%	3%	7%	6%	7%	2%	8%
Somewhat effective	34%	40% ^S	39% ^S	22%	39% ^C	31% ^C	14%
Slightly effective	28%	28%	25%	31%	23%	30%	39%
Little/no impact	31%	29%	29%	35%	31%	34%	32%
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Reducing Cyclical Variability of Staffing" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	7%	1%	13% ^L	5%	8%	5%	3%
Somewhat effective	27%	22%	36%	23%	33%	22%	18%
Slightly effective	37%	48% ^S	33%	30%	35%	29%	51% ^D
Little/no impact	28%	29%	18%	36% ^L	24%	41% ^{M,C}	21%
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Enhancing Quality of Work (e.g., reducing data errors)" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	19%	15%	28%	15%	20%	19%	11%
Somewhat effective	49%	57%	43%	46%	51%	46%	49%
Slightly effective	21%	21%	20%	24%	22%	19%	28%
Little/no impact	9%	7%	9%	10%	7%	13%	6%
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Effectiveness of Digitization at Achieving Goals

Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below?
 Showing "Converting Fixed Costs to Variable Costs" among lenders who invested at least a little in digitization

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	176	48	38	90	70	70	36
Very effective	6%	11% ^S	4%	2%	7%	4%	3%
Somewhat effective	25%	18%	29%	28%	33% ^C	24%	14%
Slightly effective	32%	35%	33%	26%	29%	35%	22%
Little/no impact	36%	36%	34%	38%	31%	34%	54% ^{M,D}
None of the above	2%	0%	0%	5%	0%	3%	7% ^M

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



Current Outsourcing Status

Does your mortgage business currently outsource any part of loan origination process?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	187	50	38	99	74	75	38
Yes	21%	32% ^S	18%	12%	27% ^D	12%	14%
No (all in-house)	79%	67%	82%	87% ^L	72%	87% ^M	86%
Don't know/Not sure	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



Parts of Loan Origination Process Being Outsourced

Which part(s) of loan origination process does your firm outsource to a third-party? Please check all that apply.
Among respondents whose firm currently outsources any part of the loan origination process

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	34	16	7	12	20	9	6
Processing: verifying information and documents (e.g., borrower credit, income, assets, tax return, etc.)	49%	66%	29%	35%	48%	67%	18%
Quality control (QC)	45%	50%	43%	35%	50%	44%	18%
Underwriting: analyzing whether the lending risk is acceptable	41%	44%	29%	52%	45%	33%	55%
Closing: delivering disclosures and closing documents, signing, and settlement (including e-delivery and e-sign)	37%	47%	14%	48%	42%	33%	45%
Demand generation: Buying leads from lead aggregators	32%	22%	57%	17%	25%	39%	18%
Legal/Compliance	17%	22%	14%	9%	18%	11%	18%
Other	30%	28%	43%	17%	28%	22%	36%

*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*



Effectiveness of Outsourcing in Converting Fixed Costs to Variable Costs

Based on your firm's experience, how effective has the outsourcing resulted in converting fixed costs to variable costs?
Among respondents whose firm currently outsources any part of the loan origination process

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	34	16	7	12	20	9	6
Very effective	28%	31%	29%	17%	25%	33%	18%
Somewhat effective	52%	56%	57%	30%	58%	44%	18%
Slightly effective	13%	12%	0%	35%	18%	0%	45% ^D
Little/no impact	6%	0%	14%	9%	0%	22% ^M	0%
Don't know/Not sure	2%	0%	0%	9%	0%	0%	18%

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



Expected Future Outsourcing Status Among Those Who Do Not Outsourced

Over the next 1-2 years, does your mortgage business plan to outsource any part of loan origination process?
Among respondents whose firm does not currently outsource any part of the loan origination process

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	152	34	31	88	54	66	32
Yes	6%	9%	6%	2%	6%	4%	3%
No (all in-house)	83%	76%	90%	81%	85%	81%	78%
Don't know/Not sure	11%	15%	3%	17%	8%	15%	18%

*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*



Expected Future Outsourcing Status Among Those Who Have Outsourced

Which part(s) of loan origination process does your firm plan to outsource to a third-party? Please check all that apply.
Among respondents whose firm currently outsources any part of the loan origination process

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	7	3	2	2	4	2	1
Underwriting: analyzing whether the lending risk is acceptable	42%	33%	50%	50%	29%	80%	0%
Processing: verifying information and documents (e.g., borrower credit, income, assets, tax return, etc.)	38%	67%	0%	50%	43%	60%	0%
Quality control (QC)	38%	67%	0%	50%	57%	40%	0%
Demand generation: Buying leads from lead aggregators	35%	17%	50%	50%	29%	60%	0%
Closing: delivering disclosures and closing documents, signing, and settlement (including e-delivery and e-sign)	23%	33%	0%	50%	29%	40%	0%
Legal/Compliance	8%	0%	0%	50%	29%	0%	0%
Other	20%	0%	50%	0%	0%	0%	100%

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





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Question Text

QR482: Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go up? Please select up to two areas.

QR483: Over the past two years, which of the following areas, if any, have had the largest impact in driving the average cost per loan at your firm to go down? Please select up to two areas.

QR484: Now, thinking of the next two years, which of the following cost areas do you anticipate will likely increase the most? Please select up to two areas.

QR485: You mentioned that you expect the cost for ## INSERT QR484a CHOICE ## will increase the most over the next two years. Could you share your views? For example, what do you think will drive the costs higher? (Optional)

QR486: Does your firm directly interact with borrowers/consumers on mortgage inquiry, loan application, or underwriting?

QR487: How much has your firm invested in digitization efforts over the past two years for your mortgage business?

QR488: Now, thinking of the next two years, how much more or less does your firm plan to invest in digitization efforts for your mortgage business?

QR489: Based on your firm's experience, to what extent have digitization efforts delivered cost savings for your mortgage business?

QR490: Based on your firm's experience, how effective have the digitization efforts been in achieving each of the goals listed below? Please choose one answer per row.

QR491: You mentioned that your firm's digital transformation efforts have been ## INSERT QR490g CHOICE## in converting fixed costs to variable costs. Could you share your experience? For example, what did your firm want to achieve? What worked? Or, what, if anything, could have been done to make your digital transformation efforts more effective? (Optional)

QR492: Does your mortgage business currently outsource any part of loan origination process?

QR493: Which part(s) of loan origination process does your firm outsource to a third-party? Please check all that apply.

QR494: Based on your firm's experience, how effective has the outsourcing resulted in converting fixed costs to variable costs?

