Mortgage Lender Sentiment Survey®
Special Topics Report

Lenders' Perspectives on Mortgage Technology Competitiveness and Value

April 2024

Fannie Mae®

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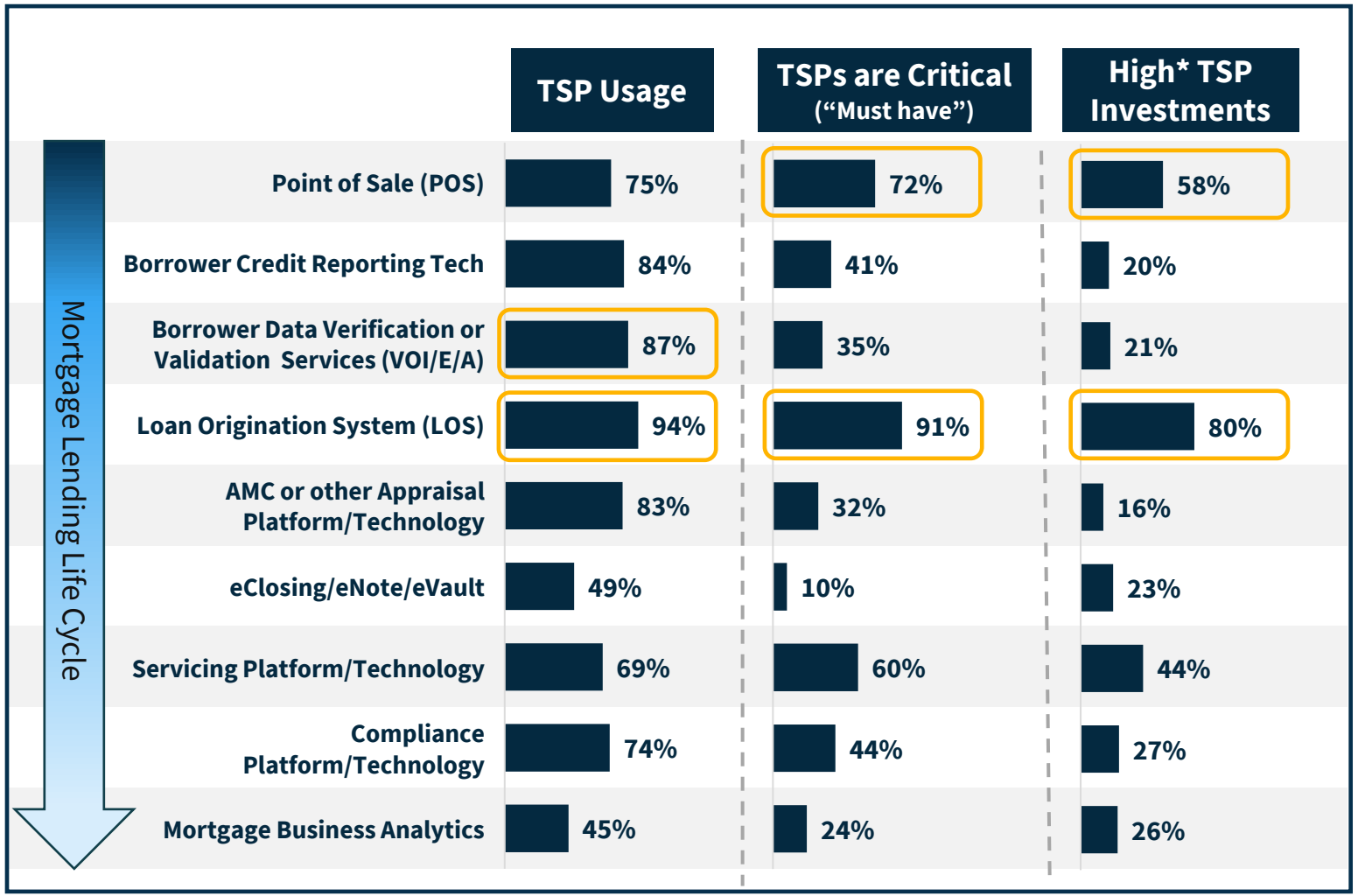
Executive Summary

Lenders' Technology Service Provider (TSP) investments focus on Loan Origination Systems (LOS) and Point of Sale (POS), and most believe that their investments deliver value in those two areas; although some say there are too few providers competing in the LOS space. Additionally, though most lenders use TSPs for Borrower Credit Reporting and Verification of Income/Employment/Assets (VOI/E/A), some say they deliver less value than expected and that there are too few providers competing.



Perceived TSP Market Competitiveness & Value

Top 2 Functional Areas

Too many providers in market	*Too few providers in market*
1 AMC or other Appraisal Platform/Tech	1 Borrower Data Verification (VOI/E/A)
2 Point of Sale (POS)	2 Loan Origination System (LOS)

*Delivering exceeding or expected value***	*Delivering less value than expected*
1 Loan Origination System (LOS)	1 Borrower Data Verification (VOI/E/A)
2 Point of Sale (POS)	2 Borrower Credit Reporting

***Combined "more value than expected" and "about as much value as expected" percentages.*

Showing percentage (%) of lenders who used TSP(s) in each functional area. The top 2 functional areas for each metric (usage, critical importance, etc.) are highlighted with yellow boxes.
** Combined "very high" and "high" percentages.*

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Business Context

Business Context and Research Questions

Business Context

For mortgage lenders, Technology Service Providers (TSPs) are indispensable partners. Over the past decade, TSPs have evolved their technology and developed various solutions to improve loan quality, reduce origination cycle time, and drive a better customer experience, among other benefits.

Fannie Mae's Economic & Strategic Research Group (ESR) surveyed nearly 200 senior mortgage executives in February 2024 to gather their views about the TSP marketplace and their experiences with the technology solutions offered by TSPs through the entire mortgage lending life cycle, from Point of Sale (POS), borrower credit reporting, verification of borrower income/employment/assets (VOI/E/A), Loan Origination System (LOS), appraisal, closing, servicing, compliance, to business analytics.

Research Questions

1. In what functional areas, throughout the mortgage lending life cycle, do lenders currently use one or more TSPs (from POS, borrower VOI/E/A, borrower credit reporting, appraisal, closing, servicing, compliance, to business analytics)?
2. What are the key criteria lenders use in selecting TSPs? And, how are the criteria different from the Q4 2016 study?
3. How high are lenders' investments in TSPs' technology solutions? And, how critical are TSPs' technology solutions to lenders' mortgage business (identifying "must haves" versus "nice to haves")?
4. Based on lenders' experiences, how do they view the market competitiveness of TSPs ("too many providers" versus "to few providers") and the value provided by TSPs' technology solutions?

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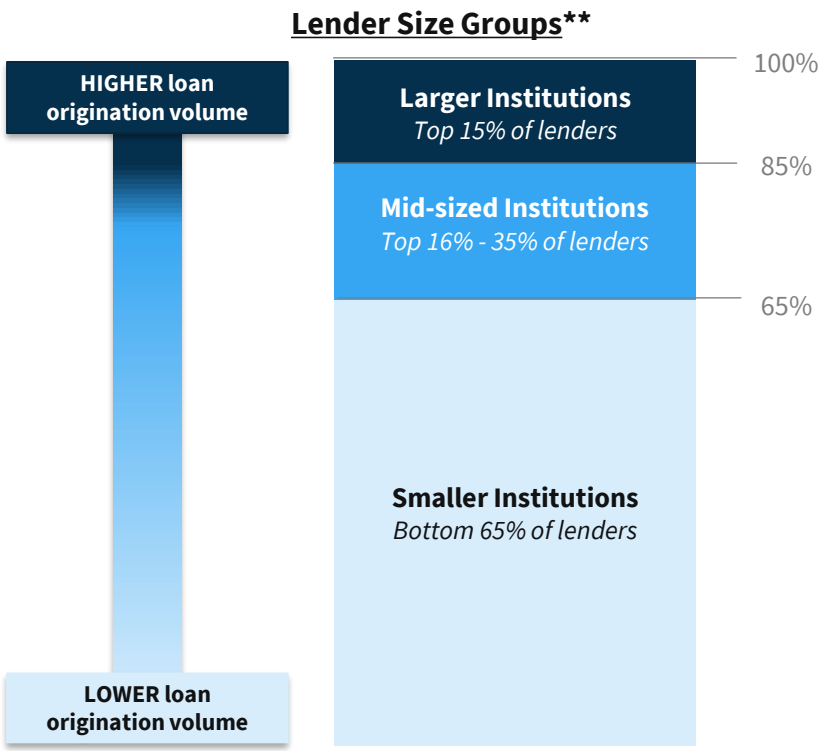
Respondent Sample and Groups

For the current study, a total of 185 senior executives* completed the survey between January 30 and February 12, representing 170 lending institutions.



Sample Q1 2024		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.		170
Lender Size Groups	**Larger Institutions** Lenders in the Fannie Mae database who were in the top 15% of lending institutions based on their total 2022 loan origination volume (above $1.34 billion)	42
	Mid-sized Institutions Lenders in the Fannie Mae database who were in the next 20% (16%-35%) of lending institutions based on their total 2022 loan origination volume (between $425 million and $1.34 billion)	36
	Smaller Institutions Lenders in the Fannie Mae database who were in the bottom 65% of lending institutions based on their total 2022 loan origination volume (less than $425 million)	92
Institution Type* **	**Mortgage Banks** (non-depository)	69
	Depository Institutions	57
	Credit Unions	37

* The results of the Mortgage Lender Sentiment Survey are reported at the lending institutional parent-company level. If more than one individual from the same institution completes the survey, their responses are weighted to represent their parent institution.
** The 2022 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.

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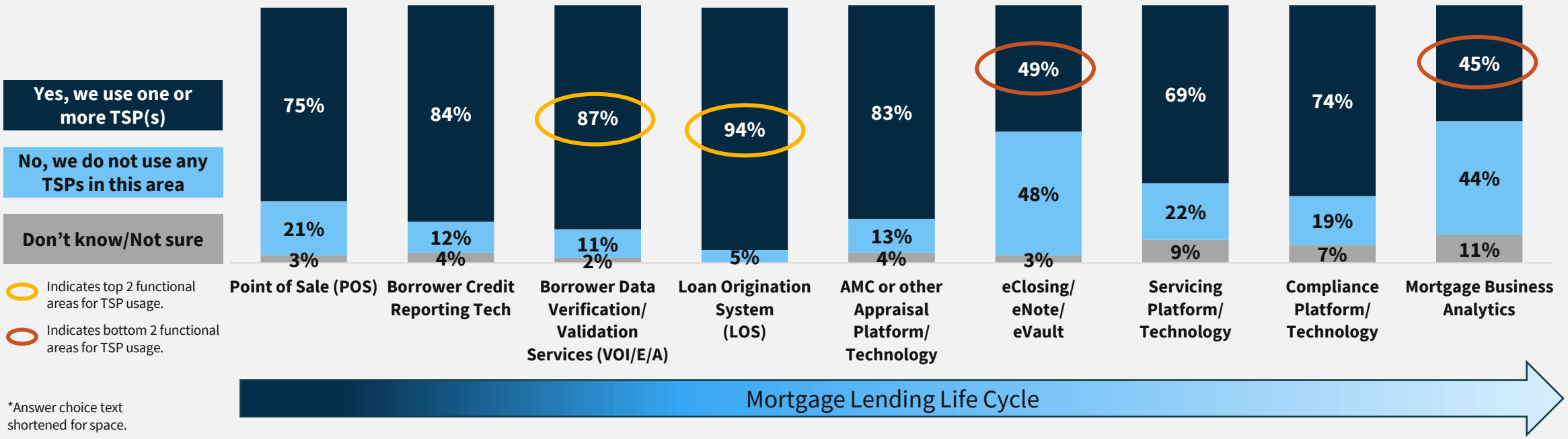
Key Findings

Current TSP Usage Landscape through the Mortgage Lending Life Cycle

Lenders are most likely to leverage TSPs for loan origination (through LOS) and borrower income, employment, or asset verification (VOI/E/A). By comparison, fewer lenders leverage TSPs for Closing and Business Analytics.

Current TSP Usage, by Mortgage Lending Functional Area

Showing percentage (%) of lenders, asked of all lenders (n=170)



The survey sample is skewed towards lenders than servicers. Thus, the usage of TSP for the servicing area is likely to be under-reported.

Q: Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs.

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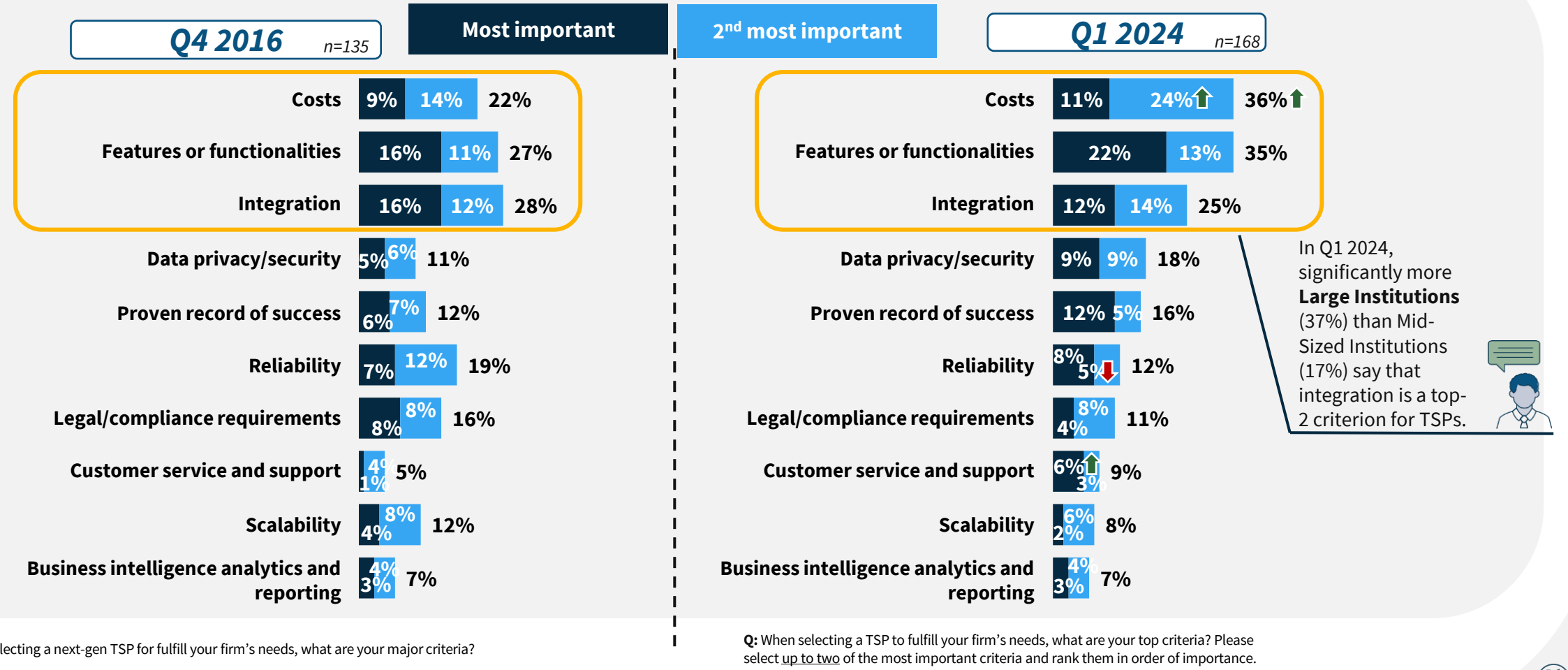
Criteria for TSP Selection

When selecting TSPs, lenders' top 3 criteria remained the same as in 2016: costs, functionality, and integration capabilities. Notably, the cost factor grew significantly, becoming the most important criterion in 2024.

Criteria for TSP Selection

Showing percentage (%) of lenders, asked of lenders who use one or more TSPs in each functional area
Ranked in descending order by the combined percentage (%) for 'Most Important' and '2nd most important' for Q1 2024



In Q1 2024, significantly more **Large Institutions** (37%) than Mid-Sized Institutions (17%) say that integration is a top-2 criterion for TSPs.

Q: When selecting a next-gen TSP for fulfill your firm's needs, what are your major criteria?

Q: When selecting a TSP to fulfill your firm's needs, what are your top criteria? Please select up to two of the most important criteria and rank them in order of importance.

Denotes the Q1 2024 % is significantly higher/lower in comparison to Q4 2016.

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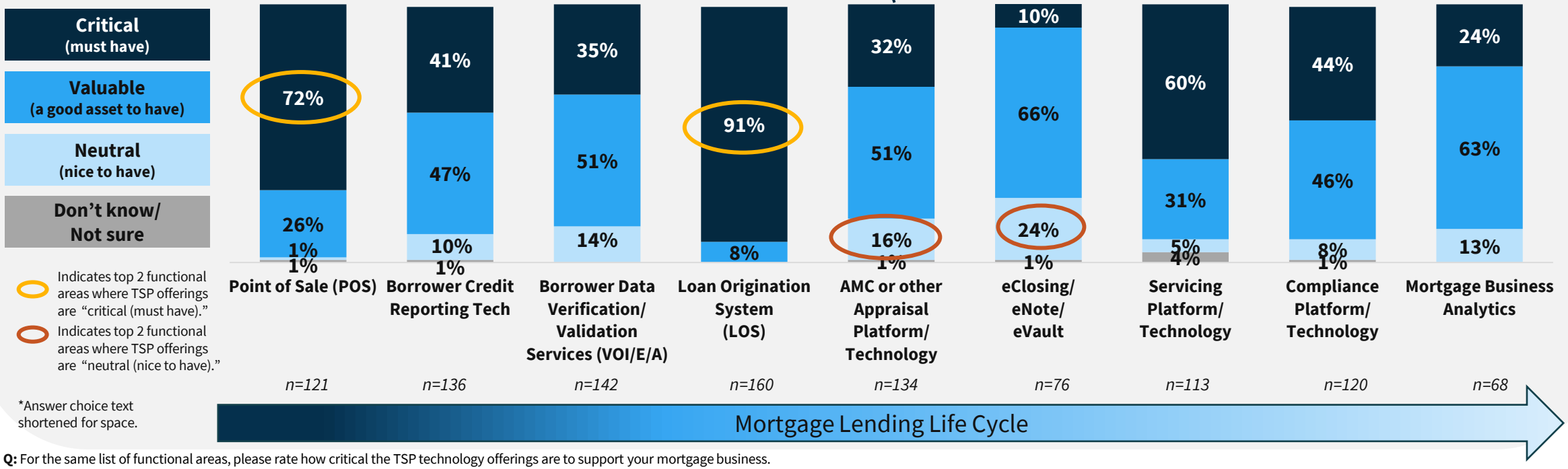
Criticality of TSP Technology Offerings through the Mortgage Lending Life Cycle

TSP technology offerings in the functional areas of LOS and POS are considered by most lenders as business critical (i.e., "must haves"). In contrast, TSP offerings for Closing and Appraisal are considered "nice to have" by many lenders.

Importance of TSP Technology Offerings, by Mortgage Lending Functional Area

Showing percentage (%) of lenders, asked of lenders who use one or more TSPs in each functional area

More **Large Institutions** (47%) than Mid-Sized (24%) and Small (24%) Institutions say that TSPs are critical ("must have") for Appraisal.



Q: For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business.

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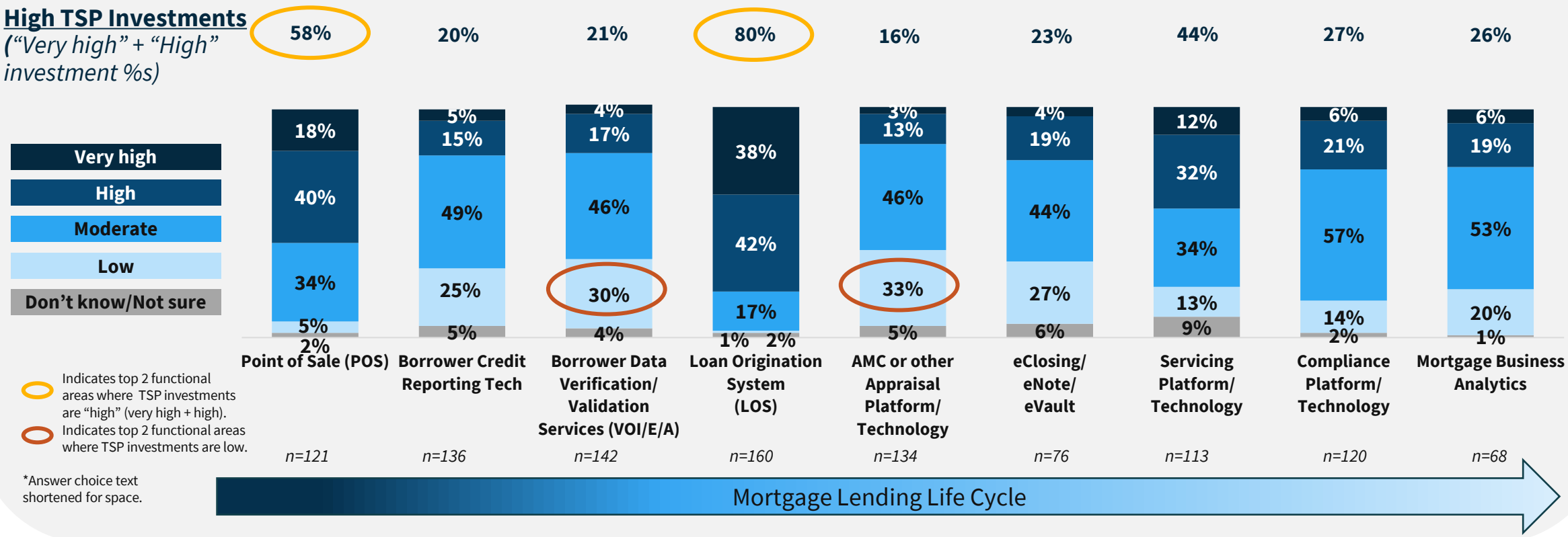
TSP Investment Level through the Mortgage Lending Life Cycle

Given how business critical TSPs are for LOS and POS, these two areas also rank the highest in the level of TSP investments made by lenders. By contrast, lenders reported making lower investments in Borrower Data Verification/Validation Services (VOI/E/A) and Appraisal Platform/Technology.

TSP Investment Level, by Mortgage Lending Functional Area

Showing percentage (%) of lenders, asked of lenders who use one or more TSPs in each functional area



Q: You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of investments your firm has made in using TSP(s).

**Note: Level of investments includes any headcount related to and/or budget invested toward implementation and usage.*

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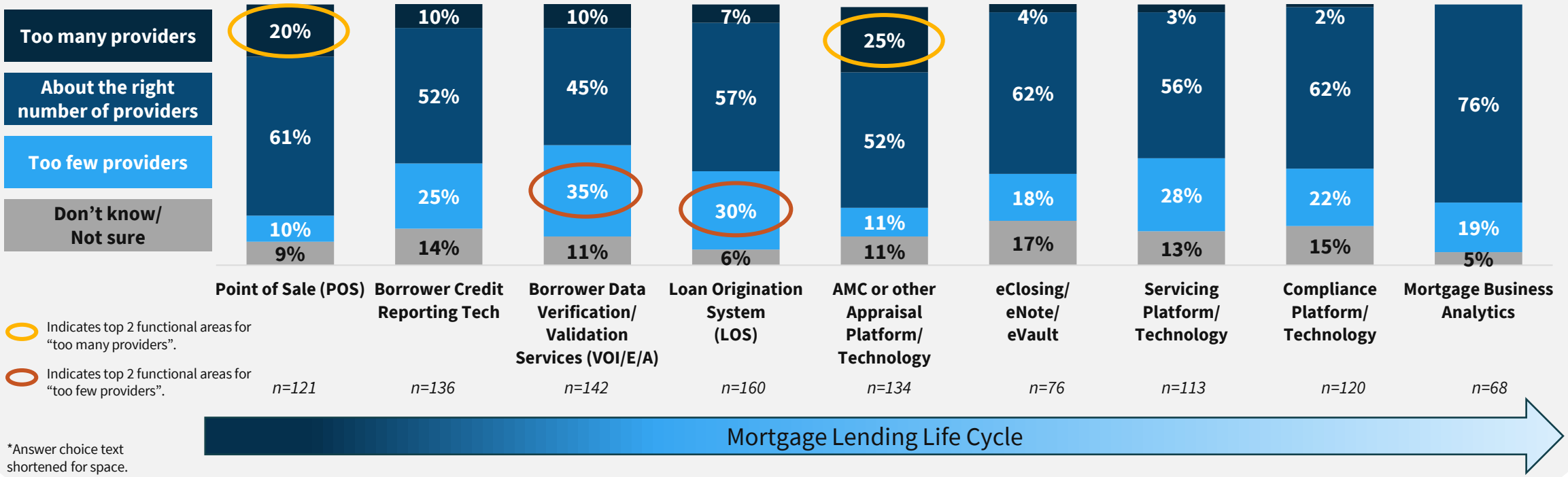
TSP Market Competitiveness through the Mortgage Lending Life Cycle

Borrower Data Verification/Validation Services (VOI/E/A) and LOS lead as the functional areas in which lenders believe there are too few providers competing.

TSP Market Competitiveness, by Mortgage Lending Functional Area

Showing percentage (%) of lenders, asked of lenders who use one or more TSPs in each functional area



*Answer choice text shortened for space.

Q: For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few?

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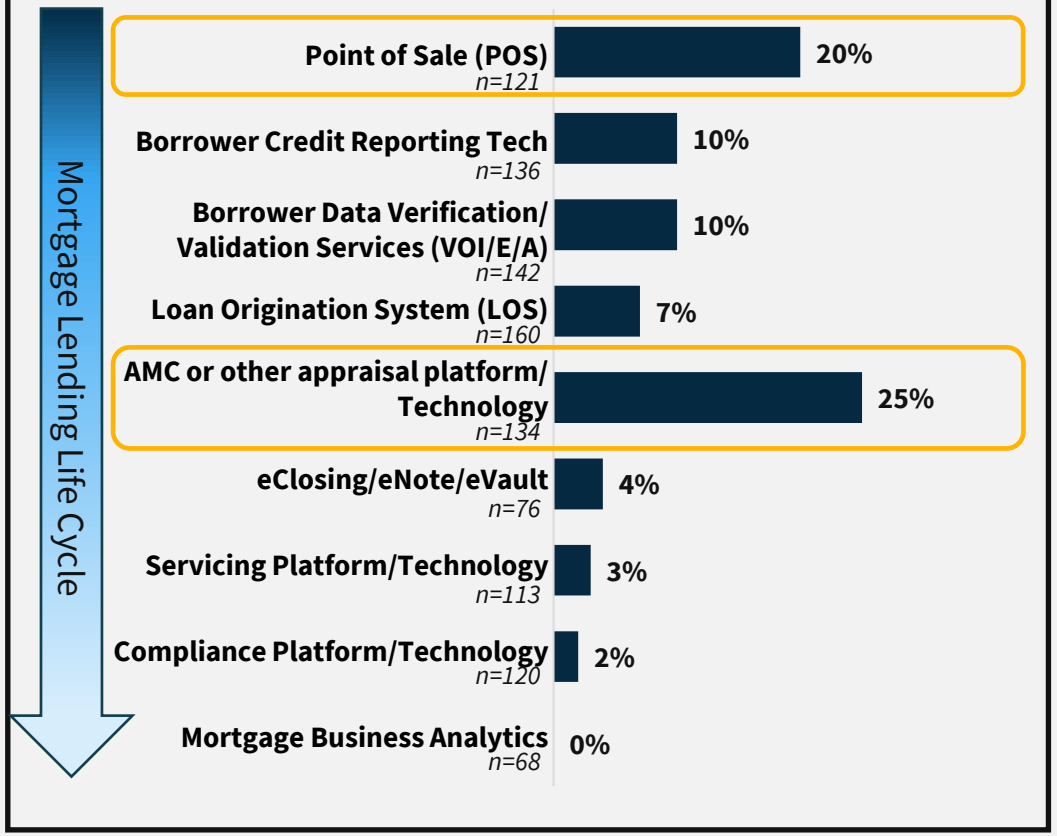
Mortgage Lending Functional Areas With "Too Many" TSPs Competing

Appraisal and POS lead as the areas in which lenders believe there are too many TSPs competing. Lenders pointed to similar services offered, difficulties in researching all options, and integration challenges.

Too Many TSPs Competing

Showing percentage (%) who selected 'Too many providers;' Ranked based on order of use during the mortgage lending lifecycle



Lender Insights about "Too Many" TSPs Competing

Showing optional responses provided when asked why there are too many TSPs for any given functional area

Appraisal Management Company (AMC) or other Appraisal Platform/Technology (n=14)

*"They all **provide similar service at [a] similar price** and **hire the same appraisers**. If half of these regional AMCs disappeared today, nobody would care." – Large Institution*

*"**Not all** AMC's have **sufficient appraisers approved** causing many delays." – Large Institution*

*"[Our firm does] not [have] enough **bandwidth to research** all options." – Small Institution*

Point of Sale (POS) (n=9)

*"The core LOS **providers do not provide a solid POS**, so it requires an outside system." – Large Institution*

*"**No proven track records** and **extensive integration** making it hard to decide on a solution." – Large Institution*

*"**Integration costs and delays due to so many platforms** create inefficiency." – Large Institution*

Q: For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few?

Q: You mentioned that you feel too many TSPs are competing in the following functional area(s). Could you share your thoughts as to why you feel there are too many providers? What are the advantages and/or challenges to the mortgage eco-system? (Optional)

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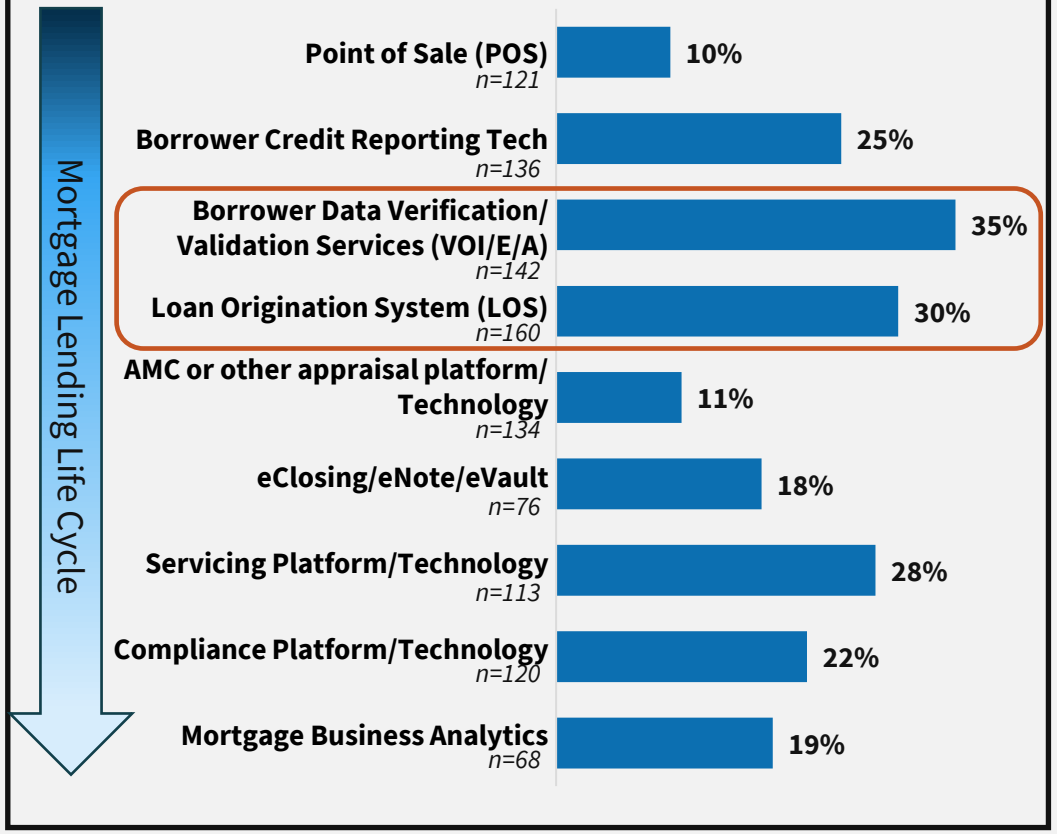
Mortgage Lending Functional Areas With "Too Few" TSPs Competing

By contrast, Borrower Data Verification/Validation Services (VOI/E/A) and LOS are the leading functional areas in which lenders believe there are too few TSPs competing. Lenders pointed out market dominance of key providers, expensive solutions, and increased pricing as challenges.

Too Few TSPs Competing

Showing percentage (%) who selected 'Too few providers;' Ranked based on order of use during the mortgage lending lifecycle



Lender Insights about "Too Few" TSPs Competing

Showing optional responses provided when asked why there are too few TSPs for any given functional area

Borrower Data Verification/Validation Services (VOI/E/A) (n=30)

*"The space continues to be **dominated by one major player** [in] the VOE / VOI space. While that is improving, the upward pricing pressures with the primary vendor have hurt the consumer." – Small Institution*

*"**Monopoly Pricing Power**." – Lage Institution*
*"**Oligopolistic pricing behavior** driven by limited choice of providers ." – Lage Institution*

*"There are **not many functional/economical vendors** on this area [speaking of Borrower Data Verification]." – Small Institution*

Loan Origination System (LOS) (n=35)

*"Having **limited competition leads to additional leverage to TSPs** which [allows] them to **increase prices**, limit development, as well as service levels without repercussions." – Large Institution*

*"Forced to go with **expensive solutions**, the technologies of the leaders are **not integrated well**." – Large Institution*

*"Consolidation is making solutions obsolete. **Need solutions focused on requirements not company profits**." – Small Institution*

Q: For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few?

Q: You mentioned that you feel too few TSPs are competing in the following functional area(s). Could you share your thoughts as to why you feel there are too few providers? What are the advantages and/or challenges to the mortgage eco-system? (Optional)

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Cost Concerns with "Too Few" TSPs Competing

Among lenders who believe there are "too few" TSPs competing, they expressed frustration with high costs, particularly for the Borrower VOI/E/A functional area.

Quotes about Cost Concerns with "Too Few" TSPs Competing

Showing Selected Open-Ended Responses

- Lack of competitive pricing.
- Costs [are] rising way too fast, suggesting lack of competition/monopoly.
- Oligopoly… and monopoly leads to massive price increases and increased costs for consumers.
- Need more competition to bring the price down.
- Monopoly pricing power.
- Cost [is] too high.
- Competition needed - market share is very concentrated.
- Prices are too high.
- Too monopolistic with pricing [and] service.
- Pricing is too high for what you get. Not enough competition.
- Oligopolistic pricing behavior driven by limited choice of providers.
- Need more competition in the market, prices are going so very high.

Q: You mentioned that you feel too few TSPs are competing in the following functional area(s). Could you share your thoughts as to why you feel there are too few providers? What are the advantages and/or challenges to the mortgage eco-system? (Optional)

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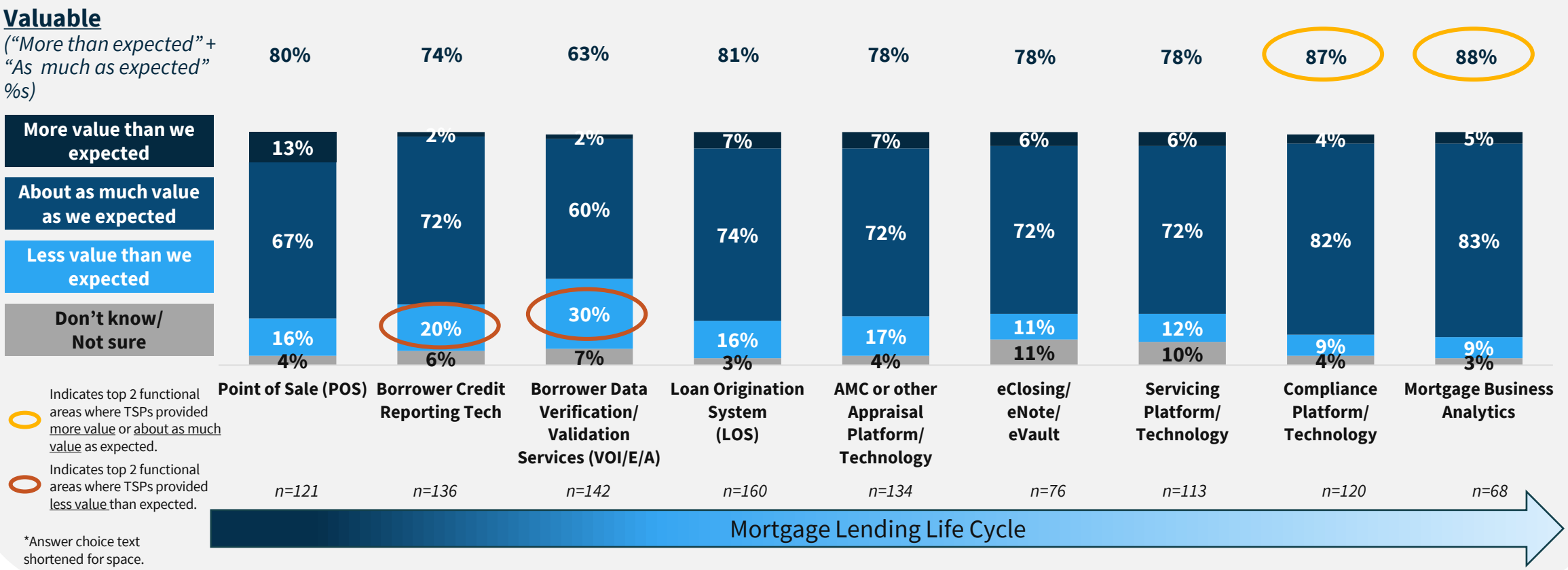
TSP Return on Investment (ROI) through the Mortgage Lending Life Cycle

When evaluating the overall return on their TSP investments, most lenders reported they receive as much value as they expected. However, Borrower Data Verification/Validation Services (VOI/E/A) and Borrower Credit Reporting lead as the functional areas for which lenders believe TSP offerings deliver less value than expected.

Return on Investment for TSP

Showing percentage (%) of lenders, asked of lenders who use one or more TSPs in each functional area



Q: When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…

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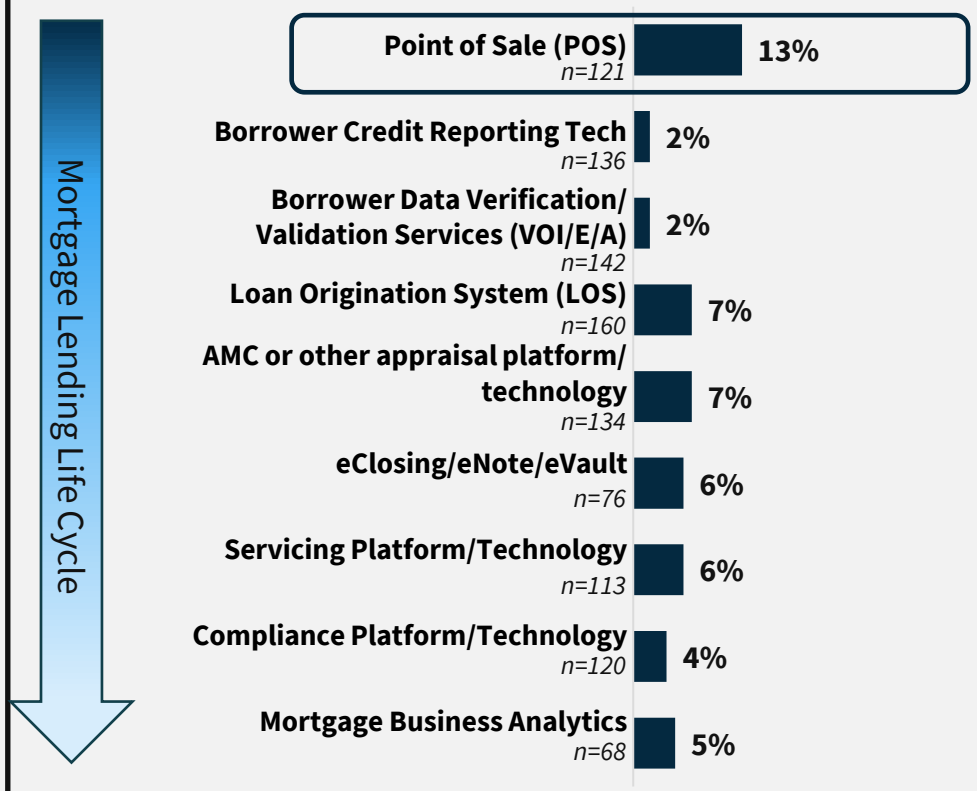
Mortgage Lending Functional Areas With "Higher" ROI for TSP Usage

Overall, few lenders say their TSP investments deliver "more value" than expected. However, TSP offerings for POS lead as the area in which lenders say they get more value than they expected because of ease of use, efficiencies created, and improved data integrity.

More Value Than Expected Using TSPs

Showing percentage (%) who selected 'More value than we expected;' Ranked based on order of use during the mortgage lending lifecycle



Reasons TSPs Deliver "More Value"

Showing optional responses provided when asked why a TSP for any given functional area provides more value than they expected

Point of Sale (POS) (n=10)

*"Borrower **ease of use**, improved data integrity." – Large Institution*

*"**Efficiencies and speed** to [help with] determination of approval." – Mid-sized Institution*

*"[POS systems are] essential for **optimizing originator productivity** and CX." – Large Institution*

Loan Origination Systems (LOS) (n=10)

*"Substantial **time savings** for underwriting and processing, **when we invest time** to set it up properly." – Small Institution*

*"[LOS is] essential for **optimizing fulfillment efficiency and productivity**, credit decisioning, and risk management." – Large Institution*

****AMC or other Appraisal Platform/Technology*** (n=7)

*"[It is the] **only way** to systematically handle random rotation of appraisers." – Large Institution*

*"Process automation created **improved efficiency in engagement** resulting in **quicker turn-times**." – Mid-Sized Institution*

*Answer choice text shortened for space.

Q: When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…

Q: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) more value than you expected. Could you share some details with us? Why do you find TSP technology offerings in this / these functional area(s) worth the investment? (Optional)

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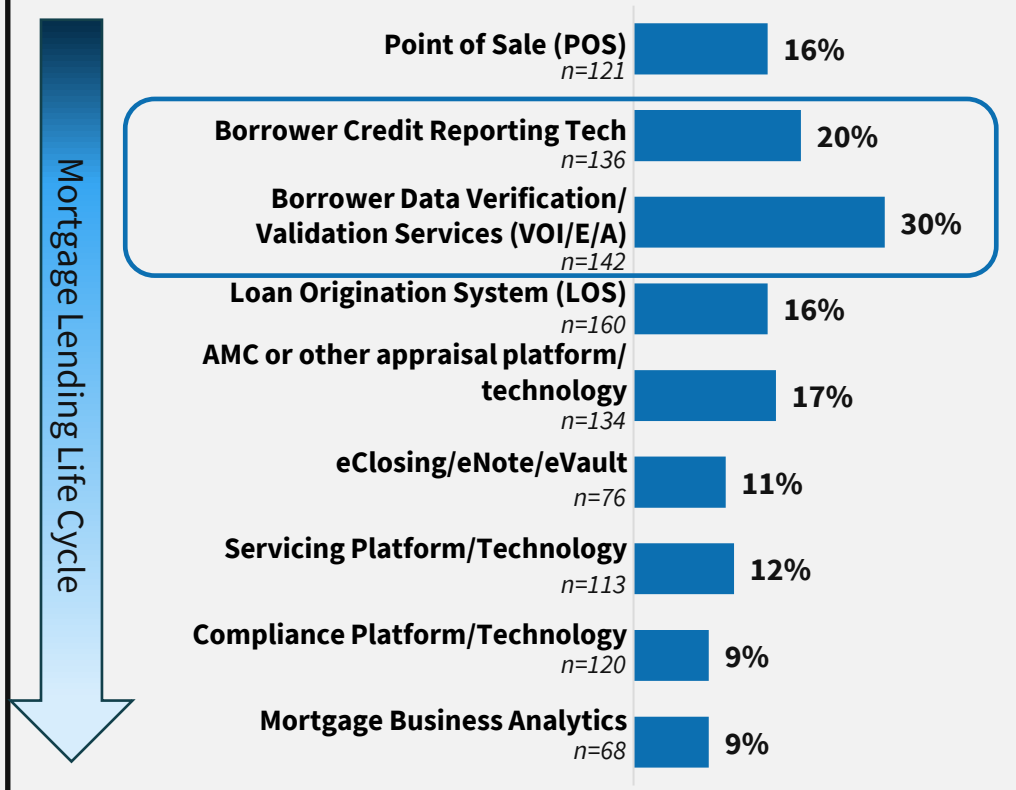
Mortgage Lending Functional Areas With "Lower" ROI for TSP Usage

Borrower Data Verification/Validation Services (VOI/E/A) and Borrower Credit Reporting lead as the functional areas deriving the least value from TSP investments because of high costs, integration challenges with LOS, and low success match rate.

Less Value Than Expected Using TSPs

Showing percentage (%) who selected 'Less value than we expected;' Ranked based on order of use during the mortgage lending lifecycle



Reasons TSPs Deliver "Less Value"

Showing optional responses provided when asked why a TSP for any given functional area provides less value than they expected

Borrower Data Verification/Validation Services (VOI/E/A) (n=24)

*"Very **expensive and no options** as many employers are going this route." – Small Institution*

*"**Low success rate** for income/employment validation. Low applicant adoption for asset validation." – Mid-sized Institution*

*"Too many companies are **not part of verification system**." – Mid-sized Institution*

*"**Integration** with LOS **has been challenging**, low customer usage." – Large Institution*

Borrower Credit Reporting Tech (n=15)

*"Data **format is old**, **pricing is high**." – Large Institution*

*"Not enough integration of data and **poor segmentation analysis**." – Small Institution*

*"[Borrower Credit Reporting Tech is] expensive and **getting more expensive** and providing less value." – Large Institution*

Q: When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…

Q: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) less value than you expected. Could you share some details with us? What challenges have you experienced? What would you recommend improving? (Optional)

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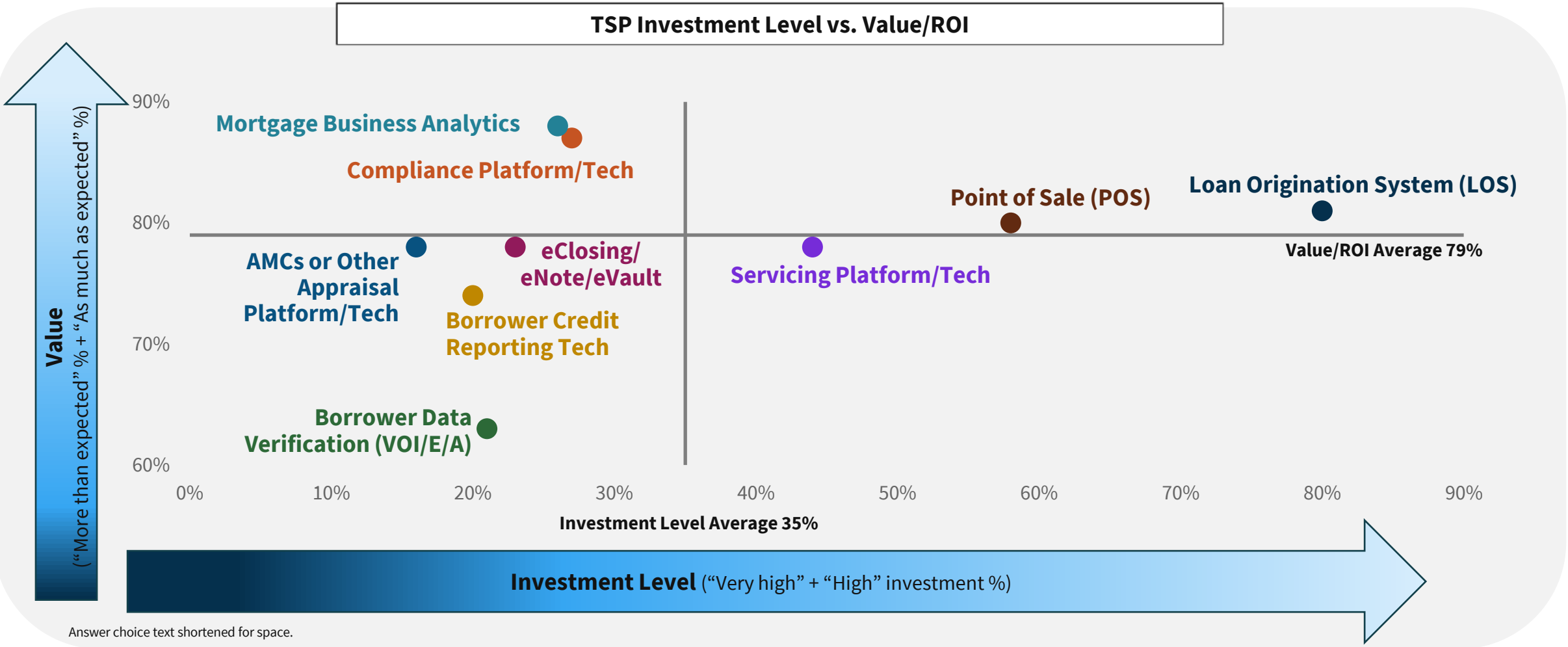
TSP Investment Level and Value

Loan Origination System (LOS) and Point of Sale (POS) are the functional areas in which lenders' TSP investments are relatively high and are believed to deliver relatively high value. Business Analytics and Compliance TSP offerings are believed to provide relatively high value, despite relatively lower investments made by lenders.



Answer choice text shortened for space.

Q: You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of investments your firm has made in using TSP(s).
Q: When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…

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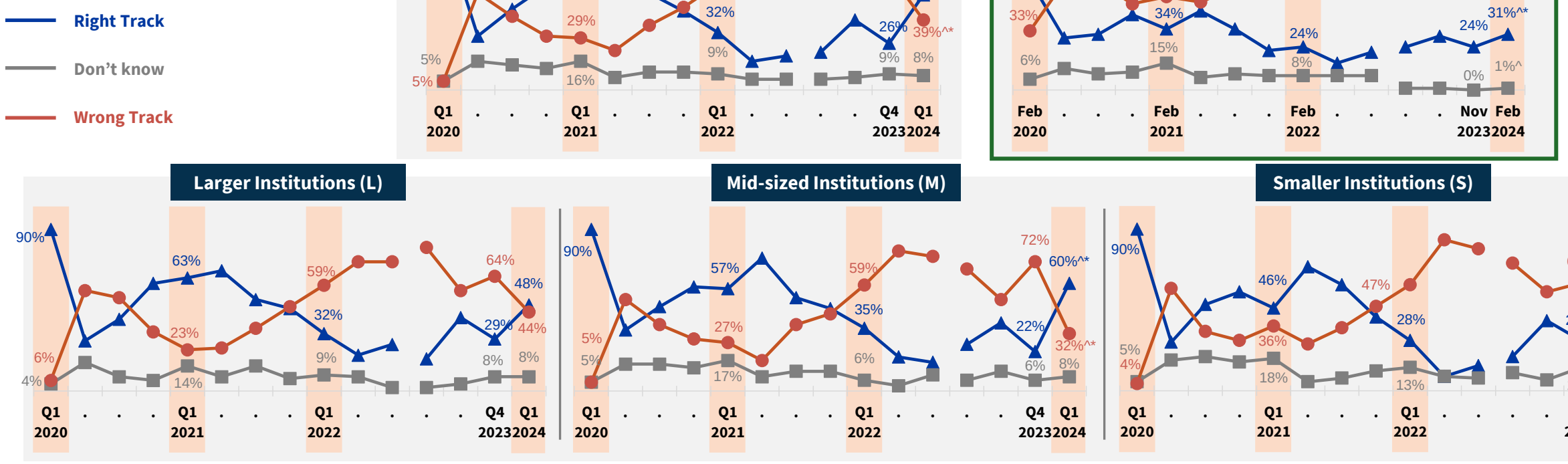
Economic and Housing Sentiment

U.S. Economy Overall

Lenders' optimism toward the U.S. economy jumped this quarter, with more lenders believing the economy is on the right track than on the wrong track, reversing the trend seen since 2022 (post-pandemic). Consumers via the National Housing Survey®, on the other hand, showed a more pessimistic view than lenders.

In general, do you, as a senior mortgage executive, think the U.S. economy overall is on the right track or the wrong track?



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
** Denotes a statistically significant change comparing Q1 2024 with Q4 2023 (or November 2023 for NHS)*
^ Denotes a statistically significant change comparing Q1 2024 with Q1 2022 (or February 2022 for NHS)

National Housing Survey: http://www.fanniemae.com/portal/research-and-analysis/housing-survey.html

Note: Due to rounding, minor differences in calculated data (summarized results, net calculations, etc.) of up to 1 percentage point may occur

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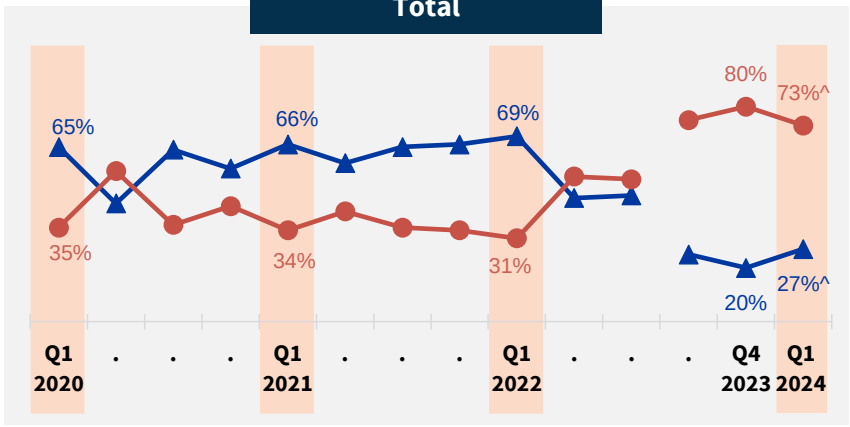
Difficulty of Getting a Mortgage

The share of lenders believing it is difficult for consumers to get a mortgage today remained at its highest level since the pandemic. Overall, lenders are more likely to perceive much higher difficulty than consumers.

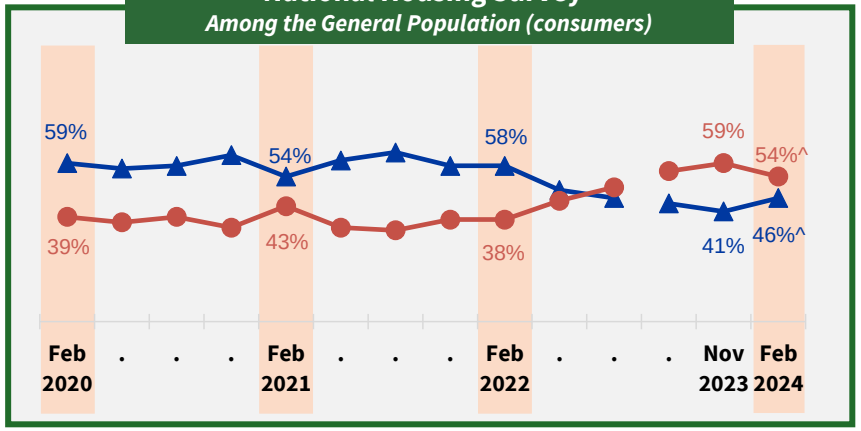
Do you think it is very difficult, somewhat difficult, somewhat easy, or very easy for consumers to get a home mortgage today?

Easy (Very/Somewhat)
Difficult (Very/Somewhat)

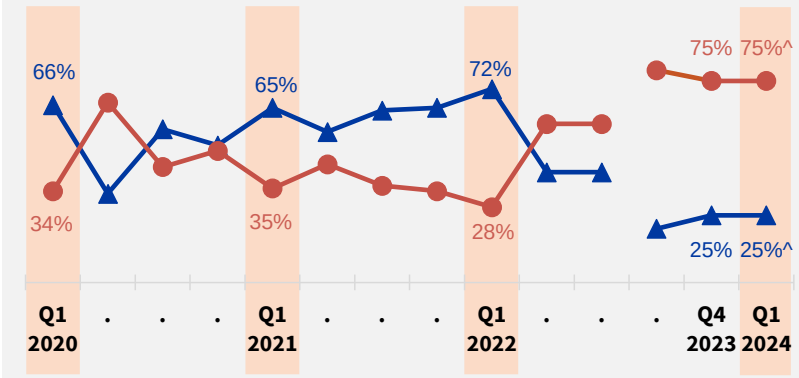
Total



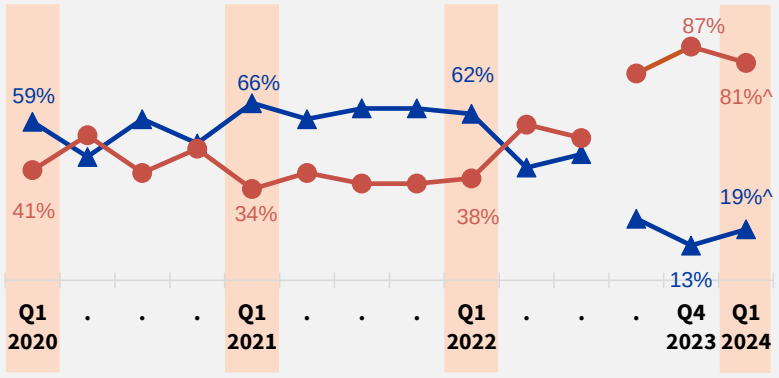
National Housing Survey®
Among the General Population (consumers)



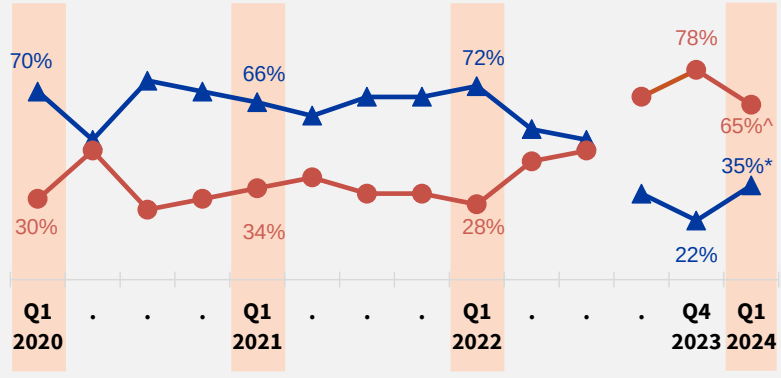
Larger Institutions (L)



Mid-sized Institutions (M)



Smaller Institutions (S)



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
** Denotes a statistically significant change comparing Q1 2024 with Q4 2023 (or November 2023 for NHS)*
^ Denotes a statistically significant change comparing Q1 2024 with Q1 2022 (or February 2022 for NHS)

Note: Due to rounding, minor differences in calculated data (summarized results, net calculations, etc.) of up to 1 percentage point may occur

National Housing Survey: http://www.fanniemae.com/portal/research-and-analysis/housing-survey.html

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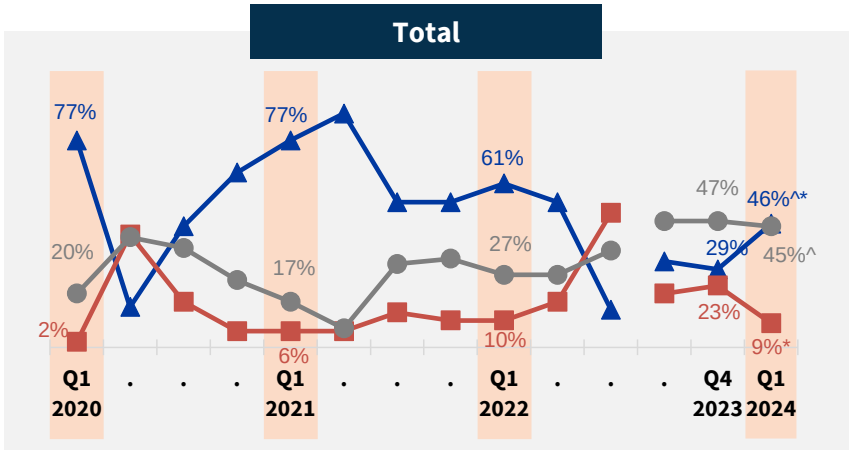
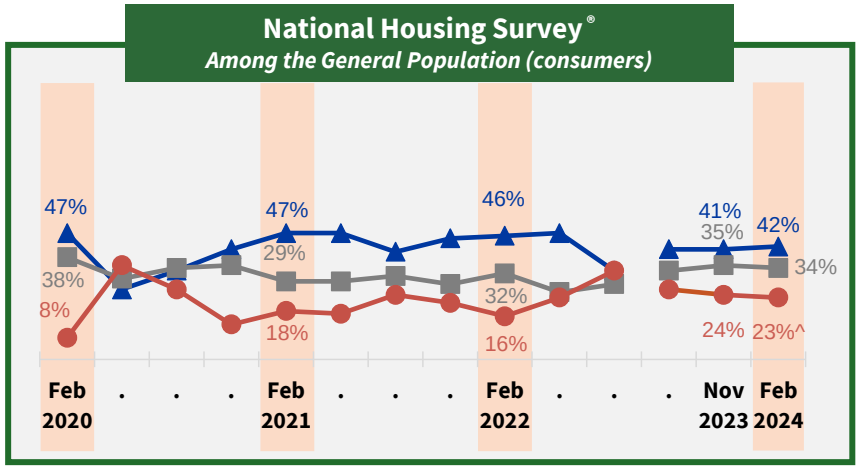
U.S. Home Prices – Next 12 Months

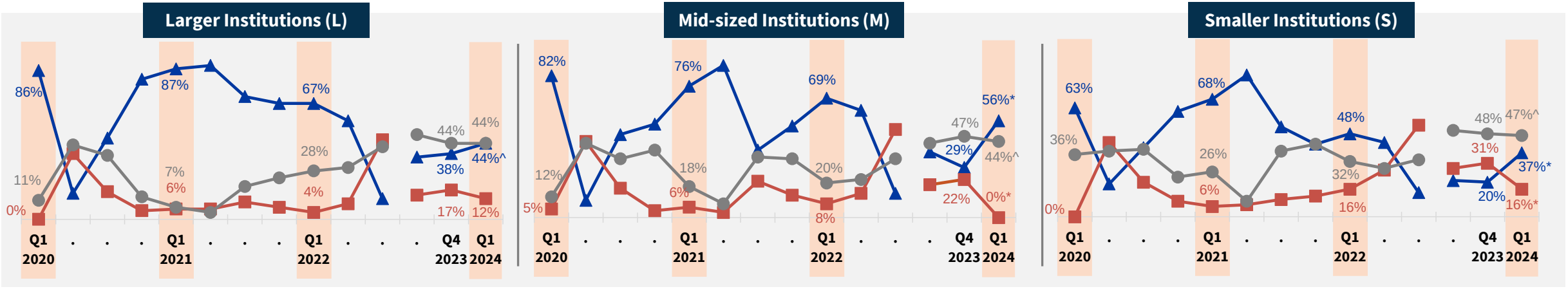
The share of lenders expecting home prices to go up in the next 12 months grew significantly, while the share expecting home prices to go down declined significantly. Consumers' expectations of home price changes, however, remained stable.

Nationally, during the next 12 months, do you, as a senior mortgage executive, think home prices in general will go up, go down, or stay the same as where they are now?

- Go up
- Go down
- Stay the same







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
** Denotes a statistically significant change comparing Q1 2024 with Q4 2023 (or November 2023 for NHS)*
^ Denotes a statistically significant change comparing Q1 2024 with Q1 2022 (or February 2022 for NHS)

National Housing Survey: http://www.fanniemae.com/portal/research-and-analysis/housing-survey.html

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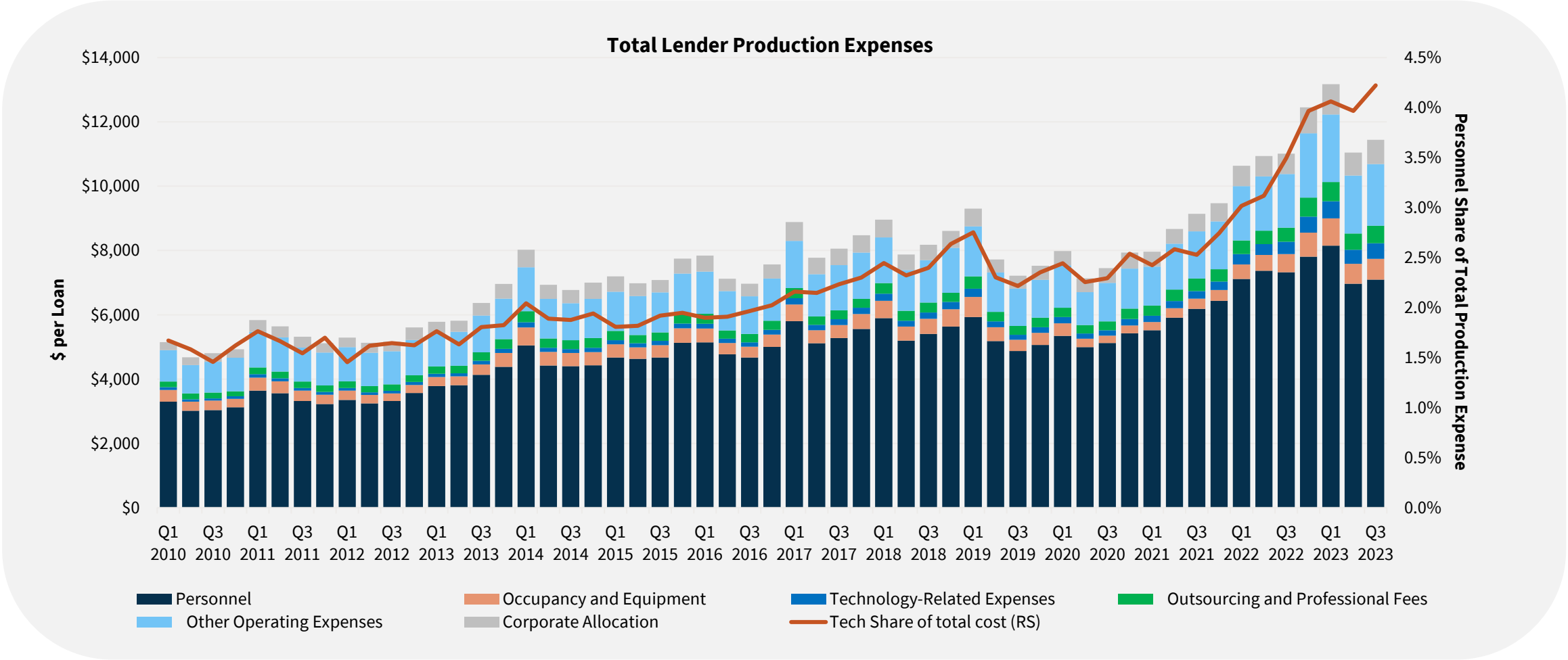
Additional Findings

Loan Origination Cost and Share of Technology Cost

The average origination cost per loan has steadily increased since Q2 2020 and reached a study-high of $13,171 per loan in Q1 2023 before pulling back slightly. The majority of lender expense is for personnel, though the share of technology cost to total expenses has increased sharply over time, from about 1.7% in Q1 2010 to a record 4.2% in Q3 2023.



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

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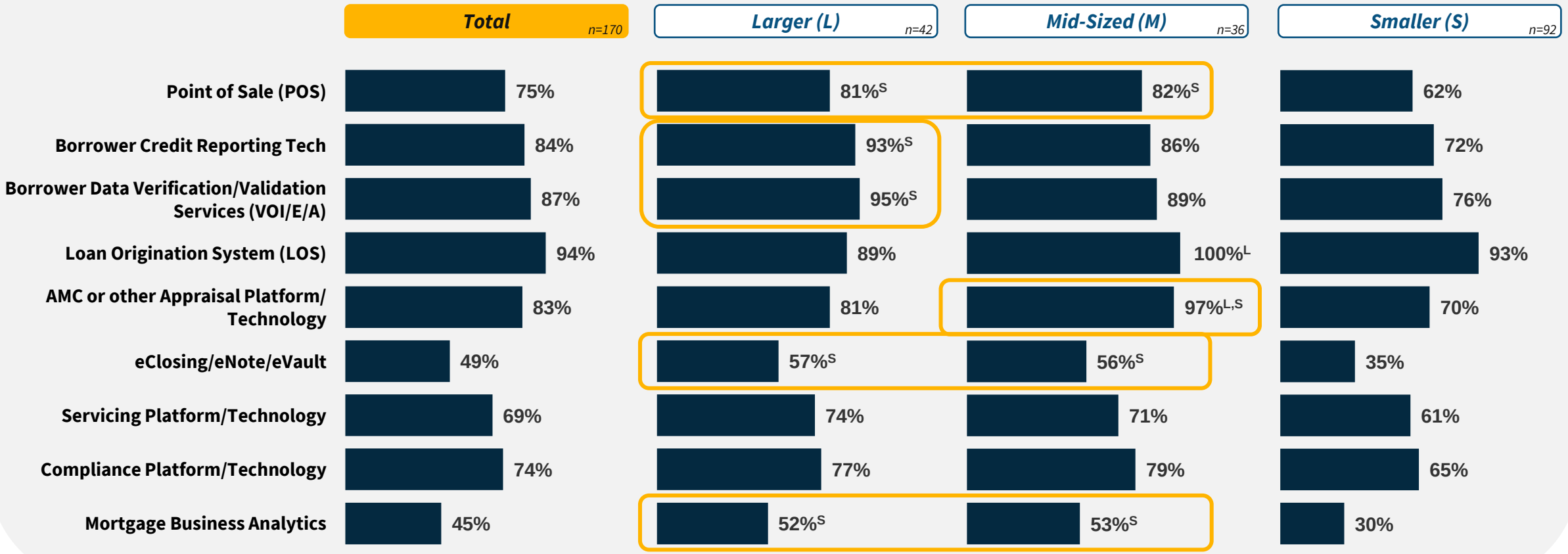
Current TSP Usage Landscape, by Institution Size

Overall, larger enders are significantly more likely than smaller lenders to leverage TSP offerings, in particular for POS, Borrower Credit Reporting, Borrower VOI/E/A, Closing, and Business Analytics.

Current TSP Usage by Institution Size

Showing percentage (%) of lenders who said "Yes, we use one or more TSP(s)" in the functional areas shown, asked of all lenders (n=170)
Ranked based on order of use during the mortgage lending lifecycle



Q: Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs.

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

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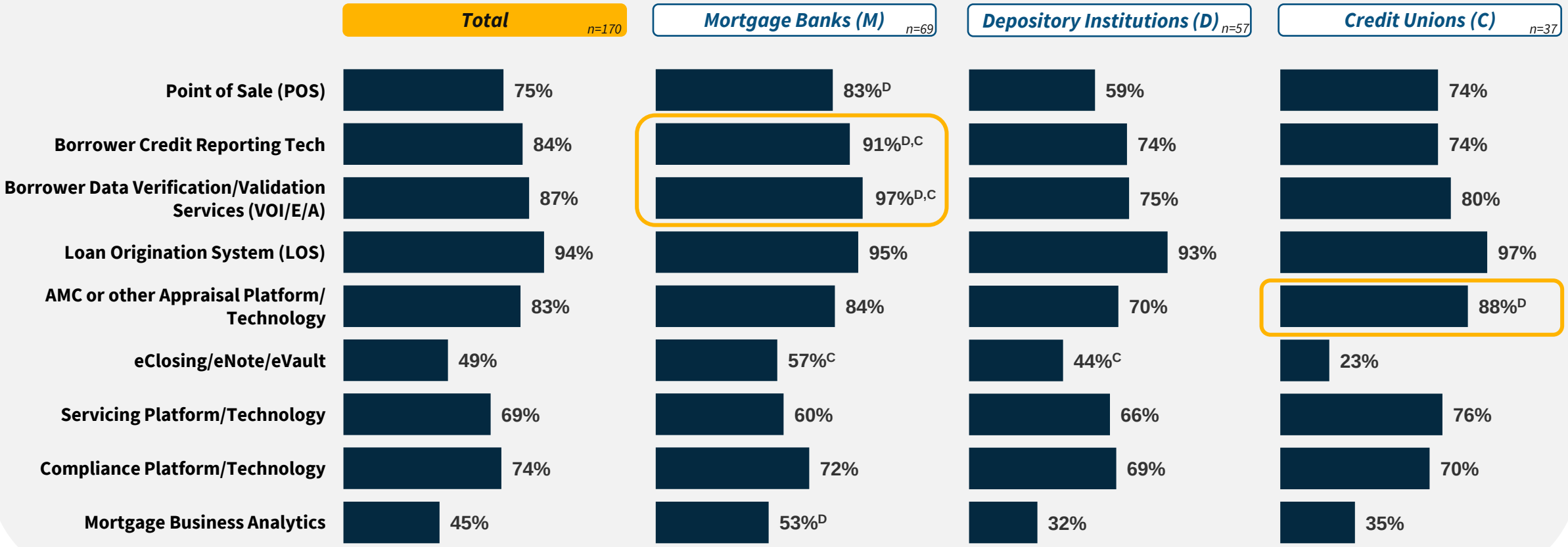
Current TSP Usage Landscape, by Institution Type

Mortgage banks are significantly more likely than depository institutions and credit unions to leverage TSP offerings for Borrower Credit Reporting and Borrower VOI/E/A.

Current TSP Usage by Institution Type

Showing percentage (%) of lenders who said "Yes, we use one or more TSP(s)" in the functional areas shown, asked of all lenders (n=170)
Ranked based on order of use during the mortgage lending lifecycle



Q: Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs.

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

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Reasons for "Lower" ROI for Appraisal and LOS

Primary reasons provided by lenders for LOS include integration issues, complexity & learning curve, and lack of innovation to improve performance.

TSPs' Technology Offerings that Deliver "Less Value"

Showing optional responses provided when asked why a TSP for any given functional area provides less value than they expected

Appraisal Management Company (AMC) or other appraisal platform/technology (n=10)

*"Appraisal management company **should provide seamless integration yet more than one company is necessary** and APT is necessary to keep them complaint." – Small Institution*

*"[TSPs for AMC are] simply an order placing service with some upload features. **Limited value here**." – Large Institution*

*"**Implementation and integration challenges** made the early adoption of the AMC difficult." – Small Institution*

*"[TSPs for AMC are] **not consistent in price and timing**." – Small Institution*

Loan Origination System (LOS) (n=18)

*"Systems are purchased based on promised improvements in cycle times, service and reduced costs. Experience suggests that **complexity and implementation and learning curve issues makes difficult the realization of promised benefits**. The **systems require significant investment** in customization that requires contracting with specialists or the hire of FTE's to run the LOS. All **factors combine to create an increased cost to implement** and run the LOS." – Small Institution*

*"Our LOS **has not kept up with the times** — it is **expensive…**, but tough when an **LOS does not keep up with the latest advances and does not keep developing to improve performance**." – Large Institution*

*"The **consistent lack of clear interpretations and treatment across multiple regulatory items** and the ever-changing vendor eco system created **inefficiencies and inaccuracies that are not easily identified during the loan life cycle**. The LOS **providers are not innovating at a pace required of the consumer**. Having augment with multiple vendors and additional technologies to resolve these concerns is **costly and cumbersome**." – Small Institution*

*Answer choice text shortened for space.

Q: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) less value than you expected. Could you share some details with us? What challenges have you experienced? What would you recommend improving? (Optional)

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Reasons for "Lower" ROI for POS and Servicing

Similarly, for the areas of POS and Servicing, lenders pointed to integration issues, and limited functionalities for Servicing.

TSPs' Technology Offerings that Deliver "Less Value"

Showing optional responses provided when asked why a TSP for any given functional area provides less value than they expected

Point of Sale (POS) (n=9)

*"A lot of borrowers do not want to give their SS# [social security number] right out of the chute — that **makes the rest of the system not work**." – Large Institution*

*"**Hard to integrate** therefore you are **underutilizing**." – Large Institution*

*"The POS systems are still having **challenges with full integration** to the LOS systems, and, as a result, **create inefficiencies and duplication of job function**." – Small Institution*

*"[I] was **promised way more efficiencies** than we experienced." – Small Institution*

Servicing Platform/Technology (n=12)

*"**Servicing reports are not as good** as they should be." – Small Institution*

*"Takes an expert in the system — **hard to train — no new features**." – Large Institution*

*"**Limitations on reporting and integration** keep us from performing where we would like to be." – Small Institution*

*"We use a sub-servicer and the technology is both **expensive and cumbersome** as the costs are passed to the lender — especially for small lenders." – Small Institution*

Q: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) less value than you expected. Could you share some details with us? What challenges have you experienced? What would you recommend improving? (Optional)

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Reasons for "Lower" ROI for Closing, Compliance, and Business Analytics

Areas like Closing, Compliance, and Business Analytics left lenders feeling these TSP offerings were limited in functionalities, industry adoption, and integration.

TSPs' Technology Offerings that Deliver "Less Value"

Showing optional responses provided when asked why a TSP for any given functional area provides less value than they expected

eClosing/eNote/eVault (n=7)

*"Vendors control pricing and flexibility which make solutions **clumsy and expensive**." – Small Institution*

*"**Hard to integrate** therefore you are underutilizing." – Large Institution*

*"We hoped it would lead to increased efficiency, but **adoption has been slow**." – Small Institution*

*"**Not enough customer acceptance**." – Small Institution*

Compliance Platform/Technology (n=6)

*"**Not deep enough in the analysis** of gaps and deficiencies during the manufacturing process." – Small Institution*

*"**Integration is difficult** and there are always manual processes to correct data. Integrated solutions that had industry-wide adoption would be a nice improvement." – Large Institution*

*"[Our solution is] a little t**oo cookie cutter and not flexible**." – Small Institution*

*"[The solutions'] **inaccuracies require manual review** and corrections." – Small Institution*

Mortgage Business Analytics (n=1)

*"Our **solution has limitations** and **doesn't provide the analytics we would like** to be leveraging." – Small Institution*

Q: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) less value than you expected. Could you share some details with us? What challenges have you experienced? What would you recommend improving? (Optional)

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Economic and Housing Sentiment

Mortgage Lender Sentiment Survey®

The Mortgage Lender Sentiment Survey® (MLSS), which debuted in March 2014, is an online survey among senior executives, such as CEOs and CFOs, of Fannie Mae's lending institution customers.

Each study focuses on a key topic to best highlight the specific opportunities and challenges facing the mortgage industry.

Examples of Past Studies

- **Condominium Mortgage Lending**
- **Artificial Intelligence and Mortgage Lending**
- **Costs and Impact of Digitization Efforts on Cost Efficiency**
- **Appraisal Modernization**
- **Blockchain**
- **Closing Homeownership Gaps**
- **Remote Working**

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.

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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.

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Cross-Subgroup Sample Sizes

	Total	Larger Lenders	Mid-Sized Lenders	Smaller Lenders
Total	170	42	36	92
Mortgage Banks (non-depository)	69	28	19	22
Depository Institutions	57	13	11	33
Credit Unions	37	1	4	32

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Survey Background and Sample

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:

Which of the following strategies do you think your firm will likely implement in growing your firm's mortgage servicing portfolio? Please select all that apply.
Asked of firms that service mortgage loans & who plan to grow their mortgage servicing portfolio

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	94	26	18	50	35	34	25
We are looking to retain more MSRs on our originations	59%	58%	73%	47%	61%	52%	54%
We are looking to grow our correspondent lending to aggregate a larger servicing portfolio	20%	26%	24%	11%	26%	9%	16%
We are looking to buy more MSRs	10%	15%	0%	12%	17%	6%	8%
We are looking to grow selectively based on product execution (GSE/Ginnie Mae/others)	45%	64%^{M,S}	32%	37%	48%	45%	38%
Not sure/Prefer not to answer/Not applicable	8%	4%	5%	14%	3%	9%	20%^{M}

64% is significantly higher than 32% (mid-sized institutions) and 37% (smaller institutions)

20% is significantly higher than 3% (mortgage banks)

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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:

Which of the following strategies do you think your firm will likely implement in growing your firm's mortgage servicing portfolio? Please select all that apply.
Asked of firms that service mortgage loans & who plan to grow their mortgage servicing portfolio

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
N=	189	50	43	96	75	77	32
Yes	84%	86%	77%	89%	77%	92%[M]	97%[M]
No	16%	14%	23%	11%	23%[D,C]	8%	3%

"Total" of 84% is
(86% + 77% + 89%) / 3

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Economic Sentiment

In general, do you, as a senior mortgage executive, think the U.S. economy overall is on the right track or the wrong track?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**170**	**42**	**36**	**92**	**69**	**57**	**37**
Right track	53%	48%	60%	53%	55%	55%	42%
Wrong track	39%	44%	32%	41%	38%	39%	46%
Don't know	8%	8%	8%	6%	7%	5%	12%

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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Ease of Getting a Home Mortgage

Do you think it is very difficult, somewhat difficult, somewhat easy, or very easy for consumers to get a home mortgage today?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**170**	**42**	**36**	**92**	**69**	**57**	**37**
Very difficult	12%	13%	10%	15%	12%	13%	15%
Somewhat difficult	61%	62%	71%[S]	50%	57%	54%	61%
Somewhat easy	23%	23%	19%	27%	29%	25%	16%
Very easy	4%	2%	0%	9%	1%	9%	8%
Don't know	0%	0%	0%	0%	0%	0%	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

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Home Price Expectations

Nationally, during the next 12 months, do you, as a senior mortgage executive, think home prices in general will go up, go down, or stay the same as where they are now?

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	170	42	36	92	69	57	37
Go up	46%	44%	56%	37%	50%	35%	39%
Go down	9%	12%^{M}	0%	16%^{M}	8%	13%	18%
Stay the same	45%	44%	44%	47%	42%	52%	43%
Don't know	0%	0%	0%	0%	0%	0%	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
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Home Price Expectations (Percent Increase)

By about what percent do you, as a senior mortgage executive, think home prices nationally will go up on average over the next 12 months?
Showing summary statistics

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**70**	**19**	**20**	**32**	**34**	**19**	**14**
Mean	4.41%	4.63%	4.10%	4.63%	4.46%	4.53%	4.71%
Median	5%	5%	5%	5.50%	5%	5%	6%
Minimum	1%	2%	1%	2%	1%	3%	3%
Maximum	10%	8%	10%	10%	10%	7%	10%
Standard Deviation	1.86%	1.66%	1.94%	2.03%	2.13%	1.39%	2.05%

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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Home Price Expectations (Percent Decrease)

By about what percent do you, as a senior mortgage executive, think home prices nationally will go down on average over the next 12 months?
Showing summary statistics

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**20**	**5**	**0**	**15**	**6**	**8**	**6**
Mean	5.04%	3.86%	0%	5.87%	4.40%	5.53%	6.08%
Median	4%	4%	0%	4%	6%	4.50%	5%
Minimum	0%	0%	0%	0%	0%	1%	3%
Maximum	10%	10%	0%	10%	10%	10%	10%
Standard Deviation	3.12%	3.07%	0%	3.06%	3.76%	3.39%	2.31%

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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Current TSP Usage for Firm – Point of Sale (POS)

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Point of Sale (POS)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	170	42	36	92	69	57	37
Yes, we use one or more TSPs	75%	81%^{S}	82%^{S}	62%	83%^{D}	59%	74%
No, we do not use any TSPs in this area	21%	13%	18%	33%^{L}	12%	36%^{M}	26%
Don't know/Not sure	3%	6%	0%	4%	5%	5%	0%

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

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Current TSP Usage for Firm – Borrower Credit Reporting Tech

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Borrower Credit Reporting Tech*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	170	42	36	92	69	57	37
Yes, we use one or more TSPs	84%	93%[S]	86%	72%	91%[D,C]	74%	74%
No, we do not use any TSPs in this area	12%	5%	8%	23%[L]	6%	23%[M]	23%[M]
Don't know/Not sure	4%	2%	6%	5%	4%	4%	3%

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

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Current TSP Usage for Firm – Borrower Data Verification/Validation Services (VOI/E/A)

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Borrower Data Verification/Validation Services (VOI/E/A)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	170	42	36	92	69	57	37
Yes, we use one or more TSPs	87%	95%^{S}	89%	76%	97%^{D,C}	75%	80%
No, we do not use any TSPs in this area	11%	2%	8%	22%^{L}	1%	21%^{M}	20%^{M}
Don't know/Not sure	2%	2%	3%	2%	1%	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

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Current TSP Usage for Firm – Loan Origination System (LOS)

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Loan Origination System (LOS)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**170**	**42**	**36**	**92**	**69**	**57**	**37**
Yes, we use one or more TSPs	94%	89%	100%[L]	93%	95%	93%	97%
No, we do not use any TSPs in this area	5%	10%	0%	7%	4%	7%	3%
Don't know/Not sure	.%	1%	0%	0%	1%	0%	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

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Current TSP Usage for Firm – Appraisal Management Company (AMC) or other Appraisal Platform/Technology

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Appraisal Management Company (AMC) or other Appraisal Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	170	42	36	92	69	57	37
Yes, we use one or more TSPs	83%	81%	97%[L,S]	70%	84%	70%	88%[D]
No, we do not use any TSPs in this area	13%	8%	3%	29%[L,M]	12%	25%	12%
Don't know/Not sure	4%	11%[M,S]	0%	1%	4%	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

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Current TSP Usage for Firm – eClosing/eNote/eVault

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *eClosing/eNote/eVault*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**170**	**42**	**36**	**92**	**69**	**57**	**37**
Yes, we use one or more TSPs	49%	57%[S]	56%[S]	35%	57%[C]	44%[C]	23%
No, we do not use any TSPs in this area	48%	38%	44%	60%[L]	39%	53%	74%[M,D]
Don't know/Not sure	3%	5%	0%	4%	4%	4%	3%

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

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Current TSP Usage for Firm – Servicing Platform/Technology

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Servicing Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**170**	**42**	**36**	**92**	**69**	**57**	**37**
Yes, we use one or more TSPs	69%	74%	71%	61%	60%	66%	76%
No, we do not use any TSPs in this area	22%	14%	19%	32%[L]	31%	26%	16%
Don't know/Not sure	9%	12%	10%	7%	9%	8%	8%

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

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Current TSP Usage for Firm – Compliance Platform/Technology

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Compliance Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**170**	**42**	**36**	**92**	**69**	**57**	**37**
Yes, we use one or more TSPs	74%	77%	79%	65%	72%	69%	70%
No, we do not use any TSPs in this area	19%	10%	17%	31%[L]	20%	28%	24%
Don't know/Not sure	7%	13%	4%	4%	8%	3%	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

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Current TSP Usage for Firm – Mortgage Business Analytics

Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs. *Mortgage Business Analytics*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	170	42	36	92	69	57	37
Yes, we use one or more TSPs	45%	52%[S]	53%[S]	30%	53%[D]	32%	35%
No, we do not use any TSPs in this area	44%	26%	42%	65%[L,M]	34%	62%[M]	59%[M]
Don't know/Not sure	11%	22%[M,S]	6%	5%	14%	6%	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

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Top Criteria for TSPs – Most important (1 of 2)

When selecting a TSP to fulfill your firm's needs, what are your top criteria? Please select up to two of the most important criteria and rank them in order of importance. *Most important*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	168	42	36	91	68	57	37
Costs	11%	13%	6%	15%	14%	13%	12%
Market influence	2%	2%	3%	0%	1%	2%	0%
Features or functionalities	22%	23%	28%	16%	25%[C]	22%	8%
Implementation	1%	0%	3%	1%	1%	2%	0%
Integration	12%	11%	14%	10%	8%	5%	24%[M,D]
Proven record of success	12%	12%	17%	7%	10%	11%	11%
Reliability	8%	7%	8%	7%	9%	4%	12%
Scalability	2%	2%	3%	1%	3%	0%	3%
System speed	0%	0%	0%	0%	0%	0%	0%
Financial stability (how long will they be in the business)	3%	5%	0%	3%	0%	7%[M]	3%
Data privacy/security	9%	2%	8%	16%[L]	3%	16%[M]	16%[M]
Business intelligence analytics and reporting	3%	2%	6%	1%	4%	2%	0%
Customer service and support	6%	7%	3%	8%	9%	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

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Top Criteria for TSPs – Most important (2 of 2)

When selecting a TSP to fulfill your firm's needs, what are your top criteria? Please select up to two of the most important criteria and rank them in order of importance. *Most important*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	168	42	36	91	68	57	37
Customer/borrower demand	4%	3%	3%	5%	5%	4%	0%
Legal/compliance requirements	4%	6%	0%	5%	5%	3%	5%
Investor requirements	2%	4%	0%	3%	2%	4%	3%
Other	0%	0%	0%	0%	0%	0%	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

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Top Criteria for TSPs – 2nd most important (1 of 2)

When selecting a TSP to fulfill your firm's needs, what are your top criteria? Please select up to two of the most important criteria and rank them in order of importance. *2nd most important*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	168	42	36	91	68	57	37
Costs	24%	21%	33%	19%	30%	18%	14%
Market influence	1%	0%	0%	3%	0%	2%	5%
Features or functionalities	13%	8%	12%	17%	15%	10%	12%
Implementation	2%	1%	6%S	0%	2%	0%	3%
Integration	14%	26%M,S	3%	12%	14%	17%	9%
Proven record of success	5%	1%	6%	7%	4%	4%	12%
Reliability	5%	6%	6%	2%	4%	4%	5%
Scalability	6%	8%	6%	3%	8%	5%	0%
System speed	.%	1%	0%	0%	1%	0%	0%
Financial stability (how long will they be in the business)	1%	2%	0%	1%	1%	2%	0%
Data privacy/security	9%	12%	8%	6%	6%	15%	3%
Business intelligence analytics and reporting	4%	5%	3%	3%	3%	2%	8%
Customer service and support	3%	0%	6%	3%	1%	4%	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

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Top Criteria for TSPs – 2nd most important (2 of 2)

When selecting a TSP to fulfill your firm's needs, what are your top criteria? Please select up to two of the most important criteria and rank them in order of importance. *2nd most important*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	168	42	36	91	68	57	37
Customer/borrower demand	2%	4%	3%	1%	2%	0%	3%
Legal/compliance requirements	8%	4%	4%	15%	4%	13%M	18%M
Investor requirements	1%	0%	0%	2%	0%	4%	0%
Other	0%	0%	0%	0%	0%	0%	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

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Implementation/Usage Investments – Point of Sale (POS)

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Point of Sale (POS)

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**121**	**34**	**30**	**58**	**57**	**34**	**28**
Very high	18%	22%	17%	15%	28%[D]	6%	11%
High	40%	32%	54%[S]	32%	35%	45%	31%
Moderate	34%	45%	24%	35%	32%	36%	44%
Low	5%	0%	5%	13%[L]	4%	7%	15%
Don't know/Not sure	2%	1%	0%	5%	1%	6%	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

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Implementation/Usage Investments – Borrower Credit Reporting Tech

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Borrower Credit Reporting Tech

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	136	39	31	66	62	42	28
Very high	5%	4%	6%	6%	7%	5%	4%
High	15%	9%	19%	17%	22%[D]	7%	9%
Moderate	49%	50%	52%	45%	46%	55%	42%
Low	25%	26%	23%	29%	18%	27%	45%[M]
Don't know/Not sure	5%	12%[M]	0%	4%	7%	6%	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

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Implementation/Usage Investments – Borrower Data Verification/Validation Services (VOI/E/A)

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Borrower Data Verification/Validation Services (VOI/E/A)

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**142**	**40**	**32**	**70**	**67**	**43**	**30**
Very high	4%	8%	0%	4%	6%	5%	0%
High	17%	14%	22%	15%	23%	12%	8%
Moderate	46%	50%	39%	47%	48%	43%	44%
Low	30%	22%	39%	27%	19%	36%	41%[M]
Don't know/Not sure	4%	6%	0%	6%	4%	5%	7%

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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Implementation/Usage Investments– Loan Origination System (LOS)

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Loan Origination System (LOS)

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**160**	**38**	**36**	**86**	**66**	**53**	**36**
Very high	38%	40%	44%	28%	50%^{D,C}	27%	19%
High	42%	38%	44%	45%	37%	46%	53%
Moderate	17%	19%	11%	21%	11%	23%	22%
Low	1%	0%	0%	2%	0%	0%	3%
Don't know/Not sure	2%	4%	0%	3%	2%	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

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Implementation/Usage Investments – Appraisal Management Company (AMC) or other Appraisal Platform/Technology

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Appraisal Management Company (AMC) or other Appraisal Platform/Technology

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**134**	**34**	**35**	**64**	**58**	**40**	**32**
Very high	3%	3%	3%	3%	3%	5%	0%
High	13%	18%	11%	11%	15%	15%	5%
Moderate	46%	50%	50%	36%	47%	46%	35%
Low	33%	20%	36%	43%[L]	30%	29%	54%[M,D]
Don't know/Not sure	5%	9%	0%	6%	5%	5%	6%

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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Implementation/Usage Investments – eClosing/eNote/eVault

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
eClosing/eNote/eVault

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**76**	**24**	**20**	**32**	**39**	**25**	**8**
Very high	4%	4%	5%	2%	6%	0%	0%
High	19%	19%	18%	22%	12%	26%	24%
Moderate	44%	44%	40%	51%	54%	34%	41%
Low	27%	23%	38%	18%	22%	30%	35%
Don't know/Not sure	6%	10%	0%	8%	6%	10%	0%

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

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Implementation/Usage Investments – Servicing Platform/Technology

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Servicing Platform/Technology

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**113**	**31**	**26**	**56**	**42**	**38**	**28**
Very high	12%	13%	16%	7%	8%	21%[C]	4%
High	32%	32%	29%	35%	24%	36%	39%
Moderate	34%	32%	27%	43%	42%	29%	39%
Low	13%	6%	24%	9%	14%	5%	14%
Don't know/Not sure	9%	16%	4%	5%	12%	8%	4%

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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Implementation/Usage Investments – Compliance Platform/Technology

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Compliance Platform/Technology

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	120	32	28	60	50	40	26
Very high	6%	6%	7%	4%	5%	8%	4%
High	21%	16%	19%	29%	24%	15%	37%[D]
Moderate	57%	64%	56%	51%	58%	62%	42%
Low	14%	14%	14%	13%	13%	10%	13%
Don't know/Not sure	2%	0%	4%	3%	0%	5%	4%

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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Implementation/Usage Investments – Mortgage Business Analytics

You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of the investments your firm has made in using TSP(s).
Mortgage Business Analytics

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**68**	**22**	**19**	**28**	**36**	**18**	**13**
Very high	6%	2%	11%	5%	11%	0%	0%
High	19%	18%	21%	18%	22%	11%	23%
Moderate	53%	66%	42%	51%	48%	67%	54%
Low	20%	14%	26%	22%	19%	17%	23%
Don't know/Not sure	1%	0%	0%	4%	0%	6%	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

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Critical Level of TSP – Point of Sale (POS)

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Point of Sale (POS)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**121**	**34**	**30**	**58**	**57**	**34**	**28**
Critical (must have)	72%	74%	71%	70%	77%	63%	75%
Valuable (a good asset to have)	26%	26%	29%	23%	23%	37%	18%
Neutral (nice to have)	1%	0%	0%	4%	1%	0%	7%
Don't know/Not sure	1%	0%	0%	3%	0%	0%	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

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Critical Level of TSP – Borrower Credit Reporting Tech

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Borrower Credit Reporting Tech*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**136**	**39**	**31**	**66**	**62**	**42**	**28**
Critical (must have)	41%	46%	42%	35%	37%	48%	33%
Valuable (a good asset to have)	47%	43%	50%	49%	53%	38%	53%
Neutral (nice to have)	10%	8%	8%	16%	10%	12%	15%
Don't know/Not sure	1%	4%	0%	0%	1%	2%	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

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Critical Level of TSP – Borrower Data Verification/Validation Services (VOI/E/A)

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Borrower Data Verification/Validation Services (VOI/E/A)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**142**	**40**	**32**	**70**	**67**	**43**	**30**
Critical (must have)	35%	48%^{S}	28%	27%	42%	26%	25%
Valuable (a good asset to have)	51%	42%	53%	61%^{L}	41%	63%^{M}	66%^{M}
Neutral (nice to have)	14%	10%	19%	12%	16%	12%	8%
Don't know/Not sure	0%	0%	0%	0%	0%	0%	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

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Critical Level of TSP – Loan Origination System (LOS)

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Loan Origination System (LOS)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	160	38	36	86	66	53	36
Critical (must have)	91%	95%	92%	87%	97%[D]	87%	89%
Valuable (a good asset to have)	8%	5%	8%	10%	3%	13%[M]	11%
Neutral (nice to have)	.%	0%	0%	1%	0%	0%	0%
Don't know/Not sure	.%	0%	0%	1%	0%	0%	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

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Critical Level of TSP – Appraisal Management Company (AMC) or other Appraisal Platform/Technology

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Appraisal Management Company (AMC) or other Appraisal Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	134	34	35	64	58	40	32
Critical (must have)	32%	47%[M,S]	24%	24%	29%	26%	32%
Valuable (a good asset to have)	51%	38%	49%	68%[L]	55%	62%	52%
Neutral (nice to have)	16%	15%	24%[S]	8%	16%	9%	15%
Don't know/Not sure	1%	0%	3%	0%	0%	2%	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

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Critical Level of TSP – eClosing/eNote/eVault

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *eClosing/eNote/eVault*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**76**	**24**	**20**	**32**	**39**	**25**	**8**
Critical (must have)	10%	12%	5%	14%	8%	14%	24%
Valuable (a good asset to have)	66%	75%	62%	55%	67%	64%	53%
Neutral (nice to have)	24%	12%	32%	28%	26%	22%	24%
Don't know/Not sure	1%	0%	0%	3%	0%	0%	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

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Critical Level of TSP – Servicing Platform/Technology

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Servicing Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**113**	**31**	**26**	**56**	**42**	**38**	**28**
Critical (must have)	60%	60%	61%	61%	49%	71%	70%
Valuable (a good asset to have)	31%	31%	31%	30%	41%[D]	19%	30%
Neutral (nice to have)	5%	5%	4%	7%	6%	8%	0%
Don't know/Not sure	4%	5%	4%	2%	4%	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

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Critical Level of TSP – Compliance Platform/Technology

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Compliance Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**120**	**32**	**28**	**60**	**50**	**40**	**26**
Critical (must have)	44%	54%	35%	45%	42%	52%	48%
Valuable (a good asset to have)	46%	42%	51%	47%	47%	41%	48%
Neutral (nice to have)	8%	5%	11%	8%	11%	5%	4%
Don't know/Not sure	1%	0%	4%	0%	0%	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

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Critical Level of TSP – Mortgage Business Analytics

For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business. *Mortgage Business Analytics*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	68	22	19	28	36	18	13
Critical (must have)	24%	27%	21%	24%	39%^{D,C}	6%	8%
Valuable (a good asset to have)	63%	57%	68%	65%	51%	78%	85%^{M}
Neutral (nice to have)	13%	16%	11%	11%	10%	17%	8%
Don't know/Not sure	0%	0%	0%	0%	0%	0%	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

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TSP Market Competitiveness – Point of Sale (POS)

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Point of Sale (POS)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	121	34	30	58	57	34	28
Too many providers	20%	24%	20%	15%	20%	15%	22%
About the right number of providers	61%	62%	68%	51%	60%	60%	56%
Too few providers	10%	10%	8%	11%	11%	13%	7%
Don't know/Not sure	9%	4%	3%	23%[L,M]	10%	12%	15%

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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TSP Market Competitiveness – Borrower Credit Reporting Tech

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Borrower Credit Reporting Tech*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	136	39	31	66	62	42	28
Too many providers	10%	11%	3%	15%	7%	10%	22%[M]
About the right number of providers	52%	43%	66%	45%	47%	54%	51%
Too few providers	25%	37%[S]	18%	17%	32%[C]	21%	9%
Don't know/Not sure	14%	9%	13%	22%	14%	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

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TSP Market Competitiveness – Borrower Data Verification/Validation Services (VOI/E/A)

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Borrower Data Verification/Validation Services (VOI/E/A)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**142**	**40**	**32**	**70**	**67**	**43**	**30**
Too many providers	10%	12%	6%	11%	6%	14%	15%
About the right number of providers	45%	44%	45%	45%	41%	45%	51%
Too few providers	35%	35%	39%	30%	42%	27%	24%
Don't know/Not sure	11%	9%	9%	14%	11%	14%	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

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TSP Market Competitiveness – Loan Origination System (LOS)

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Loan Origination System (LOS)*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	160	38	36	86	66	53	36
Too many providers	7%	12%[M]	0%	12%[M]	11%	4%	14%
About the right number of providers	57%	51%	65%	53%	48%	61%	60%
Too few providers	30%	32%	32%	26%	36%	29%	18%
Don't know/Not sure	6%	5%	3%	9%	5%	6%	8%

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

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TSP Market Competitiveness – Appraisal Management Company (AMC) or other Appraisal Platform/Technology

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Appraisal Management Company (AMC) or other Appraisal Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**134**	**34**	**35**	**64**	**58**	**40**	**32**
Too many providers	25%	18%	37%[S]	16%	22%	22%	20%
About the right number of providers	52%	58%	46%	55%	50%	58%	60%
Too few providers	11%	10%	10%	15%	16%	6%	11%
Don't know/Not sure	11%	14%	7%	14%	12%	14%	9%

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

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TSP Market Competitiveness – eClosing/eNote/eVault

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *eClosing/eNote/eVault*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**76**	**24**	**20**	**32**	**39**	**25**	**8**
Too many providers	4%	2%	5%	6%	6%	0%	12%
About the right number of providers	62%	62%	70%	48%	55%	64%	59%
Too few providers	18%	20%	15%	18%	24%	12%	18%
Don't know/Not sure	17%	16%	10%	28%	15%	24%	12%

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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TSP Market Competitiveness – Servicing Platform/Technology

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Servicing Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**113**	**31**	**26**	**56**	**42**	**38**	**28**
Too many providers	3%	3%	4%	2%	2%	3%	4%
About the right number of providers	56%	50%	63%	56%	65%	48%	64%
Too few providers	28%	34%	25%	23%	23%	33%	21%
Don't know/Not sure	13%	13%	8%	19%	10%	16%	11%

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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TSP Market Competitiveness – Compliance Platform/Technology

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Compliance Platform/Technology*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**120**	**32**	**28**	**60**	**50**	**40**	**26**
Too many providers	2%	3%	0%	3%	4%	3%	0%
About the right number of providers	62%	64%	61%	60%	67%	59%	62%
Too few providers	22%	21%	25%	18%	20%	15%	31%
Don't know/Not sure	15%	12%	14%	18%	10%	23%	8%

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

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TSP Market Competitiveness – Mortgage Business Analytics

For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few? *Mortgage Business Analytics*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	68	22	19	28	36	18	13
Too many providers	0%	0%	0%	0%	0%	0%	0%
About the right number of providers	76%	82%	79%	60%	67%	94%[M,C]	62%
Too few providers	19%	11%	21%	29%	29%[D]	0%	23%[D]
Don't know/Not sure	5%	7%	0%	11%	4%	6%	15%

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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Return on Investment for TSP – Point of Sale (POS)

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Point of Sale (POS)

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**121**	**34**	**30**	**58**	**57**	**34**	**28**
More value than we expected	13%	20%	10%	7%	14%	12%	7%
About as much value as we expected	67%	61%	71%	69%	60%	72%	80%
Less value than we expected	16%	16%	15%	17%	22%	13%	9%
Don't know/Not sure	4%	3%	3%	8%	4%	3%	4%

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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Return on Investment for TSP – Borrower Credit Reporting Tech

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Borrower Credit Reporting Tech

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**136**	**39**	**31**	**66**	**62**	**42**	**28**
More value than we expected	2%	0%	3%	2%	0%	2%	5%
About as much value as we expected	72%	67%	79%	70%	65%	71%	82%
Less value than we expected	20%	24%	15%	22%	28%	18%	13%
Don't know/Not sure	6%	9%	3%	5%	7%	8%	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

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Return on Investment for TSP – Borrower Data Verification/Validation Services (VOI/E/A)

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Borrower Data Verification/Validation Services (VOI/E/A)

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**142**	**40**	**32**	**70**	**67**	**43**	**30**
More value than we expected	2%	4%	0%	4%	4%	0%	2%
About as much value as we expected	60%	48%	69%	67%[L]	53%	63%	81%[M]
Less value than we expected	30%	40%	25%	24%	35%[C]	30%	14%
Don't know/Not sure	7%	9%	6%	6%	8%	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

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Return on Investment for TSP – Loan Origination System (LOS)

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Loan Origination System (LOS)

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**160**	**38**	**36**	**86**	**66**	**53**	**36**
More value than we expected	7%	9%	3%	10%	5%	6%	18%[M]
About as much value as we expected	74%	64%	89%[L,S]	67%	72%	79%	61%
Less value than we expected	16%	22%	8%	19%	22%	11%	18%
Don't know/Not sure	3%	5%	0%	3%	2%	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

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Return on Investment for TSP – Appraisal Management Company (AMC) or other Appraisal Platform/Technology

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Appraisal Management Company (AMC) or other Appraisal Platform/Technology

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**134**	**34**	**35**	**64**	**58**	**40**	**32**
More value than we expected	7%	10%	6%	5%	8%	8%	3%
About as much value as we expected	72%	60%	77%	77%	65%	72%	85%[M]
Less value than we expected	17%	22%	14%	16%	22%	15%	12%
Don't know/Not sure	4%	7%	3%	3%	6%	5%	0%

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

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Return on Investment for TSP – eClosing/eNote/eVault

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver… *eClosing/eNote/eVault*

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**76**	**24**	**20**	**32**	**39**	**25**	**8**
More value than we expected	6%	12%	0%	6%	7%	8%	0%
About as much value as we expected	72%	67%	88%^{S}	55%	72%	58%	71%
Less value than we expected	11%	12%	2%	23%^{M}	7%	22%	29%
Don't know/Not sure	11%	10%	10%	15%	14%	12%	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

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Return on Investment for TSP – Servicing Platform/Technology

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Servicing Platform/Technology

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	**113**	**31**	**26**	**56**	**42**	**38**	**28**
More value than we expected	6%	10%	4%	4%	2%	8%	7%
About as much value as we expected	72%	64%	76%	76%	71%	63%	88%[D]
Less value than we expected	12%	12%	12%	13%	16%	16%	5%
Don't know/Not sure	10%	15%	8%	7%	11%	13%[C]	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

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Return on Investment for TSP – Compliance Platform/Technology

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Compliance Platform/Technology

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	120	32	28	60	50	40	26
More value than we expected	4%	2%	4%	8%	5%	0%	15%[D]
About as much value as we expected	82%	85%	86%	76%	82%	82%	71%
Less value than we expected	9%	12%	4%	13%	8%	13%	13%
Don't know/Not sure	4%	2%	7%	3%	5%	5%	0%

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

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Return on Investment for TSP – Mortgage Business Analytics

When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…
Mortgage Business Analytics

	Total	LOAN VOLUME			INSTITUTION TYPE		
		Larger (L)	Mid-sized (M)	Smaller (S)	Mortgage Banks (M)	Depository Institutions (D)	Credit Unions (C)
n=	68	22	19	28	36	18	13
More value than we expected	5%	6%	0%	11%	9%	6%	0%
About as much value as we expected	83%	85%	84%	78%	77%	89%	92%
Less value than we expected	9%	2%	16%	11%	10%	6%	8%
Don't know/Not sure	3%	7%	0%	0%	4%	0%	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

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Survey Question Text

Question Text

QR515: Listed below are several key functional areas across the mortgage lending cycle. For each area, please indicate if your firm is currently using one or more Technology Service Providers (TSP) to fulfill your needs.

QR516: When selecting a TSP to fulfill your firm's needs, what are your top criteria? Please select up to two of the most important criteria and rank them in order of importance.

QR517: You mentioned that your firm currently uses one or more TSPs for the following functional area(s). For each area, please rate the level of investments your firm has made in using TSP(s).
**Note: Level of investments includes any headcount related to and/or budget invested toward implementation and usage.*

QR518: For the same list of functional areas, please rate how critical the TSP technology offerings are to support your mortgage business.

QR519: For the same list of functional areas, we would like to gather your views about market competitiveness. For each area, do you feel that the market has too many TSPs competing, just enough, or too few?

QR520: You mentioned that you feel too many TSPs are competing in the following functional area(s). Could you share your thoughts as to why you feel there are too many providers? What are the advantages and/or challenges to the mortgage eco-system? (Optional)

QR521: You mentioned that you feel too few TSPs are competing in the following functional area(s). Could you share your thoughts as to why you feel there are too few providers? What are the advantages and/or challenges to the mortgage eco-system? (Optional)

QR522: When considering your business' overall return on investment in functional areas where your firm used at least one TSP, would you say that the TSP technology offerings typically deliver…

QR523: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) more value than you expected. Could you share some details with us? Why do you find TSP technology offerings in this / these functional area(s) worth the investment? (Optional)

QR524: You mentioned that you found the TSP technology offerings in the following functional area(s) deliver(s) less value than you expected. Could you share some details with us? What challenges have you experienced? What would you recommend improving? (Optional)

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