

Mortgage Lender Sentiment Survey[®] Special Topics Report

How Do Lenders Value Appraisal Modernization?

First Quarter 2022



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Executive Summary

Nearly all lenders surveyed believe that appraisal modernization is valuable to the mortgage industry and that **CU[®] and other third-party tools have been helpful** in managing collateral risk. Lenders identified **inspection-based appraisal waivers** and **non-traditional appraisals (e.g., desktop appraisals or hybrid appraisals)** as the most beneficial areas to adopt. **Speed of adoption** and **integration with LOS and GSE underwriting systems** are seen as key challenges to address.

Appraisal Modernization



94% say appraisal modernization is **valuable**, and **61%** think it's **very valuable**

Most Beneficial Area to Adopt



32% say **inspection-based appraisal waivers**

30% say **non-traditional appraisals (e.g., desktop appraisals or hybrid appraisals)**

Implementation

Biggest Benefit

38% say **shortening loan origination cycle time**

Challenges

- 1** Speed of industry-wide adoption
- 2** Integration with LOS (loan origination systems)
- 3** Integration with GSE automated underwriting systems

Managing Collateral Risk

(Combined % very + somewhat helpful)



94% say Collateral Underwriter[®] / other third-party tools have been **helpful** to manage collateral risk, and **54%** say it's **very helpful**

Why Collateral Underwriter[®] (CU[®])/Other Tools are Helpful



- Creates a process for quantifying and managing appraisal risk
- Helps to determine if some of the data seems questionable
- Helps detect quality or valuation issues

Section Introduction Text: In this section, we would like to gather your views on appraisal modernization. Appraisal Modernization is an effort to leverage a variety of technologies and processes to enhance the ability to manage collateral risk and make the process more efficient for lenders, borrowers, appraisers, and secondary-market investors.





Business Context



Business Context and Research Questions

Business Context

Technologies are transforming many industries to improve operational efficiency, lower costs, and enhance customer experience. Appraisal modernization has increasingly gained traction in the mortgage lending industry. It refers to a concept to leverage technologies, data, and analytics to enhance the ability to manage collateral risk and make the process more efficient for lenders, consumer borrowers, appraisers, and secondary-market investors. The COVID-19 pandemic introduced “appraisal flexibilities” and further stimulated industry discussion on how the industry could “modernize” property valuation process. This topic has also gained attention by the Federal Housing Finance Agency (FHFA), who issued a Request for Input (RFI) in late December 2020, asking for input on appraisal policies, practices, and processes.

Fannie Mae’s Economic & Strategic Research (ESR) Group surveyed senior mortgage executives in February 2022 through its quarterly Mortgage Lender Sentiment Survey[®] to better understand lenders’ views about appraisal modernization, its benefits, implementation challenges, and top application areas.

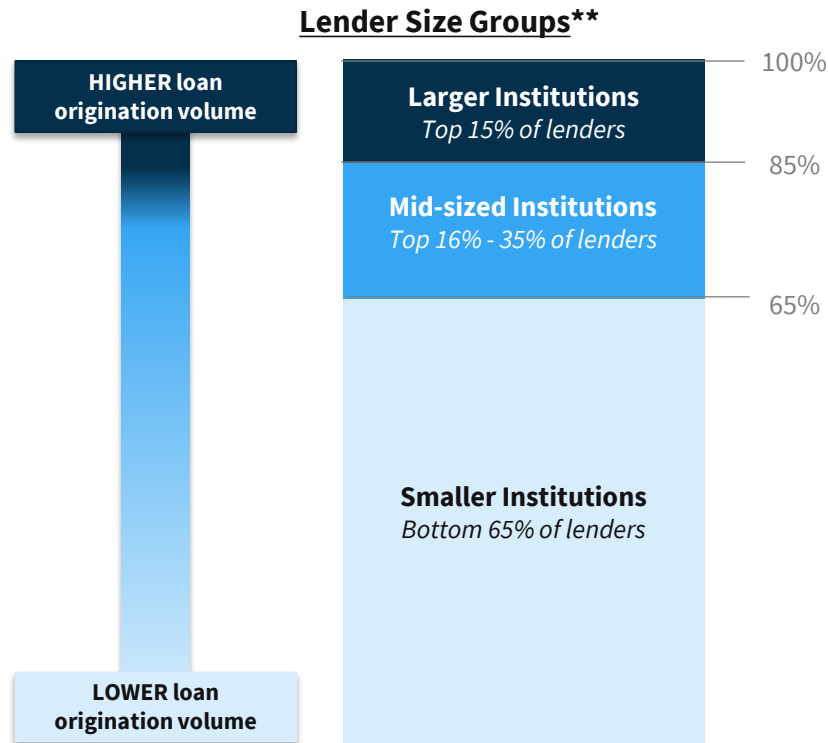
Research Questions

- 1) What’s lenders’ overall sentiment about the value of appraisal modernization efforts for the mortgage lending industry?
- 2) To what extent investing in appraisal modernization technology/tools would be a top priority for lenders, compared with other technologies/tools?
- 3) What specific applications of appraisal modernization do lenders find most beneficial for the industry to adopt?
- 4) What are the top benefits lenders perceive that could result from appraisal modernization?
- 5) What are the top implementation challenges lenders foresee?
- 6) What suggestions or ideas do lenders have to enhance Collateral Underwriter (CU[®]) or third-party tools to make the process more efficiently?



Q1 2022 Respondent Sample and Groups

The current analysis is based on first quarter 2022 data collection. For Q1 2022, a total of 200 senior executives completed the survey between February 2-14, representing 188 lending institutions.*



Sample Q1 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.		188
Lender Size Groups	Larger Institutions Lenders in the Fannie Mae database who were in the top 15% of lending institutions based on their total 2020 loan origination volume (above \$2.25 billion)	47
	Mid-sized Institutions Lenders in the Fannie Mae database who were in the next 20% (16%-35%) of lending institutions based on their total 2020 loan origination volume (between \$598 million and \$2.25 billion)	62
	Smaller Institutions Lenders in the Fannie Mae database who were in the bottom 65% of lending institutions based on their total 2020 loan origination volume (less than \$598 million)	79
Institution Type***	Mortgage Banks (non-depository)	83
	Depository Institutions	62
	Credit Unions	40

* 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 2020 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.





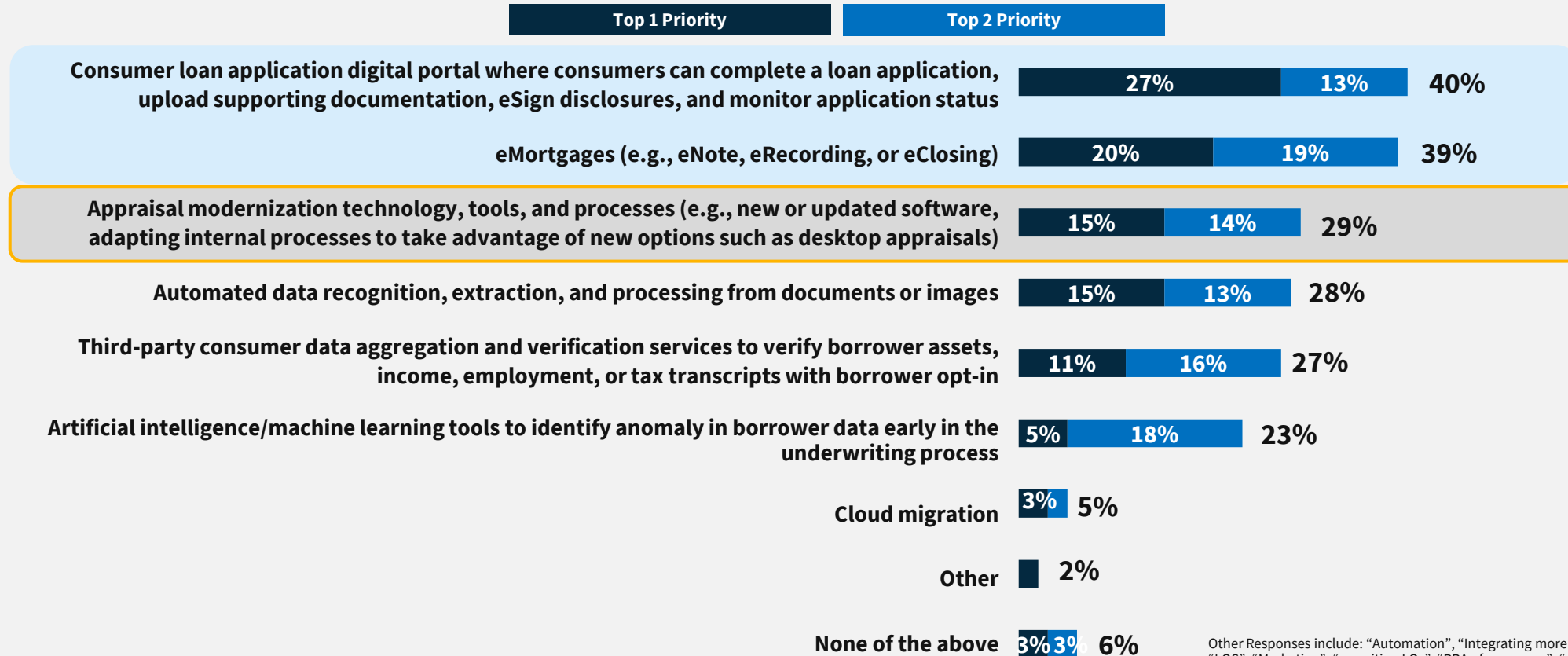
Appraisal Modernization



Top Investment Priorities for 2022

Most lenders view appraisal modernization as a medium priority area for investment, after consumer loan application digital portals and eMortgages. Fifteen percent of lenders cited appraisal modernization as their top priority for 2022.

Imagine that you currently have limited funding or resources to invest. Which of the following technologies or tools would you prioritize in 2022? Please select up to two and rank them in order of your investment priority.



Other Responses include: "Automation", "Integrating more price competitive vendors", "LOS", "Marketing", "recruiting LOs", "RPA of processes", "servicing modernization", "task-based/segmented processing".

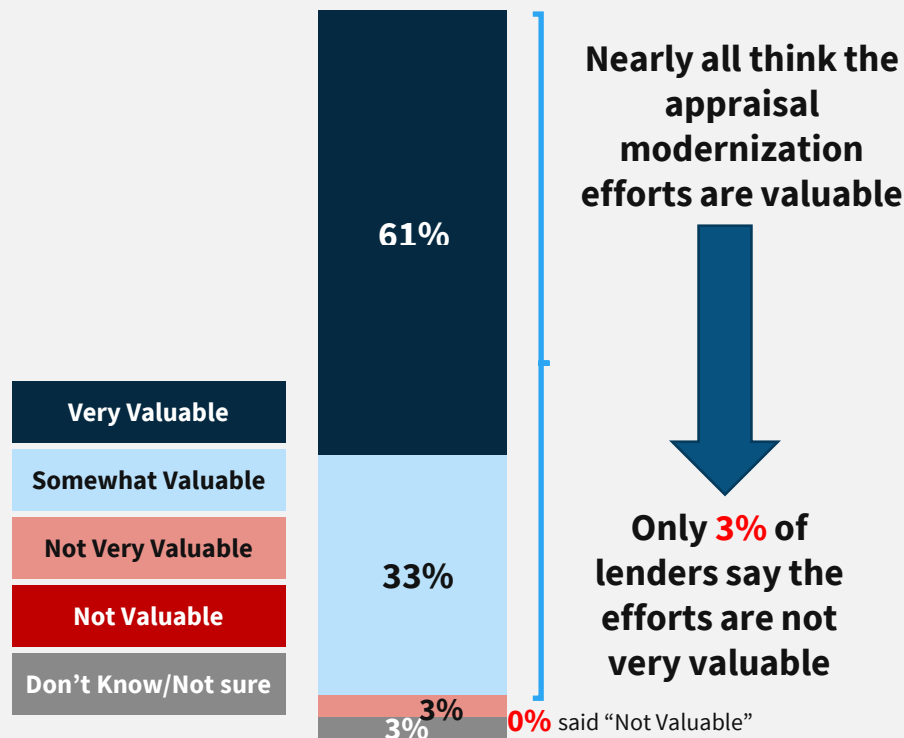
Q: Imagine that you currently have limited funding or resources to invest. Which of the following technologies or tools would you prioritize in 2022? Please select up to two and rank them in order of your investment priority.



Value of Appraisal Modernization Efforts

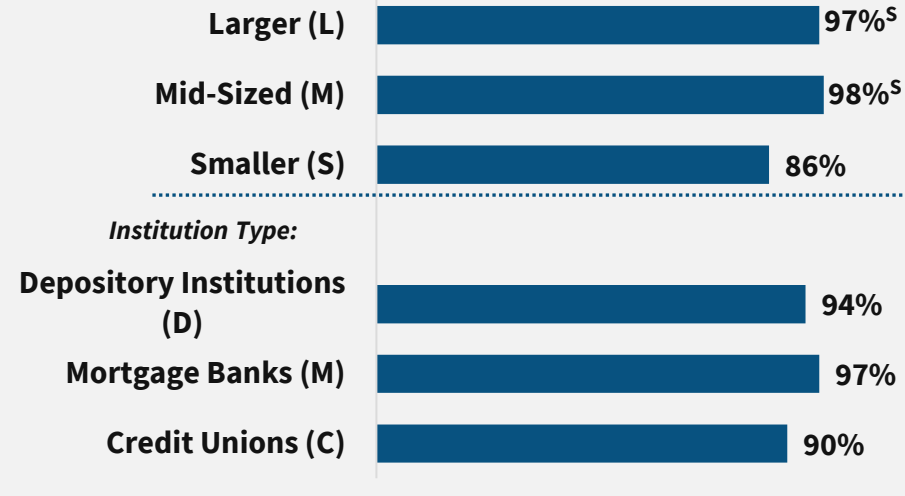
Nearly all lenders agree that appraisal modernization efforts are valuable to the industry. Institutions of all types and sizes are generally likely to find them valuable, though smaller institutions are slightly less likely than larger and mid-sized institutions.

How valuable do you think appraisal modernization efforts are for the mortgage lending industry?



At Least Somewhat Valuable by Size/Type

% Very Valuable + % Somewhat Valuable by Sub-Audience



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

Section Introduction Text: In this section, we would like to gather your views on appraisal modernization. Appraisal Modernization is an effort to leverage a variety of technologies and processes to enhance the ability to manage collateral risk and make the process more efficient for lenders, borrowers, appraisers, and secondary-market investors.

Q: First, overall, how valuable do you think appraisal modernization efforts are for the mortgage lending industry?



Value of Appraisal Modernization Efforts – Why it’s Valuable/Not Valuable

Lenders think that appraisal modernization will create more efficiency and provide more flexibility for appraisers; the few lenders who do not consider it very valuable cited concerns around data quality.

Value of Appraisal Modernization Efforts for the Mortgage Lending Industry

(N=122)

Why it’s Valuable:

Creates More Efficiency

“Appraisal costs and turn-around times have gone up considerably while UCDP valuation feedback has declined. This points to inefficiency that needs to be addressed. AUD feedback should allow for more appraisal waivers and AVM valuation instead of full appraisals...” – Smaller Institution

“Aging population of appraisers so supply would be down. Avoid the delays we have seen in the past for getting appraisals done.” – Mid-Sized Institution

“Appraisal are taking too long to be completed and the number of appraisers entering the industry space is problematic in that it seems like a dying industry.” – Smaller Institution

“Currently, the appraisal process is the biggest issue facing the mortgage industry. It causes significant delays, higher costs (due to involvement of AMCs, and there are fewer experienced practitioners that understand more complex collateral assignments).” – Mid-Sized Institution

Provides Flexibility For Appraisers

“Appraiser population is declining rapidly and standards to be an appraiser are overly rigorous for new people to enter that field.”
– Larger Institution

“Appraisers are so overworked, they cannot get to all the houses we need appraised. If they can, they want to charge more money for the appraisal. The charge gets passed on to the consumer so its hurtful for consumers.” – Mid-Sized Institution

“Appraiser availability has decreased and automated valuation tools are better. Need to use appraisers for harder properties to value.” – Larger Institution

“Appraiser performance has been very unreliable in terms of timeliness and quality for a number of months. Appraisal modernization could help improve on these areas without compromising the quality of the property valuation.” – Mid-sized Institution

Why it’s not very valuable

Concern About Appraisal Quality

“They may work fine in big cities, but in rural areas, there is too much variability from property to property for a canned computer valuation to give an accurate valuation.” – Larger Institution

“The more automation the increased risk of inaccuracy data and market manipulations.” – Smaller Institution

“There is still a problem with appraisal underwriting standards.” – Smaller Institution

“The entire process needs to be improved.”
– Larger Institution

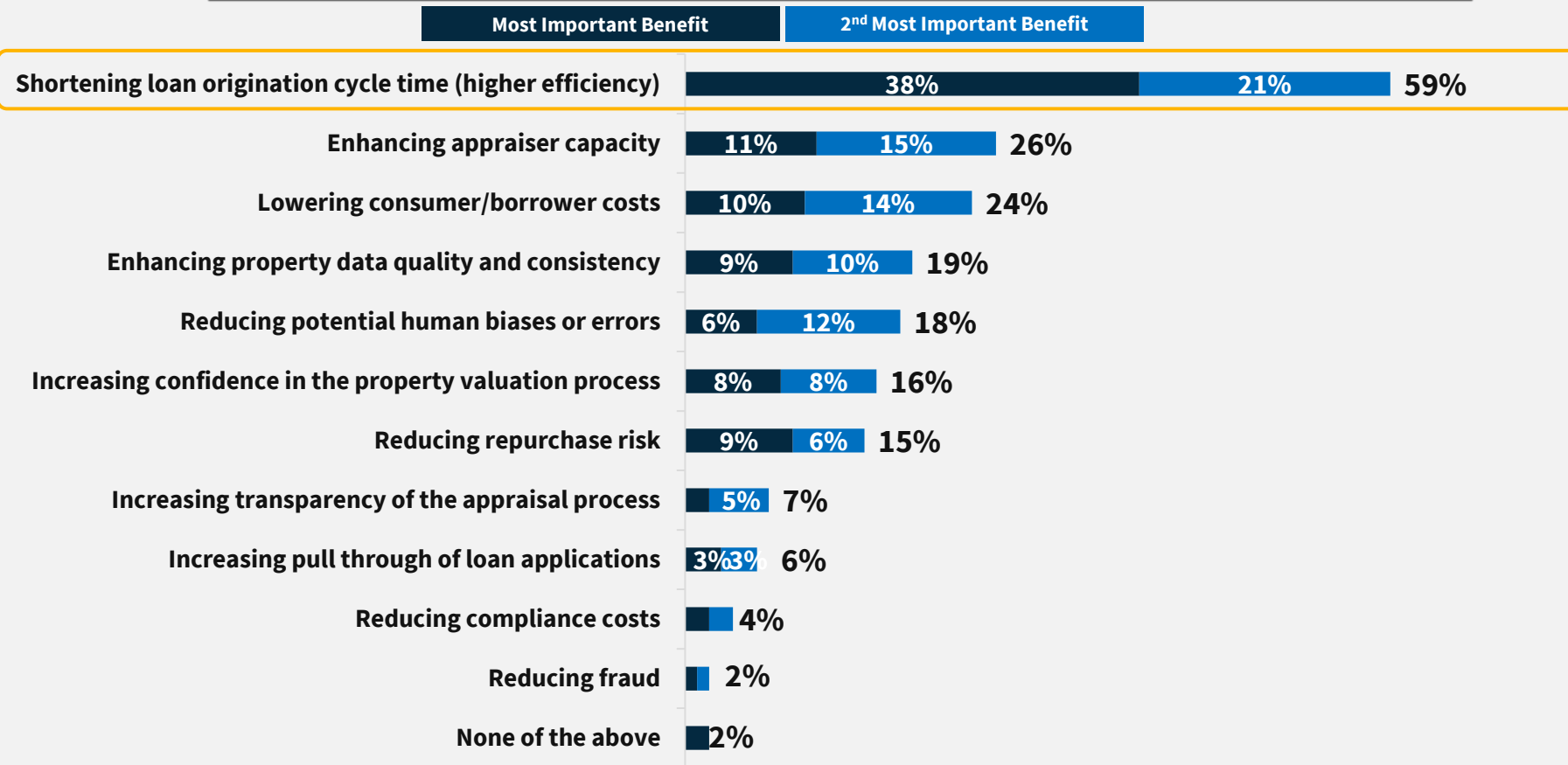
Q: You mentioned that you believe appraisal modernization efforts are ## INSERT QR472 CHOICE ## for the mortgage lending industry. Please share your thoughts on why, such as what values you expect they bring to your business or any concerns you have. (Optional)



Perceived Biggest Benefits for Appraisal Modernization Adoption

Shortening the loan origination cycle time is cited by lenders as the most important benefit resulting from appraisal modernization. Additionally, approximately one-quarter of lenders see enhancing appraiser capacity and lowering consumer/borrower costs as most important.

Most Important Potential Benefits Appraisal Modernization Would Bring to Firm/Mortgage Industry



Q: Listed below are some potential benefits that could result from appraisal modernization efforts. Based on your firm's experience, please select up to two of the most important benefits you think appraisal modernization would bring to your firm or the mortgage industry, and rank them in order of significance.



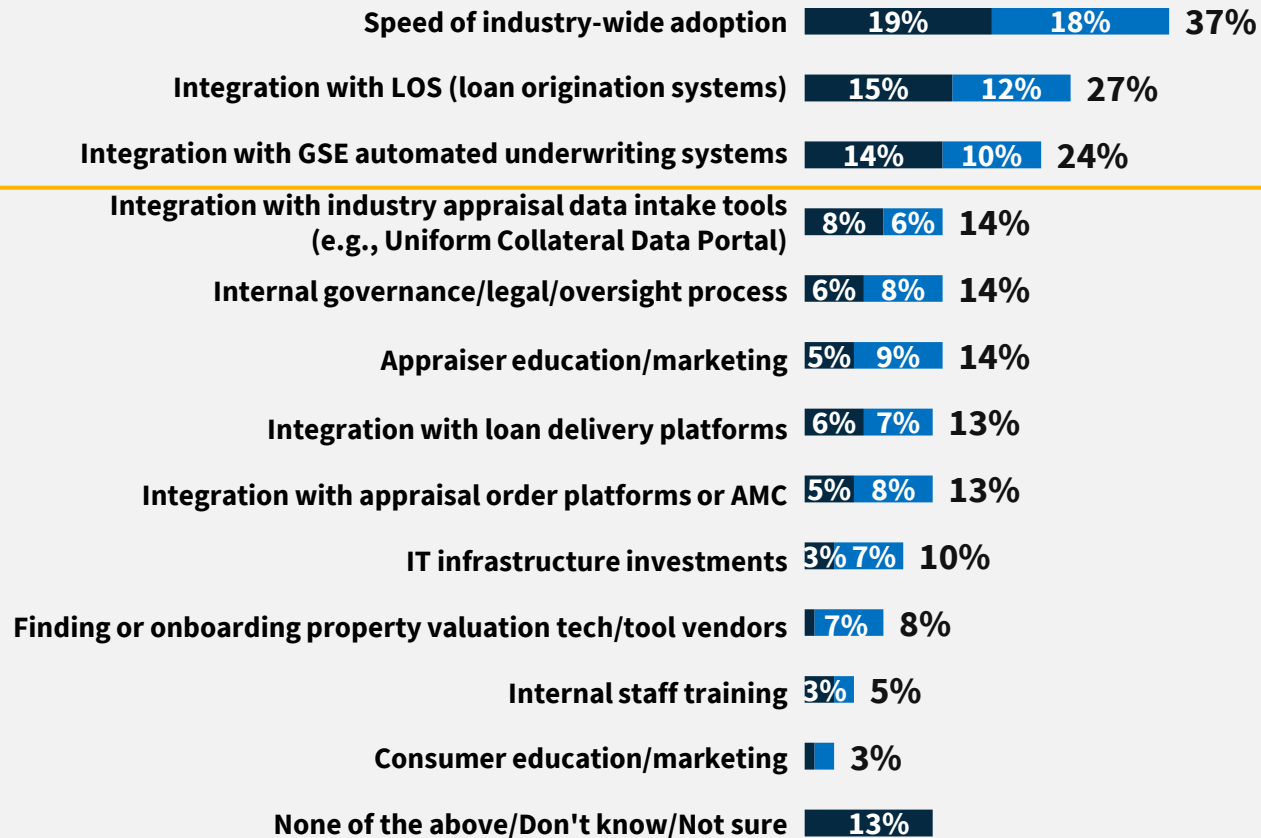
Perceived Biggest Challenges for Appraisal Modernization Implementation

Lenders cite the speed of industry-wide adoption as the biggest implementation challenge, followed by integration with LOS and with GSE automated underwriting systems.

Biggest Appraisal Modernization Implementation Challenges

Top 1 Biggest Challenge

Top 2 Biggest Challenge



Other Potential Challenges for Appraisal Modernization Implementation (N=16)

*“Getting people to understand that an **inspection is far more valuable to all parties than the appraisal we get now.**” – Mid-Sized Institution*

*“If the agencies adopt modernization but the aggregators do not, then **this will create a world of issues for the IMBs that sell loans this way (servicing release).**” – Larger Institution*

*“GSE willingness to expand **acceptance to independent 4th party valuations** (independent of buyer, seller, lender) such as building its own proprietary valuation model or county assessor value.” – Mid-Sized Institution*

*“**Fungibility of loan sales.** PIW not necessarily salable to all investors for example. Reduced appraisal or alternative appraisals might have less investor options, as well.” – Mid-Sized Institution*

Q: Listed below are some possible challenges that companies might face in implementing appraisal modernization efforts. Based on your experience, please select up to two of the biggest possible implementation challenges and rank them in order of significance.

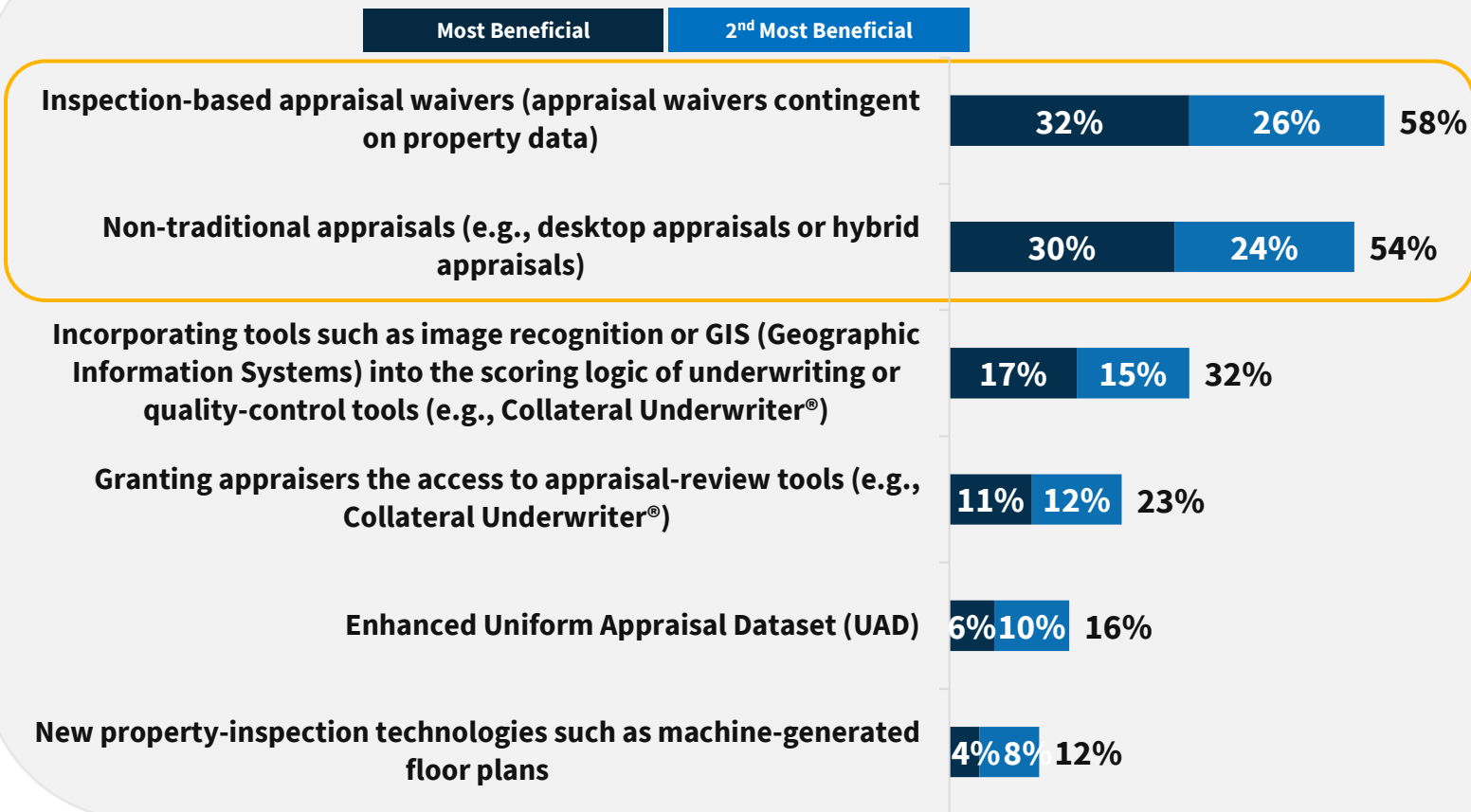
Q: Are there other challenges you foresee that are not captured in the above? Please share your thoughts with us. (Optional)



Most Beneficial Areas of Appraisal Modernization for Firm/Industry to Adopt

Inspection-based appraisal waivers and non-traditional appraisals (e.g., desktop appraisals or hybrid appraisals) are seen as the most beneficial areas to adopt. Additionally, one-third of lenders think incorporating tools such as image recognition or GIS (Geographic Information Systems) into the scoring logic would be helpful.

Most Beneficial Areas of Appraisal Modernization for Firm/Industry to Adopt



Other Ideas That Can Add Value to Appraisal Modernization (N=20)

*“I would like to see appraisers’ data measured against FNMA/Freddie data in an effort to **grade an appraiser’s accuracy prior to any appraisal being done...**” – Smaller Institution*

*“Maybe a combination of Non-Traditional appraisals, with **interior and exterior pictures received from the Realtor, or Borrower**, which can be reviewed by the Underwriter and Processor.” – Smaller Institution*

*“We really should **only be doing full appraisals for high balance, rural and unique properties**. AVM’s give us enough info in most all other cases. The appraisal is really nothing to count on after closing as we have seen in other cycles. Outdated thinking.” – Mid-Sized Institution*

*“**Challenge the orientation of appraisals with the risk it intends to mitigate**. Forward looking risk vs. backward looking valuation validation points.” – Larger Institution*

Q: Listed below are some areas for appraisal modernization. Which ones do you think would be the most beneficial for your firm or the mortgage industry to adopt? Please select up to two and rank them in order of significance.

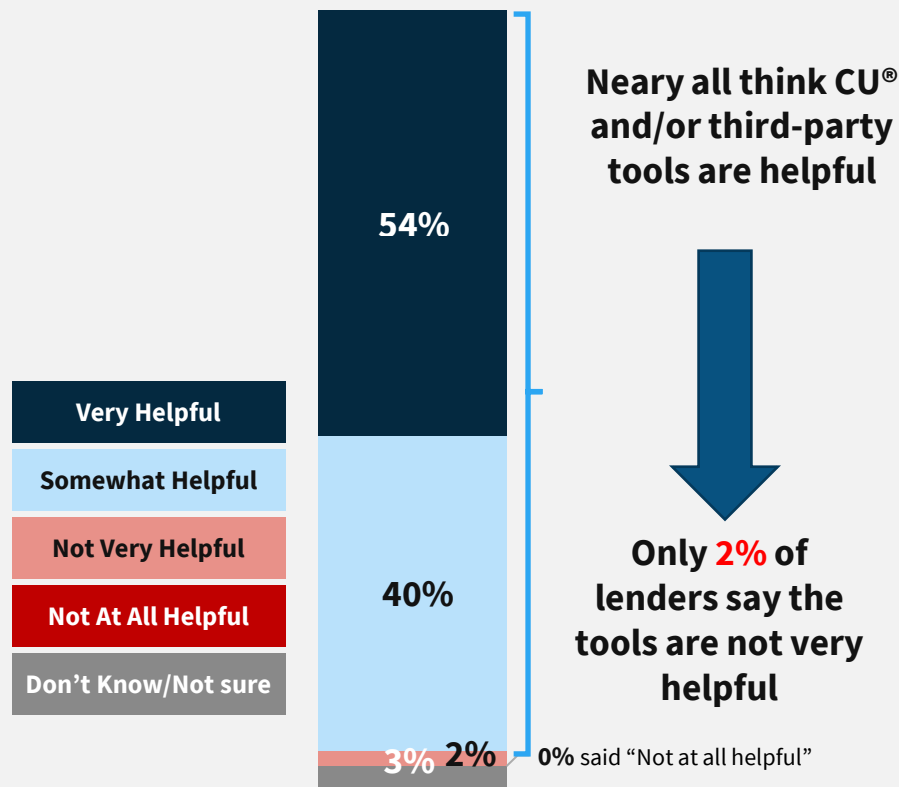
Q: Are there other ideas, not captured in the above, that might help add more value to appraisal modernization? Please share your thoughts with us. (Optional)



How Helpful are Collateral Underwriter® (CU®)/Third-Party Tools in Managing Risk

Nearly all lenders agree that Collateral Underwriter® (CU®) and similar third-party tools are helpful in managing collateral risk. They note that the tools provide an extra layer of due diligence and can boost confidence in certain appraisals.

How helpful are Collateral Underwriter® (CU®) and/or similar third-party tools in managing collateral risk at your firm?



Why do you believe that Collateral Underwriter® (CU®) and/or third-Party Tools are....helpful? (N=62)

Why it's Helpful:

“Enables us to **create a process for quantifying and managing appraisal risk** based on the CU score.” - Smaller Institution

“Helps to determine if some of **the data seems questionable or areas that need extra due diligence** during the manual appraisal reviews.”- Smaller Institution

“Helps us **detect quality or valuation issues** while giving us the confidence on the low score appraisals.” - Mid-Sized Institution

“They add **quality and consistency** to the collateral valuation process, but require significant underwriting time still. There should be a national effort **to ingest all the MLS data and county assessor data into one big data framework** that can be modelled from.” - Mid-Sized Institution

Why it's not very helpful:

“It's **nice to have a scoring method to help evaluate the collateral**, but there **are physical aspects of a property that can't be documented on paper** via the appraisal that can significantly play into the valuation method and CU can impair the scoring of a property since the appraiser can't include it into the appraisal.” - Larger Institution

“Does not work well with **new construction**.” - Larger Institution

“Limitations on **rural locations**.” - Smaller Institution

Q: How helpful are [insert tools used (Collateral Underwriter® (CU®) and/or similar third-party tools)] in managing collateral risk at your firm?

Q: Why do you believe that [the collateral risk management tools you use] are ## INSERT QR480 CHOICE ##? Please share your thoughts. What suggestions do you have on these tools to help your firm manage collateral risk more effectively, or to support a more modern appraisal process?





Appendix



Objectives of Mortgage Lender Sentiment Survey®

The Mortgage Lender Sentiment Survey® (MLSS), which debuted in March 2014, is a quarterly online survey among senior executives in the mortgage industry. 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.

Tracks insights and provides benchmarks into current and future mortgage lending activities and practices.

Quarterly Regular Questions

- **Consumer Mortgage Demand**
- **Credit Standards**
- **Profit Margin Outlook**

Featured Specific Topic Analyses

- **Blockchain**
- **Closing Homeownership Gaps**
- **Lenders' 2021 Business Priorities**
- **COVID-19 & Remote Working**
- **Mortgage Servicing Challenges**
- **CONDO Mortgage Lending Opportunities**

The MLSS is 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.



Methodology of 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.

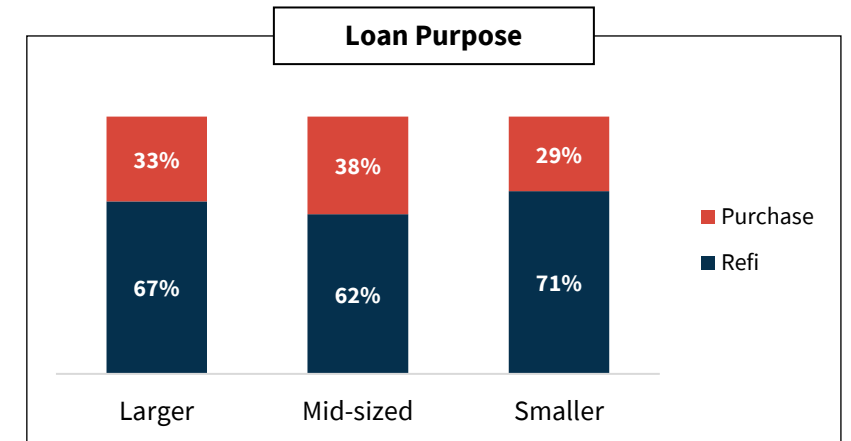
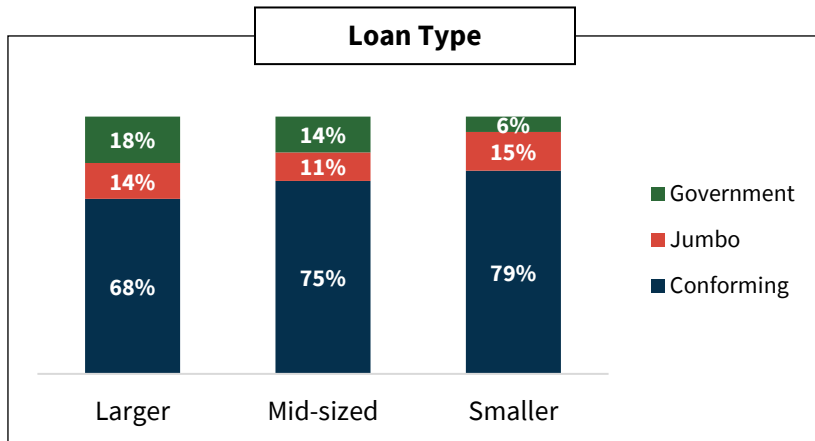
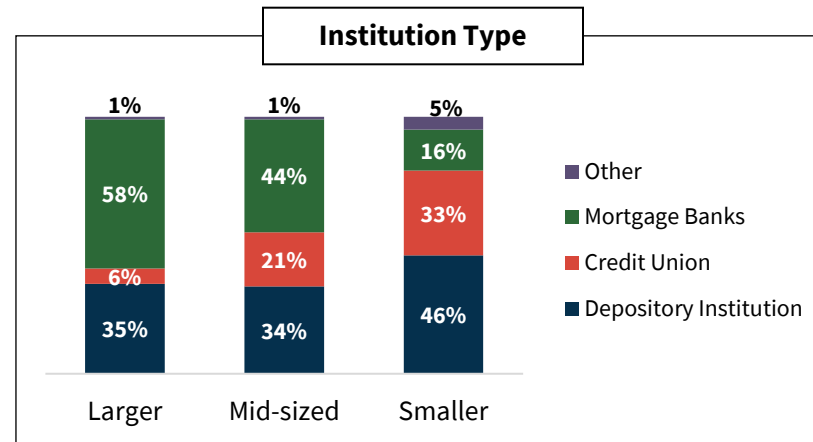
Data Weighting

- 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 2020. Institutions were divided into three groups based on their 2020 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.



Q1 2022 Cross-Subgroup Sample Sizes

	Total	Larger Lenders	Mid-Sized Lenders	Smaller Lenders
Total	188	47	62	79
Mortgage Banks (non-depository)	83	32	30	21
Depository Institutions	62	14	18	30
Credit Unions	40	1	14	25



Types of Tools Lenders Use to Manage Collateral Risk

Two-fifths of lenders only use Collateral Underwriter® (CU®) as part of their underwriting and quality control process, and about a third of lenders also use other tools besides Collateral Underwriter® (CU®).

What types of tools do the firms use to manage collateral risk as part of your underwriting and quality control process?



Mortgage Banks and Credit Unions are significantly more likely to use both CU (63%) and other tools compared to Depository Institutions (13%)

Collateral Underwriter® (CU®)
Only

43%

Other Tools Only

9%

Collateral Underwriter® (CU®)
and Other Tools

26%

Don't Know

22%

Q: What types of tools does your firm use to manage collateral risk as part of your underwriting and quality control process? Please check all that apply.



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:

First, overall, how valuable do you think appraisal modernization efforts are for the mortgage lending industry?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	188	47	62	79	83	62	40
Very valuable	61%	74% ^S	67% ^S	42%	68% ^D	52%	52%
Somewhat valuable	33%	23%	31%	44% ^L	29%	42%	38%
Not very valuable	3%	3%	0%	6%	2%	5%	5%
Not valuable	0%	0%	0%	0%	0%	0%	0%
Don't know/Not sure	3%	0%	2%	8%	1%	2%	5%

67% is significantly higher than 42%
(smaller institutions)



Top Two Investment Priorities for 2022

Top Investment Priorities : Imagine that you currently have limited funding or resources to invest. Which of the following technologies or tools would you prioritize in 2022? Please select up to two and rank them in order of your investment priority.
Showing Top1 Investment Priority +Top 2 Investment Priority

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	188	47	62	79	83	62	40
Consumer loan application digital portal where consumers can complete a loan application, upload supporting documentation, eSign disclosures, and monitor application status	40%	34%	34%	50%	37%	47%	41%
eMortgages (e.g., eNote, eRecording, or eClosing)	39%	42%	35%	37%	36%	33%	49%
Appraisal modernization technology, tools, and processes (e.g., new or updated software, adapting internal processes to take advantage of new options such as desktop appraisals)	29%	27%	35%	24%	27%	42% ^C	16%
Automated data recognition, extraction, and processing from documents or images	28%	27%	32%	28%	31%	29%	23%
Third-party consumer data aggregation and verification services to verify borrower assets, income, employment, or tax transcripts with borrower opt-in	27%	27%	24%	31%	32%	23%	20%
Artificial intelligence/machine learning tools to identify anomaly in borrower data early in the underwriting process	23%	30% ^S	27% ^S	11%	25% ^D	9%	28% ^D
Cloud migration	5%	4%	4%	8%	3%	6%	8%
Other	2%	2%	2%	1%	2%	2%	2%
None of the above	6%	3%	6%	6%	3%	8%	8%
No answer	2%	1%	2%	4%	3%	1%	5%



Views on Appraisal Modernization Efforts for the Mortgage Lending Industry

First, overall, how valuable do you think appraisal modernization efforts are for the mortgage lending industry?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	188	47	62	79	83	62	40
Very valuable	61%	74% ^S	67% ^S	42%	68% ^D	52%	52%
Somewhat valuable	33%	23%	31%	44% ^L	29%	42%	38%
Not very valuable	3%	3%	0%	6%	2%	5%	5%
Not valuable	0%	0%	0%	0%	0%	0%	0%
Don't know/Not sure	3%	0%	2%	8%	1%	2%	5%

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



Two Most Beneficial Areas for Appraisal Modernization

*Most beneficial: Listed below are some areas for appraisal modernization. Which ones do you think would be the most beneficial for your firm or the mortgage industry to adopt? Please select up to two and rank them in order of significance.
Showing Most Beneficial +Second Most Beneficial*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	188	47	62	79	83	62	40
Non-traditional appraisals (e.g., desktop appraisals or hybrid appraisals)	58%	63%	59%	51%	59%	52%	64%
Inspection-based appraisal waivers (appraisal waivers contingent on property data)	54%	55%	56%	52%	51%	55%	60%
New property-inspection technologies such as machine-generated floor plans	32%	30%	34%	30%	29%	32%	34%
Enhanced Uniform Appraisal Dataset (UAD)	23%	18%	17%	37% ^{L,M}	25%	28%	18%
Incorporating tools such as image recognition or GIS (Geographic Information Systems) into the scoring logic of underwriting or quality-control tools (e.g., Collateral Underwriter [®])	16%	15%	20%	13%	17%	19%	8%
Granting appraisers the access to appraisal-review tools (e.g., Collateral Underwriter [®])	12%	16%	10%	9%	17%	8%	4%
No answer	4%	2%	3%	8%	2%	5%	10%

*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*



Two Most Important Potential Benefits Resulting from Appraisal Modernization

Most Important Benefit : Listed below are some potential benefits that could result from appraisal modernization efforts. Based on your firm's experience, please select up to two of the most important benefits you think appraisal modernization would bring to your firm or the mortgage industry and rank them in order of significance.

Showing Most Important + Second Most Important

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	188	47	62	79	83	62	40
Shortening loan origination cycle time (higher efficiency)	59%	63%	57%	56%	55%	61%	66%
Enhancing appraiser capacity	26%	30%	27%	19%	20%	31%	23%
Lowering consumer/borrower costs	24%	26%	21%	25%	23%	20%	30%
Enhancing property data quality and consistency	19%	24%	12%	22%	23%	18%	10%
Reducing potential human biases or errors	18%	17%	23%	16%	21%	21%	8%
Increasing confidence in the property valuation process	16%	11%	14%	23%	13%	21%	21%
Reducing repurchase risk	15%	11%	20%	12%	18%	11%	11%
Increasing transparency of the appraisal process	7%	7%	9%	4%	7%	5%	8%
Increasing pull through of loan applications	6%	3%	8%	8%	5%	5%	12%
Reducing compliance costs	4%	4%	5%	5%	6%	3%	5%
Reducing fraud	2%	4%	2%	0%	3%	1%	0%
None of the above	2%	0%	1%	4%	1%	3%	2%
No answer	3%	0%	3%	5%	5%	0%	5%

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



Two Biggest Possible Implementation Challenges

Biggest Challenges : Listed below are some possible challenges that companies might face in implementing appraisal modernization efforts. Based on your experience, please select up to two of the biggest possible implementation challenges and rank them in order of significance.

Showing biggest challenge + second biggest challenge

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
<i>N</i> =	188	47	62	79	83	62	40
Speed of industry-wide adoption	37%	45% ^S	41% ^S	25%	41%	36%	25%
Integration with LOS (loan origination systems)	27%	23%	26%	32%	29%	21%	34%
Integration with GSE automated underwriting systems	24%	19%	22%	31%	21%	25%	33%
Integration with industry appraisal data intake tools (e.g., Uniform Collateral Data Portal)	14%	10%	17%	15%	15%	13%	18%
Appraiser education/marketing	14%	13%	10%	15%	17%	11%	10%
Internal governance/legal/oversight process	14%	12%	19%	10%	12%	16%	11%
Integration with appraisal order platforms or AMC	13%	14%	17%	8%	16%	9%	11%
Integration with loan delivery platforms	13%	15%	6%	19% ^M	11%	19%	8%
IT infrastructure investments	10%	15%	7%	9%	12%	7%	13%
Finding or onboarding property valuation tech/tool vendors	8%	9%	9%	5%	4%	14%	3%
Internal staff training	5%	8%	2%	7%	5%	7%	2%
Consumer education/marketing	3%	0%	4%	6%	1%	5%	5%
None of the above/Don't know/Not sure	13%	9%	14%	18%	13%	9%	22%
No answer	4%	5%	6%	2%	1%	7%	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*



Tools Firms Use to Manage Collateral Risk

What types of tools does your firm use to manage collateral risk as part of your underwriting and quality control process? Please check all that apply.

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	188	47	62	79	83	62	40
Collateral Underwriter® (CU®) Only	43%	46%	46%	37%	46%	47%	30%
Other tools only	9%	4%	6%	15%	5%	13%	12%
Collateral Underwriter® (CU®) and other tools	26%	29%	24%	24%	31% ^D	13%	32% ^D
Don't know/Not sure	22%	20%	23%	24%	18%	27%	25%

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



How Helpful is Collateral Underwriter® (CU®) and/or Other Tools

How helpful is the Collateral Underwriter® (CU®) and/or other tools in managing collateral risk at your firm?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	145	38	48	60	68	45	30
Very helpful	54%	53%	68% ^S	42%	61%	44%	53%
Somewhat helpful	40%	41%	27%	53% ^M	36%	47%	47%
Not very helpful	2%	4%	0%	2%	1%	4%	0%
Not at all helpful	0%	0%	0%	0%	0%	0%	0%
Don't know/Not sure	3%	3%	4%	3%	3%	4%	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



Question Text

QR471a: Top Investment Priority : Imagine that you currently have limited funding or resources to invest. Which of the following technologies or tools would you prioritize in 2022? Please select up to two and rank them in order of your investment priority.

QR471b: 2nd Investment Priority : Imagine that you currently have limited funding or resources to invest. Which of the following technologies or tools would you prioritize in 2022? Please select up to two and rank them in order of your investment priority.

QR472: First, overall, how valuable do you think appraisal modernization efforts are for the mortgage lending industry?

QR474a: Most Beneficial : Listed below are some areas for appraisal modernization. Which ones do you think would be the most beneficial for your firm or the mortgage industry to adopt? Please select up to two and rank them in order of significance.

QR474b: *2nd Most Beneficial : Listed below are some areas for appraisal modernization. Which ones do you think would be the most beneficial for your firm or the mortgage industry to adopt? Please select up to two and rank them in order of significance.*

QR476a: Most Important Benefit : Listed below are some potential benefits that could result from appraisal modernization efforts. Based on your firm's experience, please select up to two of the most important benefits you think appraisal modernization would bring to your firm or the mortgage industry and rank them in order of significance.

QR476b: 2nd Most Important Benefit : Listed below are some potential benefits that could result from appraisal modernization efforts. Based on your firm's experience, please select up to two of the most important benefits you think appraisal modernization would bring to your firm or the mortgage industry and rank them in order of significance.

QR477a: Biggest Challenge : Listed below are some possible challenges that companies might face in implementing appraisal modernization efforts. Based on your experience, please select up to two of the biggest possible implementation challenges and rank them in order of significance.

QR477b: 2nd Biggest Challenge : Listed below are some possible challenges that companies might face in implementing appraisal modernization efforts. Based on your experience, please select up to two of the biggest possible implementation challenges and rank them in order of significance.

QR479: What types of tools does your firm use to manage collateral risk as part of your underwriting and quality control process? Please check all that apply.

QR480: How helpful is the Collateral Underwriter® (CU®) and/or other tools in managing collateral risk at your firm?

