February 2019 Senior Financial Officer Survey

Board of Governors of the Federal Reserve System

Summary

In February 2019, the Federal Reserve conducted a Senior Financial Officer Survey to collect qualitative and quantitative information from senior financial officers on their banks' reserve management practices and money market participation.[1] This survey featured many of the same questions included in the survey conducted in September 2018.[2] For instance, the first part of the survey again asked respondents to identify the lowest level of reserve balances that they would feel comfortable holding before taking action to retain or increase their reserve balances given the constellation of short-term rates prevailing at the time of the survey.[3] The second part of the survey asked respondents to consider reserve balance management in interest rate environments different from the one prevailing at the time of the survey. The third part of the survey asked about participation in unsecured overnight wholesale funding markets. Building on the previous survey, a number of new questions were added to further explore respondents' demand for reserve balances. For example, the first part of the survey was expanded to include a two-part question on respondents' comfort level with using Federal Reserve intraday credit as well as questions designed to gain more insight on their lowest comfortable level of reserve balances. In addition, a new part was added to the survey that asked respondents about participation in secured overnight wholesale funding markets.

The survey was distributed to senior financial officers at 80 banks on February 7, 2019, with replies due by February 21, 2019.[4] The reference period for most questions was January 2019. Responses were received from 75 banks. In aggregate, these 75 banks held roughly three-fourths of total reserve balances in the banking system at the time of the survey. As in 2018, the banks identified for surveying represented a range of asset sizes and business models. Responses were collected from senior financial officers at 43 domestic banks and 32 U.S. branches and agencies of foreign banking organizations.[5]

Key takeaways from the survey include the following:

- Survey respondents indicated that their lowest comfortable level of reserve balances given the constellation of short-term interest rates prevailing at the time of the survey was a bit over $700 billion; by comparison, these banks' total average reserve balance holdings in January 2019 were $1.2 trillion.
- Forty percent of respondents ranked meeting routine intraday payments flows as the most important consideration in determining their lowest comfortable level of reserve balances.

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1 The February 2019 survey was conducted by the Board of Governors of the Federal Reserve System in collaboration with the Federal Reserve Bank of New York.

2 A summary of aggregated results from the September 2018 Senior Financial Officer Survey is available at https://www.federalreserve.gov/data/sfos/files/senior-financial-officer-survey-201809.pdf.

3 Respondents were asked to assume that the "constellation of short-term rates" referred to the rates on federal funds, Eurodollars, repurchase agreements, and short-dated U.S. Treasury bills.

4 The September 2018 survey was distributed to 59 senior financial officers; 51 responses were received. As in 2018, respondents were asked to provide responses at the level of the consolidated bank holding company, if applicable. In this iteration of the survey, respondents were also asked to specify the reserve holding entities that were covered in a survey response.

5 The 43 domestic banks included U.S. commercial banks, federal savings banks, state-chartered savings banks, and savings and loan associations with U.S. assets greater than $2 billion. No credit unions were included in the survey. The 32 foreign banks included U.S. branches and agencies of foreign banks as well as 1 U.S. commercial bank that exhibited reserve management behavior more akin to this group than similarly sized domestic banks; all of the institutions included in foreign banks had U.S. assets greater than $2 billion.

- Roughly three-fourths of respondents from domestic banks reported that a very likely action to replenish reserve balances in the short term and long term would be to increase advances from Federal Home Loan Banks (FHLBs), while over 40 percent of respondents from foreign banks were very likely to borrow in unsecured funding markets in the short term and long term.
- About three-fourths of respondents indicated that they felt comfortable to neutral about using Federal Reserve intraday credit.[6] The majority of institutions that felt neutral to uncomfortable using intraday credit reported that their views on intraday credit did not affect their reported lowest comfortable level of reserves.[7]
- Over half of all respondents reported that their lowest comfortable level of reserve balances would not change regardless of the interest rate environment. Respondents from foreign banks were more willing to economize on their holdings of reserve balances in comparison to domestic banks if the opportunity cost to hold these balances increased.
- More respondents reported being active lenders of cash in secured overnight wholesale funding markets than they were in similar unsecured markets.
- Twenty-three respondents reported being willing to lend at spreads to the interest on excess reserves (IOER) rate of less than 25 basis points in unsecured overnight wholesale funding markets. Nearly double the number of respondents indicated a similar willingness to lend in secured overnight wholesale funding markets if receiving level-1 high-quality liquid assets (HQLA).

The remainder of this summary is organized into four parts, similar to the structure of the survey, followed by a tabular presentation of responses.[8]

Part 1. Current Reserve Balance Management Strategies and Practices

(Table 1, questions 1–4)

Questions on lowest comfortable level of reserve balances. Senior financial officers at each bank were asked to report the approximate lowest level of reserve balances that they would feel comfortable holding before taking active steps to maintain or increase their bank's reserve balances given the prevailing constellation of short-term interest rates relative to the IOER rate. In aggregate, the lowest comfortable levels of reserve balances reported by all respondents summed to about $700 billion, notably smaller than the amount of reserves these banks held, on average, in January 2019.

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6 "Neutral" was further defined in the survey question as "use of intraday credit is not a key consideration in account management decisions."

7 When describing responses, "remained unchanged" covers percentages from 0 to 5 percent; "modest" refers to percentages greater than 5 and less than or equal to 10 percent; "moderate" refers to percentages greater than 10 and less than or equal to 20 percent; "significant" refers to percentages greater than 20 and less than 50 percent; and "majority" refers to percentages greater than or equal to 50 percent.

8 Survey results are organized into four tables to match the four parts of the survey. For the most part, the instructions and survey questions presented in each table mirror the ones distributed to the respondents, with minor adjustments to enhance clarity. As not all respondents answered every question, the number of respondents answering each question is reported in the accompanying data tables.

To learn more about what the "lowest comfortable level of reserve balances" means to respondents, the survey included two new questions that asked respondents to indicate the frequency with which they review this value as well as their comfort level with potential day-to-day fluctuations below this value. A significant number of respondents indicated that they assess their lowest comfortable level of reserve balances on a daily basis. Another 20 percent selected "other," and, based on written comments, the banks that selected "other" indicated that they assessed their lowest comfortable level of reserve balances as needed or on an ongoing basis.

Over three-fourths of respondents reported being comfortable with the potential for day-to-day fluctuations to occasionally bring reserve levels below their lowest comfortable level of reserve balances. The remaining respondents from seven domestic banks and nine foreign banks said that they were uncomfortable with potential day-to-day fluctuations. These same respondents indicated that they would need, in total, an additional $33 billion of reserve balances to be comfortable with potential day-to-day fluctuations of balances. Factoring in this additional $33 billion would increase the aggregate reported lowest comfortable level of reserve balances 5 percent, to slightly over $730 billion.

Question on drivers of lowest comfortable level of reserve balances. Survey respondents were asked to rank the determinants of their lowest comfortable level of reserve balances.[9] Forty percent of all respondents ranked meeting routine intraday payment flows as the most important driver of their lowest comfortable level of reserve balances. The second most important determinant varied somewhat depending on whether the respondent was from a domestic or foreign bank.[10] For respondents from domestic banks, a significant fraction ranked meeting projected outflows over a certain window (more than one business day and under normal market conditions) as the second most important driver. Nearly 30 percent of respondents from foreign banks ranked satisfying internal liquidity stress metrics (meeting projected outflows under stressed market conditions) as the second most important.

Questions on potential actions to rebuild reserve balances should they fall below the lowest comfortable level. Survey respondents were also asked to report the likelihood of employing various actions in the short term (up to a week) and long term (over a week) to replenish reserve balances should they fall below their lowest comfortable level of reserve balances. The majority of respondents from domestic banks reported increased borrowing from FHLBs in the form of advances as a very likely action to rebuild their lowest comfortable level of reserve balances in both the short term and long term. The likelihood reported by domestic banks of taking other actions depended greatly on the time horizon. Slightly over 40 percent of respondents from domestic banks indicated that a very likely action would be to borrow in unsecured funding markets in tenors less than 30 days in the short term. In the long term, the possible options to address a reserve level shortfall broadened beyond borrowing in unsecured funding markets. For instance, a similar percent of respondents from domestic banks cited increasing their retail deposit base through either offering higher rates or offering attractive non-rate terms as a likely action. Roughly one-third of respondents from domestic banks also indicated borrowing in secured funding markets in tenors greater than 30 days as a likely action.

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9 In the 2018 survey, respondents were asked to *rate* the determinants of their lowest comfortable level of reserve balances.

10 A scale of 5 was used to identify the consideration ranked second most important.

A significant number of respondents from foreign banks would be very likely to borrow in unsecured markets at various tenors in the short term and long term. In the short term, over 20 percent of respondents from foreign banks were very likely to use the foreign exchange swap market to swap non-U.S. dollar reserves for U.S. dollar reserves. Another very likely action in the short term for respondents from foreign banks was reducing lending in short-term money markets.

Question on intraday credit usage. Survey respondents were asked to indicate their comfort level with using intraday credit to manage the mismatch in timing between incoming funds and outgoing payments. Almost three-fourths of respondents cited being "highly comfortable," "mostly comfortable," or "neutral" about accessing intraday credit (either collateralized or uncollateralized) from the Federal Reserve. One-fourth of respondents indicated that they were "mostly" to "highly" uncomfortable accessing intraday credit. As a follow-up question, respondents that answered that they were either neutral or uncomfortable at some level using intraday credit were then asked to report how their views about intraday credit usage affected their institutions' lowest comfortable level of reserves. The majority of these respondents noted that their views did not increase their reported lowest comfortable level of reserves. There was not an appreciable difference in respondent answers by institution type.

Part 2. Reserve Balance Management in Different Interest Rate Environments

(Table 2, question 5)

Survey respondents were asked to report how their lowest comfortable level of reserve balances would change, given different opportunity costs of holding these balances. Opportunity cost was defined as the difference between a constellation of short-term interest rates and the current level of the IOER rate.[11] Respondents were asked to consider four different opportunity cost scenarios, in which the opportunity cost (1) fell 5 basis points, (2) rose 5 basis points, (3) rose 25 basis points, or (4) rose 50 basis points. In each of these scenarios, respondents were asked to assume that all short-term interest rates shifted by a similar amount and that the scenario would persist for a significant period of time.

The majority of respondents reported that their lowest comfortable level of reserve balances would remain unchanged if the opportunity cost of holding reserve balances was either 5 basis points lower or higher than prevailed in January 2019. This finding held even as the opportunity cost of holding reserves increased.

Responses to this question differed somewhat among respondents by institution type. About one-fourth of respondents at foreign banks reported that their lowest comfortable level of reserve balances would decrease if the opportunity cost of holding balances was 5 basis points higher, while all domestic bank respondents indicated that their lowest comfortable level of reserve balances would remain unchanged. As the opportunity cost rose 25 basis points and 50 basis points, more respondents indicated a willingness to economize on their lowest comfortable level of reserve balances. More than half of respondents from foreign banks and one-third of respondents from domestic banks reportedly would decrease their

[11] The "current" level of the IOER rate refers to January 2019, which was before the survey was distributed.

lowest comfortable level of reserve balances by some degree if the opportunity cost of holding reserve balances increased 50 basis points.

Part 3. Unsecured Overnight Wholesale Funding Market Activity

(Table 3, questions 6–9)

In this part of the survey, respondents were asked to report on their current and prospective borrowing and lending activities in unsecured overnight wholesale funding markets. Unsecured overnight wholesale funding markets were defined to cover trading in the federal funds market or the overnight Eurodollar market.

Questions on current borrowing activity. Senior financial officers were asked whether their bank was an active borrower in unsecured overnight wholesale funding markets. An active borrower was defined as borrowing for purposes other than testing. The majority of respondents reported "Yes," with nearly all foreign banks providing this response.

Respondents that self-identified their bank as an active borrower in unsecured overnight wholesale funding markets were then asked to identify the importance of different motivations for their borrowing. Among the foreign banks that indicated they engage in unsecured borrowing, a majority noted borrowing to provide a short-term investment option to customers, and earning a positive spread on the proceeds by investing at the IOER rate as an important or very important motivation. Domestic banks' responses differed somewhat, with over three-fourths of respondents indicating that covering temporary or unexpected shortfalls in their reserve balances was an important or very important motivation for them to borrow in unsecured overnight wholesale funding markets. Around 60 percent of respondents from domestic banks also cited improving or maintaining liquidity coverage ratio (LCR) metrics as another important or very important borrowing motivation.

Questions on current lending activity. About 90 percent of respondents indicated that they were not active lenders in unsecured overnight wholesale funding markets. These respondents highlighted a number of reasons for not lending, including the lack of sufficient returns, more conservative credit and counterparty risk considerations for unsecured lending, and general indifference given that this type of activity is not an important part of their business model. Several respondents noted that they were net borrowers, while other respondents cited the attractiveness of holding reserves at the central bank given limited credit lines and other market or regulatory constraints.

Question on willingness to lend. Respondents were asked to identify the lowest spread relative to the IOER rate and the amount at which they would be willing to lend cash (at this spread) in unsecured overnight wholesale funding markets. Over half of all respondents provided both a spread and dollar amount that they would be willing to lend.[12] Among those respondents, reported spreads over the IOER rate ranged from as low as 5 basis points to as high as 125 basis points. Responses to this question differed meaningfully across respondents by institution type. For instance, the majority of respondents from foreign banks would require a spread to the IOER rate of less than 25 basis points and, at these spreads, would lend individually in amounts over $1 billion. In contrast, around 60 percent of respondents from

[12] Three of these respondents did not provide an amount that they would be willing to lend; rather, they provided qualitative information from which to approximate a lending amount.

domestic banks would require a spread to the IOER rate greater than 25 basis points and, at these spreads, would lend individually in amounts from as low as $0.025 billion to over $10 billion.

Part 4. Secured Overnight Wholesale Funding Market Activity

(Table 4, questions 10–13)

In this part of the survey, respondents were asked to report on their current and prospective borrowing and lending activities in the secured overnight wholesale funding markets. Respondents were also asked to consider the repurchase agreement and reverse repurchase agreement activity completed by their bank only and not activities by an affiliated broker-dealer. The structure of the questions in this part mirrors that of the previous section except where noted.

Questions on current borrowing activity. Senior financial officers were asked whether their bank was an active cash borrower in secured overnight wholesale funding markets. An active borrower was defined as borrowing for purposes other than testing. Across all respondents, more than one-third indicated they were an active cash borrower. Over one-fourth of respondents from domestic banks indicated that they were active cash borrowers in secured overnight wholesale funding markets, while respondents from foreign banks were evenly split.

Respondents that self-identified their bank as an active cash borrower in secured overnight wholesale funding markets were then asked to identify the importance of different motivations for their borrowing. A majority of respondents from foreign banks rated financing their bank's securities inventory to support market making activities, borrowing to provide short-term investment options to customers, and executing relative value trades across borrowing and lending markets as important or very important motivations for their borrowing in secured overnight funding markets. The majority of respondents from domestic banks that identified themselves as an active cash borrower indicated covering temporary or unexpected shortfalls in reserve balance holdings relative to the lowest comfortable level of reserves as an important or very important borrowing motivation. Other important or very important motivators for respondents from domestic banks included financing their bank's securities inventory to support market making activities and meeting anticipated intraday payment or liquidity needs.

Questions on current lending activity. Roughly 40 percent of respondents indicated that they were active cash lenders in secured overnight wholesale funding markets. A majority of respondents from foreign banks and less than half of respondents from domestic banks reported being active lenders. Common reasons cited for lending cash in the secured overnight wholesale funding markets included earning the spread over the IOER rate and accommodating client needs.

Questions on willingness to lend. Respondents were asked to identify the lowest spread relative to the IOER rate and the amount at which they would be willing to lend cash if receiving level-1 HQLA collateral such as U.S. Treasury securities or level-2 HQLA collateral such as U.S. agency securities or mortgage-backed securities.[13] Respondent answers varied somewhat depending on whether they were receiving level-1 or level-2 HQLA collateral.

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[13] Level-1 HQLA and level-2 HQLA are defined in §249.20 of Regulation WW (Liquidity Risk Measurements Standards).

Nearly 70 percent of all respondents provided both a spread and dollar amount that they would be willing to lend if receiving level-1 HQLA, while a slightly smaller share of respondents provided both values if receiving level-2 HQLA.[14] Among those respondents, the reported spreads over the IOER rate for lending if receiving level-1 HQLA ranged from as low as 0 basis points to as high as 100 basis points. The range of spreads over the IOER rate for lending if receiving level-2 HQLA was a bit higher, from as low as 2½ basis points to as high as 150 basis points.

Around 80 percent of respondents that provided a spread and dollar amount that they would be willing to lend if receiving level-1 HQLA would require a spread of less than 25 basis points. At this spread, a majority of those respondents would be willing to lend in amounts over $1 billion. Nearly all respondents from foreign banks would require a spread to the IOER rate of less than 25 basis points and, at this spread, would lend in amounts over $1 billion. Responses from domestic banks exhibited much more variability in terms of the spreads and amounts that they would be willing to lend.

If receiving level-2 HQLA, a majority of respondents from foreign banks required a spread to the IOER rate of less than 25 basis points. Responses from senior financial officers at domestic banks were relatively heterogeneous. A little less than half of respondents from domestic banks required a spread to the IOER rate of less than 25 basis points if receiving level-2 HQLA. All but one of the remaining respondents from domestic banks would require a spread to the IOER rate between 26 basis points and 100 basis points.

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[14] Three of these respondents did not provide an amount that they would be willing to lend; rather, they provided qualitative information from which to approximate a lending amount.

Results

The following results include the instructions provided to the survey respondents. Please note that percentages are based on the number of financial institutions that gave responses other than "Not applicable." Components may not sum to totals because of rounding.

Table 1. Current Reserve Balance Management Strategies and Practices

The following questions ask about your bank's current and prospective demand for reserve balances, conditional on the opportunity cost of holding those balances relative to other liquid assets. Unless otherwise specified, please consider your bank's end-of-day reserve balances when answering the questions. Question 1 asks for the approximate lowest level of reserve balances that your bank is currently comfortable holding, and questions 2 through 4 in this section inquire about considerations related to that determination.[15]

1. Given the constellation of short-term interest rates relative to the interest on excess reserves (IOER) rate over the past month, what is the approximate lowest dollar level of reserve balances that your bank would be comfortable holding before it began taking active steps to maintain or increase its reserve balance position?

A.

Totals	All Respondents	Domestic	Foreign
	(billions of dollars)		
Reported lowest comfortable level of reserve balances	703.4	425.4	278.0
Average reserve balances in January 2019*	1,244.2	707.7	536.6

* Federal Reserve data.

B. If you responded to the September 2018 Senior Financial Officer Survey and your lowest comfortable level of reserve balances reported in question 1.A has changed significantly from the last survey, please explain the factors leading to this change.

(16 responses)

A significant share of these respondents cited enhancements to their internal monitoring and modeling as the factor that led them to change their lowest comfortable level of reserve balances since the last survey. Others cited typical factors that influence reserve holdings, such as changes in reserve requirements and intraday payment needs. One-fourth of these respondents reported being more comfortable with reallocating from reserve balances to other investments.

[15] For the purposes of this survey, please assume that the "constellation of short-term rates" refers to the rates on federal funds, Eurodollars, repurchase agreements, and short-dated U.S. Treasury bills that prevailed in January 2019. Examples of "active steps" include bidding more aggressively in the federal funds market or other wholesale unsecured funding markets, reducing holdings of other liquid assets, or raising deposit rates.

C. Regarding your response in question 1.A above, how frequently does your bank assess this value as part of ongoing reserve management analysis?

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Daily	26	35.1	14	33.3	12	37.5
Weekly	3	4.1	1	2.4	2	6.3
Monthly	11	14.9	7	16.7	4	12.5
Quarterly	9	12.2	6	14.3	3	9.4
Biannually	3	4.1	1	2.4	2	6.3
Annually	7	9.5	4	9.5	3	9.4
Other (please explain below)	15	20.3	9	21.4	6	18.8
Total	74	100.0	42	100.0	32	100.0

Respondents that answered “Other” to question 1.C indicated the following:

(15 responses)

The majority of the respondents that selected “Other” indicated that they assess their lowest comfortable level of reserve balances as needed in response to changes in business activities or funding profile. The remaining respondents reported that they take more of an ongoing assessment approach as part of their internal liquidity management.

D. This question attempts to gain additional information on what the “lowest comfortable level of reserve balances” means to your institution. Respondents were asked to select the statement that best described their position.

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Statement I. Our bank is comfortable that potential day-to-day fluctuations could occasionally bring reserve levels below the amount provided in question 1.A.	59	78.7	36	83.7	23	71.9
Statement II. Our bank is uncomfortable if reserve levels fall below the level provided in question 1.A on any day.	16	21.3	7	16.3	9	28.1
Total	75	100.0	43	100.0	32	100.0

Sixteen respondents selected Statement II and were then asked to provide the level at which their bank would be comfortable with potential day-to-day fluctuations that could occasionally result in reserve balances below the level reported in question 1.A. These respondents reported a level that was greater than the lowest comfortable level of reserve balances reported in question 1.A. The table below summarizes respondents’ answers to this question relative to question 1.A. The first data column displays the number of banks that reported a dollar amount above question 1.A for the noted ranges.

Dollar amount above Question 1.A	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
0 to $0.5 billion	4	25.0	4	57.1	0	0.0
$0.5 to $1 billion	5	31.3	2	28.6	3	33.3
Over $1 billion	7	43.8	1	14.3	6	66.7
Total	16	100.0	7	100.0	9	100.0

2. Other than meeting your bank's reserve requirements, please rank the importance of the following considerations in determining the amount you indicated in question 1.A on a scale of 1 (not important) to 6 (most important). Each number rank should be used exactly once.

A. Meeting routine intraday payment flows:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
1 (Not important)	7	9.3	2	4.7	5	15.6
2	6	8.0	6	14.0	0	0.0
3	9	12.0	6	14.0	3	9.4
4	11	14.7	6	14.0	5	15.6
5	12	16.0	6	14.0	6	18.8
6 (Most important)	30	40.0	17	39.5	13	40.6
Total	75	100.0	43	100.0	32	100.0

B. Meeting projected outflows over a certain window (more than one business day and under normal market conditions):

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
1 (Not important)	5	6.7	3	7.0	2	6.3
2	11	14.7	6	14.0	5	15.6
3	15	20.0	7	16.3	8	25.0
4	19	25.3	11	25.6	8	25.0
5	20	26.7	13	30.2	7	21.9
6 (Most important)	5	6.7	3	7.0	2	6.3
Total	75	100.0	43	100.0	32	100.0

C. Satisfying internal liquidity stress metrics (meeting projected outflows under stressed market conditions):

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
1 (Not important)	1	1.3	1	2.3	0	0.0
2	8	10.7	6	14.0	2	6.3
3	11	14.7	10	23.3	1	3.1
4	17	22.7	7	16.3	10	31.3
5	20	26.7	11	25.6	9	28.1
6 (Most important)	18	24.0	8	18.6	10	31.3
Total	75	100.0	43	100.0	32	100.0

D. Seeking to earn the IOER rate instead of the return on other high-quality liquid assets:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
1 (Not important)	31	41.3	22	51.2	9	28.1
2	15	20.0	5	11.6	10	31.3
3	11	14.7	7	16.3	4	12.5
4	9	12.0	6	14.0	3	9.4
5	5	6.7	1	2.3	4	12.5
6 (Most important)	4	5.3	2	4.7	2	6.3
Total	75	100.0	43	100.0	32	100.0

E. Managing the bank's liquidity portfolio composition based on monetization assumptions for high-quality liquid assets:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
1 (Not important)	8	10.7	6	14.0	2	6.3
2	19	25.3	13	30.2	6	18.8
3	25	33.3	10	23.3	15	46.9
4	10	13.3	6	14.0	4	12.5
5	7	9.3	5	11.6	2	6.3
6 (Most important)	6	8.0	3	7.0	3	9.4
Total	75	100.0	43	100.0	32	100.0

F. Lack of depth in late day funding markets:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
1 (Not important)	22	29.3	9	20.9	13	40.6
2	17	22.7	7	16.3	10	31.3
3	4	5.3	3	7.0	1	3.1
4	10	13.3	7	16.3	3	9.4
5	10	13.3	7	16.3	3	9.4
6 (Most important)	12	16.0	10	23.3	2	6.3
Total	75	100.0	43	100.0	32	100.0

3. If your bank's reserve balance fell, or was expected to fall, below the amount you indicated in question 1.A, in the following table please provide the likelihood that your bank would pursue the following actions in the short term (up to a week) and in the long term (over a week) on a scale of 1 (very unlikely), 2 (unlikely), 3 (likely), or 4 (very likely).

A. For a short-term funding need:

i. Borrow in unsecured funding markets (for example, federal funds, Eurodollars, or negotiable certificates of deposits (CDs)) in tenors less than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	15	20.0	11	25.6	4	12.5
Unlikely	15	20.0	9	20.9	6	18.8
Likely	13	17.3	5	11.6	8	25.0
Very likely	32	42.7	18	41.9	14	43.8
Total	75	100.0	43	100.0	32	100.0

ii. Borrow in unsecured funding markets (for example, federal funds, Eurodollars, or negotiable certificates of deposits (CDs)) in tenors greater than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	18	25.4	15	38.5	3	9.4
Unlikely	24	33.8	12	30.8	12	37.5
Likely	15	21.1	6	15.4	9	28.1
Very likely	14	19.7	6	15.4	8	25.0
Total	71	100.0	39	100.0	32	100.0

Note: Four respondents provided an answer of N/A or left it blank.

iii. Borrow in secured funding markets (for example, repurchase agreements) in tenors less than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	19	25.7	10	23.3	9	29.0
Unlikely	23	31.1	12	27.9	11	35.5
Likely	16	21.6	11	25.6	5	16.1
Very likely	16	21.6	10	23.3	6	19.4
Total	74	100.0	43	100.0	31	100.0

Note: One respondent provided an answer of N/A or left it blank.

iv. Borrow in secured funding markets (for example, repurchase agreements) in tenors greater than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	36	50.0	20	48.8	16	51.6
Unlikely	28	38.9	15	36.6	13	41.9
Likely	8	11.1	6	14.6	2	6.5
Very likely	0	0.0	0	0.0	0	0.0
Total	72	100.0	41	100.0	31	100.0

Note: Three respondents provided an answer of N/A or left it blank.

v. Borrow from the Federal Reserve discount window

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	70	97.2	40	97.6	30	96.8
Unlikely	2	2.8	1	2.4	1	3.2
Likely	0	0.0	0	0.0	0	0.0
Very likely	0	0.0	0	0.0	0	0.0
Total	72	100.0	41	100.0	31	100.0

Note: Three respondents provided an answer of N/A or left it blank.

vi. Reduce lending in short-term money markets (for example, reverse repurchase agreements)

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	15	28.8	11	45.8	4	14.3
Unlikely	6	11.5	2	8.3	4	14.3
Likely	19	36.5	6	25.0	13	46.4
Very likely	12	23.1	5	20.8	7	25.0
Total	52	100.0	24	100.0	28	100.0

Note: Twenty-three respondents provided an answer of N/A or left it blank.

vii. Reduce holdings of available-for-sale short-term securities

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	29	40.8	20	48.8	9	30.0
Unlikely	28	39.4	16	39.0	12	40.0
Likely	9	12.7	3	7.3	6	20.0
Very likely	5	7.0	2	4.9	3	10.0
Total	71	100.0	41	100.0	30	100.0

Note: Four respondents provided an answer of N/A or left it blank.

viii. Increase advances from Federal Home Loan Banks (FHLBs)[16]

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	0	0.0	0	0.0	0	0.0
Unlikely	2	5.3	2	5.3	0	0.0
Likely	6	15.8	6	15.8	0	0.0
Very likely	30	78.9	30	78.9	0	0.0
Total	38	100.0	38	100.0	0	0.0

Note: Thirty-seven respondents provided an answer of N/A or left it blank.

[16] This action was only relevant for members of FHLBs. Nonmembers of a FHLB answered "Not applicable."

ix. Increase retail deposit base by offering higher rates

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	30	57.7	23	56.1	7	63.6
Unlikely	14	26.9	13	31.7	1	9.1
Likely	7	13.5	4	9.8	3	27.3
Very likely	1	1.9	1	2.4	0	0.0
Total	52	100.0	41	100.0	11	100.0

Note: Twenty-three respondents provided an answer of N/A or left it blank.

x. Increase retail deposit base by offering attractive, non-rate terms

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	34	68.0	26	66.7	8	72.7
Unlikely	11	22.0	11	28.2	0	0.0
Likely	5	10.0	2	5.1	3	27.3
Very likely	0	0.0	0	0.0	0	0.0
Total	50	100.0	39	100.0	11	100.0

Note: Twenty-five respondents provided an answer of N/A or left it blank.

xi. Use the foreign exchange swap market to swap non-U.S. dollar reserves for U.S. dollar reserves

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	23	45.1	15	65.2	8	28.6
Unlikely	11	21.6	1	4.3	10	35.7
Likely	8	15.7	4	17.4	4	14.3
Very likely	9	17.6	3	13.0	6	21.4
Total	51	100.0	23	100.0	28	100.0

Note: Twenty-four respondents provided an answer of N/A or left it blank.

xii. Other (please rate here and explain in 3.C)

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	4	25.0	4	44.4	0	0.0
Unlikely	5	31.3	4	44.4	1	14.3
Likely	3	18.8	0	0.0	3	42.9
Very likely	4	25.0	1	11.1	3	42.9
Total	16	100.0	9	100.0	7	100.0

Note: Fifty-nine respondents provided an answer of N/A or left it blank.

B. For a long-term funding need:

i. Borrow in unsecured funding markets (for example, federal funds, Eurodollars, or negotiable certificates of deposits (CDs)) in tenors less than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	34	47.2	22	55.0	12	37.5
Unlikely	23	31.9	12	30.0	11	34.4
Likely	9	12.5	1	2.5	8	25.0
Very likely	6	8.3	5	12.5	1	3.1
Total	72	100.0	40	100.0	32	100.0

Note: Three respondents provided an answer of N/A or left it blank.

ii. Borrow in unsecured funding markets (for example, federal funds, Eurodollars, or negotiable certificates of deposits (CDs)) in tenors greater than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	12	16.7	10	25.0	2	6.3
Unlikely	7	9.7	4	10.0	3	9.4
Likely	29	40.3	16	40.0	13	40.6
Very likely	24	33.3	10	25.0	14	43.8
Total	72	100.0	40	100.0	32	100.0

Note: Three respondents provided an answer of N/A or left it blank.

iii. Borrow in secured funding markets (repurchase agreements) in tenors less than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	35	48.6	21	51.2	14	45.2
Unlikely	28	38.9	15	36.6	13	41.9
Likely	4	5.6	2	4.9	2	6.5
Very likely	5	6.9	3	7.3	2	6.5
Total	72	100.0	41	100.0	31	100.0

Note: Three respondents provided an answer of N/A or left it blank.

iv. Borrow in secured funding markets (for example, repurchase agreements) in tenors greater than 30 days

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	29	40.3	13	31.7	16	51.6
Unlikely	21	29.2	11	26.8	10	32.3
Likely	18	25.0	14	34.1	4	12.9
Very likely	4	5.6	3	7.3	1	3.2
Total	72	100.0	41	100.0	31	100.0

Note: Three respondents provided an answer of N/A or left it blank.

v. Borrow from the Federal Reserve discount window

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	72	100.0	41	100.0	31	100.0
Unlikely	0	0.0	0	0.0	0	0.0
Likely	0	0.0	0	0.0	0	0.0
Very likely	0	0.0	0	0.0	0	0.0
Total	72	100.0	41	100.0	31	100.0

Note: Three respondents provided an answer of N/A or left it blank.

vi. Reduce lending in short-term money markets (for example, reverse repurchase agreements)

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	16	30.8	11	45.8	5	17.9
Unlikely	8	15.4	3	12.5	5	17.9
Likely	14	26.9	4	16.7	10	35.7
Very likely	14	26.9	6	25.0	8	28.6
Total	52	100.0	24	100.0	28	100.0

Note: Twenty-three respondents provided an answer of N/A or left it blank.

vii. Reduce holdings of available-for-sale short-term securities

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	20	28.2	11	26.8	9	30.0
Unlikely	19	26.8	10	24.4	9	30.0
Likely	20	28.2	10	24.4	10	33.3
Very likely	12	16.9	10	24.4	2	6.7
Total	71	100.0	41	100.0	30	100.0

Note: Four respondents provided an answer of N/A or left it blank.

viii. Increase advances from Federal Home Loan Banks (FHLBs)[17]

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	2	5.3	2	5.3	0	0.0
Unlikely	3	7.9	3	7.9	0	0.0
Likely	7	18.4	7	18.4	0	0.0
Very likely	26	68.4	26	68.4	0	0.0
Total	38	100.0	38	100.0	0	0.0

Note: Thirty-seven respondents provided an answer of N/A or left it blank.

ix. Increase retail deposit base by offering higher rates

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	17	32.7	10	24.4	7	63.6
Unlikely	6	11.5	6	14.6	0	0.0
Likely	21	40.4	17	41.5	4	36.4
Very likely	8	15.4	8	19.5	0	0.0
Total	52	100.0	41	100.0	11	100.0

Note: Twenty-three respondents provided an answer of N/A or left it blank.

x. Increase retail deposit base by offering attractive, non-rate terms

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	21	41.2	14	35.0	7	63.6
Unlikely	10	19.6	9	22.5	1	9.1
Likely	17	33.3	14	35.0	3	27.3
Very likely	3	5.9	3	7.5	0	0.0
Total	51	100.0	40	100.0	11	100.0

Note: Twenty-four respondents provided an answer of N/A or left it blank.

[17] This action was only relevant for members of FHLBs. Nonmembers of a FHLB answered "Not applicable."

xi. Use the foreign exchange swap market to swap non-U.S. dollar reserves for U.S. dollar reserves

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	23	44.2	14	60.9	9	31.0
Unlikely	10	19.2	2	8.7	8	27.6
Likely	11	21.2	4	17.4	7	24.1
Very likely	8	15.4	3	13.0	5	17.2
Total	52	100.0	23	100.0	29	100.0

Note: Twenty-three respondents provided an answer of N/A or left it blank.

xii. Other (please rate here and explain in 3.C)

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Very unlikely	0	0.0	0	0.0	0	0.0
Unlikely	2	12.5	1	11.1	1	14.3
Likely	8	50.0	5	55.6	3	42.9
Very likely	6	37.5	3	33.3	3	42.9
Total	16	100.0	9	100.0	7	100.0

Note: Fifty-nine respondents provided an answer of N/A or left it blank.

C. Other (please explain):

(16 responses)

Respondents that selected “Other” commented on potential actions, although these actions were not clearly differentiated by short-term or long-term funding needs. For example, half of the respondents indicated that they would replenish a shortfall in their reserve balances by borrowing from their affiliates. Others noted that they would issue unsecured debt, issue brokered deposits, or increase wholesale deposits.

4. The Federal Reserve provides intraday credit (daylight overdrafts) to healthy institutions at little or no cost. What level of comfort does your answer to question 1.A assume for using intraday credit (either collateralized or uncollateralized) from the Federal Reserve as a tool to manage the mismatch in timing between incoming funds and outgoing payments?

A.

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Highly comfortable with using intraday credit on a routine basis	9	13.8	9	22.0	0	0.0
Mostly comfortable with using intraday credit on a routine basis	13	20.0	10	24.4	3	12.5
Neutral – use of intraday credit is not a key consideration in account management decisions	26	40.0	14	34.1	12	50.0
Mostly uncomfortable with using intraday credit	11	16.9	5	12.2	6	25.0
Highly uncomfortable with using intraday credit	6	9.2	3	7.3	3	12.5
Total	65	100.0	41	100.0	24	100.0

Note: Ten respondents provided an answer of "N/A."

B. If you answered that you were "neutral," "mostly uncomfortable," or "highly uncomfortable" with the use of intraday credit in question 4.A, please indicate the extent to which concerns about intraday credit usage affect your estimate of the lowest comfortable level of reserve balances reported in question 1.A.

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Significantly increases the amount in question 1.A	1	2.3	0	0.0	1	4.8
Somewhat increases the amount in question 1.A	12	27.9	7	31.8	5	23.8
Minimally increases the amount in question 1.A	8	18.6	5	22.7	3	14.3
Does not increase the amount in question 1.A	22	51.2	10	45.5	12	57.1
Total	43	100.0	22	100.0	21	100.0

Table 2. Reserve Balance Management under Different Interest Rate Environments

5. This question is designed to gain insight into how your bank might adjust its reserve balance holdings and invest in other liquid assets (level-1 high-quality liquid assets) in response to changes in the opportunity cost of holding those balances.[18] For the purposes of this question, please assume that IOER remains at its current level. Please also assume

[18] For example, overnight Treasury general collateral repurchase agreements or short-term U.S. Treasury bills.

that all short-term interest rates shift by a similar amount and that the interest rate scenario is one that will persist for a significant period of time. For example, scenarios B through D represent a higher opportunity cost of holding reserves than prevails at present. Consider the opportunity cost of holding reserve balances as the difference between the constellation of short-term interest rates and the IOER rate.

A. Change in the lowest comfortable level of reserve balances as reported in question 1.A if the opportunity cost of holding these balances, measured as the difference between the constellation of short-term interest rates and the IOER rate, is **5 basis points lower** in the reference period.

	All Respondents			Domestic			Foreign		
	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent
Decreased	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0
Unchanged	0.0	66	88.0	0.0	41	95.3	0.0	25	78.1
Increased	44.1	9	12.0	5.1	2	4.7	39.0	7	21.9
Total	44.1	75	100.0	5.1	43	100.0	39.0	32	100.0

B. Change in the lowest comfortable level of reserve balances as reported in question 1.A if the opportunity cost of holding these balances, measured as the difference between the constellation of short-term interest rates and the IOER rate, is **5 basis points higher** in the reference period.

	All Respondents			Domestic			Foreign		
	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent
Decreased	18.7	8	10.7	0.0	0	0.0	18.7	8	25.0
Unchanged	0.0	67	89.3	0.0	43	100.0	0.0	24	75.0
Increased	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0
Total	18.7	75	100.0	0.0	43	100.0	18.7	32	100.0

C. Change in the lowest comfortable level of reserve balances as reported in question 1.A if the opportunity cost of holding these balances, measured as the difference between the constellation of short-term interest rates and the IOER rate, is **25 basis points higher** in the reference period.

	All Respondents			Domestic			Foreign		
	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent
Decreased	70.0	27	36.0	29.5	12	27.9	40.5	15	46.9
Unchanged	0.0	48	64.0	0.0	31	72.1	0.0	17	53.1
Increased	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0
Total	70.0	75	100.0	29.5	43	100.0	40.5	32	100.0

D. Change in lowest comfortable level of reserve balances as reported in question 1.A if the opportunity cost of holding these balances, measured as the difference between the constellation of short-term interest rates and the IOER rate, is **50 basis points higher** in the reference period.

	All Respondents			Domestic			Foreign		
	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent	Amount of Change ($billions)	Banks	Percent
Decreased	118.5	31	41.3	62.3	14	32.6	56.2	17	53.1
Unchanged	0.0	44	58.7	0.0	29	67.4	0.0	15	46.9
Increased	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0
Total	118.5	75	100.0	62.3	43	100.0	56.2	32	100.0

E. The next table presents the aggregate lowest comfortable level of reserve balances for each scenario.

Opportunity Cost Scenario	All Respondents	Domestic	Foreign
	(billions of dollars)		
IOER rate – **5 basis points**	747.4	430.5	316.9
IOER rate + **5 basis points**	684.7	425.4	259.3
IOER rate + **25 basis points**	633.4	395.9	237.5
IOER rate + **50 basis points**	584.8	363.1	221.7

F. If you responded to the September 2018 Senior Financial Officer Survey and the interest rate sensitivity of your lowest comfortable level of reserve balances has changed significantly from the previous survey, please explain the factors leading to this change.

(18 responses)

Several respondents noted current market conditions and overnight spreads to the IOER rate as reasons for their reassessment of their interest rate sensitivity since the previous survey. Other respondents noted that their decisions were not based on return but rather other internal or regulatory requirements.

Table 3. Unsecured Overnight Wholesale Funding Market Activity

The questions in this part of the survey ask you to explain the considerations that motivate your bank's activity in unsecured overnight wholesale funding markets.

6. Is your bank an active borrower in unsecured overnight wholesale funding markets (Yes or No)? If you answered "No," please skip to question 8.

	All Respondents	Domestic	Foreign
Yes	45	18	27
No	30	25	5
Total	75	43	32

7. Please rate the importance of the following possible motivations for your bank's borrowing in unsecured overnight wholesale funding markets on a scale of 1 (not important), 2 (somewhat important), 3 (important), or 4 (very important).

A. Earning a positive spread on the proceeds by investing at IOER:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	22	50.0	15	83.3	7	26.9
Somewhat important	8	18.2	2	11.1	6	23.1
Important	8	18.2	1	5.6	7	26.9
Very important	6	13.6	0	0.0	6	23.1
Total	44	100.0	18	100.0	26	100.0

Note: One respondent provided an answer of "N/A" or left it blank.

B. Covering temporary or unexpected shortfalls in reserve balance holdings relative to the amount you indicated in question 1.A:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	15	33.3	2	11.1	13	48.1
Somewhat important	7	15.6	2	11.1	5	18.5
Important	9	20.0	5	27.8	4	14.8
Very important	14	31.1	9	50.0	5	18.5
Total	45	100.0	18	100.0	27	100.0

C. Meeting anticipated intraday payment or liquidity needs:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	17	38.6	5	29.4	12	44.4
Somewhat important	8	18.2	2	11.8	6	22.2
Important	9	20.5	5	29.4	4	14.8
Very important	10	22.7	5	29.4	5	18.5
Total	44	100.0	17	100.0	27	100.0

Note: One respondent provided an answer of "N/A" or left it blank.

D. Meeting reserve requirements:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	25	61.0	6	37.5	19	76.0
Somewhat important	4	9.8	1	6.3	3	12.0
Important	5	12.2	4	25.0	1	4.0
Very important	7	17.1	5	31.3	2	8.0
Total	41	100.0	16	100.0	25	100.0

Note: Four respondents provided an answer of "N/A" or left it blank.

E. Borrowing to provide a short-term investment option to customers:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	16	40.0	12	85.7	4	15.4
Somewhat important	7	17.5	1	7.1	6	23.1
Important	11	27.5	1	7.1	10	38.5
Very important	6	15.0	0	0.0	6	23.1
Total	40	100.0	14	100.0	26	100.0

Note: Five respondents provided an answer of "N/A" or left it blank.

F. Improving or maintaining LCR metrics:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	16	41.0	4	30.8	12	46.2
Somewhat important	4	10.3	1	7.7	3	11.5
Important	10	25.6	2	15.4	8	30.8
Very important	9	23.1	6	46.2	3	11.5
Total	39	100.0	13	100.0	26	100.0

Note: Six respondents provided an answer of "N/A" or left it blank.

G. Executing relative value trades across borrowing and lending markets:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	23	57.5	8	53.3	15	60.0
Somewhat important	10	25.0	5	33.3	5	20.0
Important	6	15.0	2	13.3	4	16.0
Very important	1	2.5	0	0.0	1	4.0
Total	40	100.0	15	100.0	25	100.0

Note: Five respondents provided an answer of "N/A" or left it blank.

H. Other (please rate here and explain in 7.I):

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	0	0.0	0	0.0	0	0.0
Somewhat important	1	33.3	0	0.0	1	50.0
Important	1	33.3	0	0.0	1	50.0
Very important	1	33.3	1	100.0	0	0.0
Total	3	100.0	1	100.0	2	100.0

Note: Forty-two respondents provided an answer of "N/A" or left it blank.

I. Other (please explain):

Responses are not reported when the number of respondents is 3 or fewer.

8. Is your bank an active lender in unsecured overnight wholesale funding markets (Yes or No)? For the purposes of this question, consider an active lender as a bank that lends for non-test purposes at least once a month. If you answered "Yes," please answer question 8.B and skip question 8.C. If you answered "No," please answer question 8.C and skip question 8.B.

A.

	All Respondents	Domestic	Foreign
Yes	7	5	2
No	68	38	30
Total	75	43	32

B. Please describe the factors that drive your decision to lend:

(7 responses)

A few respondents indicated that they lend in this market to maintain client or counterparty relationships. Others cited deploying excess cash to earn a positive spread.

C. Please describe why you do not lend:

(68 responses)

Respondents highlighted a number of reasons for not lending. A significant number of respondents indicated that a lack of sufficient returns or general indifference given this type of activity is not an important part of their business model as reasons for not lending. A moderate share of respondents noted that they were net borrowers and thus needed the funding, while a modest number of respondents cited the attractiveness of reserves given limited credit lines and other market inefficiencies. Roughly 10 percent of respondents underscored the potential balance sheet costs associated with lending unsecured.

9. Generally speaking, and excluding the effects of month-end activity, please specify the lowest spread relative to the IOER rate at which your bank would be willing to lend in the overnight unsecured (for example, federal funds or overnight Eurodollars) wholesale funding markets. When specifying spread, please assume that this will persist for some time.

   A. Respondents were asked to report the lowest spread relative to the IOER rate at which they would be willing to lend in the unsecured overnight wholesale funding market as well as how much they would be willing to lend at that spread.

   Forty-seven banks provided both a spread and an amount they would be willing to lend. Two provided only a spread, and one of these two indicated in writing that the amount that they would be willing to lend was conditional on the availability of liquidity and other internal credit risk metrics. The remaining 26 either left this question blank or indicated "N/A."

   The tables below summarize respondent counts by different ranges of lowest spreads to the IOER rate and lendable amounts for all respondents and then by institution type.

   Results for all respondents

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		All Respondents	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	5	21.7	1	16.7	3	16.7	9	19.2
16 to 25 basis points	6	26.1	1	16.7	7	38.9	14	29.8
26 to 50 basis points	5	21.7	2	33.3	8	44.4	15	31.9
51 to 100 basis points	6	26.1	2	33.3	0	0.0	8	17.0
101 to 125 basis points	1	4.3	0	0.0	0	0.0	1	2.1
Total	23	100.0	6	100.0	18	100.0	47	100.0

Note: Twenty-eight respondents provided a qualitative answer, N/A, or left it blank.

   Results for respondents from domestic banks

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		Respondents from Domestic Banks	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	2	10.5	1	20.0	0	0.0	3	9.7
16 to 25 basis points	6	31.6	1	20.0	2	28.6	9	29.0
26 to 50 basis points	4	21.1	2	40.0	5	71.4	11	35.5
51 to 100 basis points	6	31.6	1	20.0	0	0.0	7	22.6
101 to 125 basis points	1	5.3	0	0.0	0	0.0	1	3.2
Total	19	100.0	5	100.0	7	100.0	31	100.0

Note: Twelve respondents provided a qualitative answer, N/A, or left it blank.

Results for respondents from foreign banks

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		Respondents from Foreign Banks	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	3	75.0	0	0.0	3	27.3	6	37.5
16 to 25 basis points	0	0.0	0	0.0	5	45.5	5	31.3
26 to 50 basis points	1	25.0	0	0.0	3	27.3	4	25.0
51 to 100 basis points	0	0.0	1	100.0	0	0.0	1	6.3
101 to 125 basis points	0	0.0	0	0.0	0	0.0	0	0.0
Total	4	100.0	1	100.0	11	100.0	16	100.0

Note: Sixteen respondents provided a qualitative answer, N/A, or left it blank.

Table 4. Secured Overnight Wholesale Funding Market Activity

The questions in this part of the survey ask you to explain the considerations that motivate your bank's activity in secured overnight wholesale funding markets. This activity should represent repurchase agreement activity completed by your bank. If you are affiliated with a broker-dealer, do not include the normal financing activity of your broker-dealer for the purposes of these questions.

10. Is your bank an active cash borrower in secured (repurchase agreement) markets (Yes or No)? For the purposes of this question, consider an active borrower as a bank that borrows for non-test purposes at least once a month. If you marked "No," please skip to question 12.

	All Respondents	Domestic	Foreign
Yes	28	12	16
No	47	31	16
Total	75	43	32

11. Please rate the importance of the following motivations for your bank's current cash borrowing in secured overnight funding markets pledging U.S. Treasury securities, agency securities, or mortgage-backed securities as collateral on a scale of 1 (not important), 2 (somewhat important), 3 (important), or 4 (very important).

   A. Financing your bank's securities inventory to support market making activities:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	6	28.6	3	42.9	3	21.4
Somewhat important	1	4.8	0	0.0	1	7.1
Important	4	19.0	1	14.3	3	21.4
Very important	10	47.6	3	42.9	7	50.0
Total	21	100.0	7	100.0	14	100.0

Note: Seven respondents provided an answer of "N/A" or left it blank.

B. Earning a positive spread on the proceeds by investing at IOER:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	13	56.5	4	44.4	9	64.3
Somewhat important	4	17.4	3	33.3	1	7.1
Important	4	17.4	2	22.2	2	14.3
Very important	2	8.7	0	0.0	2	14.3
Total	23	100.0	9	100.0	14	100.0

Note: Five respondents provided an answer of “N/A” or left it blank.

C. Covering temporary or unexpected shortfalls in reserve balance holdings relative to the amount you indicated in question 1.A:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	11	44.0	1	9.1	10	71.4
Somewhat important	2	8.0	1	9.1	1	7.1
Important	8	32.0	6	54.5	2	14.3
Very important	4	16.0	3	27.3	1	7.1
Total	25	100.0	11	100.0	14	100.0

Note: Three respondents provided an answer of “N/A” or left it blank.

D. Meeting anticipated intraday payment and liquidity needs:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	14	56.0	4	36.4	10	71.4
Somewhat important	4	16.0	1	9.1	3	21.4
Important	4	16.0	3	27.3	1	7.1
Very important	3	12.0	3	27.3	0	0.0
Total	25	100.0	11	100.0	14	100.0

Note: Three respondents provided an answer of “N/A” or left it blank.

E. Meeting reserve requirements:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	18	78.3	6	60.0	12	92.3
Somewhat important	1	4.3	0	0.0	1	7.7
Important	1	4.3	1	10.0	0	0.0
Very important	3	13.0	3	30.0	0	0.0
Total	23	100.0	10	100.0	13	100.0

Note: Five respondents provided an answer of “N/A” or left it blank.

F. Borrowing to provide a short-term investment option to customers:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	6	27.3	3	37.5	3	21.4
Somewhat important	2	9.1	1	12.5	1	7.1
Important	9	40.9	1	12.5	8	57.1
Very important	5	22.7	3	37.5	2	14.3
Total	22	100.0	8	100.0	14	100.0

Note: Six respondents provided an answer of “N/A” or left it blank.

G. Executing relative value trades across borrowing and lending markets:

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	8	33.3	3	33.3	5	33.3
Somewhat important	4	16.7	2	22.2	2	13.3
Important	9	37.5	3	33.3	6	40.0
Very important	3	12.5	1	11.1	2	13.3
Total	24	100.0	9	100.0	15	100.0

Note: Four respondents provided an answer of “N/A” or left it blank.

H. Other (please rate here and explain in 11.I):

	All Respondents		Domestic		Foreign	
	Banks	Percent	Banks	Percent	Banks	Percent
Not important	0	0.0	0	0.0	0	0.0
Somewhat important	0	0.0	0	0.0	0	0.0
Important	1	33.3	0	0.0	1	100.0
Very important	2	66.7	2	100.0	0	0.0
Total	3	100.0	2	100.0	1	100.0

Note: Twenty-five respondents provided an answer of “N/A” or left it blank.

I. Other (please explain):

(5 responses)

Multiple respondents noted that their motivations to borrow are to support matched book repo and client relationships.

12. Is your bank an active lender in secured overnight wholesale funding markets (Yes or No)? For the purposes of this question, consider an active lender as a bank that lends for non-test purposes at least once a month. If you answered "Yes," please answer question 12.B and skip question 12.C. If you answered "No," please answer question 12.C and skip question 12.B.

A.

	All Respondents	Domestic	Foreign
Yes	32	13	19
No	43	30	13
Total	75	43	32

B. Please describe the factors that drive your decision to lend:

(32 responses)

Multiple respondents indicated that they lend cash in secured overnight markets in order to meet customer and client needs. In addition, a number of respondents noted the attractive spread to the IOER rate and investment opportunities as an alternative reason.

C. Please describe why you do not lend:

(43 responses)

Roughly one-fourth of respondents noted that the current spread to the IOER rate was not enough for them to lend cash in secured overnight markets. A significant number of respondents indicated that they would not lend in these markets because they are net borrowers, keep low excess reserve balances, or are not operationally set up to lend cash in the repo markets. Lastly, a moderate share of respondents identified that their credit and liquidity risk appetite is a driver in their decision not to lend cash in overnight secured markets.

13. Generally speaking, and excluding the effects of month-end activity, please specify the lowest spread relative to IOER at which your bank would be willing to lend cash in the secured (reverse repurchase agreements) overnight markets. When specifying the spread, please assume that this spread will persist for some time. When considering your bank's lending to an affiliated entity, such as an affiliated broker-dealer, please only include that activity that would lead to a reduction in reserve balances at the bank.

A. Respondents were asked to report the lowest spread relative to the IOER rate that they would be willing to lend cash if receiving level-1 high-quality liquid assets (HQLA) collateral, such as U.S. Treasury securities, as well as how much they would be willing to lend at that spread.

Fifty-one banks provided both a spread and an amount that they would be willing to lend. Four provided a spread and indicated in writing that the amount that they would be willing to lend was conditional on market conditions and overall liquidity needs. The remaining 20 either left this question blank or indicated "N/A."

The tables below summarize respondent counts by different ranges of lowest spreads to the IOER rate and lendable amounts for all respondents and then by institution type.

Results for all respondents if receiving **Level-1 HQLA**

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		All Respondents	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	6	33.3	3	50.0	22	81.5	31	60.8
16 to 25 basis points	4	22.2	1	16.7	5	18.5	10	19.6
26 to 50 basis points	5	27.8	2	33.3	0	0.0	7	13.7
51 to 100 basis points	3	16.7	0	0.0	0	0.0	3	5.9
Total	18	100.0	6	100.0	27	100.0	51	100.0

Note: Twenty-four respondents provided a qualitative answer, N/A, or left it blank.

Results for respondents from domestic banks if receiving **Level-1 HQLA**

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		Respondents from Domestic Banks	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	5	29.4	2	50.0	7	63.6	14	43.8
16 to 25 basis points	4	23.5	1	25.0	4	36.4	9	28.1
26 to 50 basis points	5	29.4	1	25.0	0	0.0	6	18.8
51 to 100 basis points	3	17.6	0	0.0	0	0.0	3	9.4
Total	17	100.0	4	100.0	11	100.0	32	100.0

Note: Eleven respondents provided a qualitative answer, N/A, or left it blank.

Results for respondents from foreign banks if receiving **Level-1 HQLA**

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		Respondents from Foreign Banks	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	1	100.0	1	50.0	15	93.8	17	89.5
16 to 25 basis points	0	0.0	0	0.0	1	6.3	1	5.3
26 to 50 basis points	0	0.0	1	50.0	0	0.0	1	5.3
51 to 100 basis points	0	0.0	0	0.0	0	0.0	0	0.0
Total	1	100.0	2	100.0	16	100.0	19	100.0

Note: Thirteen respondents provided a qualitative answer, N/A, or left it blank.

B. Respondents were asked to report the lowest spread relative to the IOER rate that they would be willing to lend cash if receiving level-2 HQLA collateral, such as U.S. agency securities or mortgage-backed securities, as well as how much they would be willing to lend at that spread.

Forty-two banks provided both a spread and an amount that they would be willing to lend. Two provided a spread and indicated in writing that the amount that they would be willing to lend was conditional on market conditions. The remaining 31 either left this question blank or indicated "N/A."

Results for all respondents if receiving **Level-2 HQLA**

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		All Respondents	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	3	17.7	2	28.6	9	50.0	14	33.3
16 to 25 basis points	3	17.7	1	14.3	6	33.3	10	23.8
26 to 50 basis points	6	35.3	2	28.6	2	11.1	10	23.8
51 to 100 basis points	4	23.5	2	28.6	1	5.6	7	16.7
101 to 125 basis points	0	0.0	0	0.0	0	0.0	0	0.0
126 to 150 basis points	1	5.9	0	0.0	0	0.0	1	2.4
Total	17	100.0	7	100.0	18	100.0	42	100.0

Note: Thirty-three respondents provided a qualitative answer, N/A, or left it blank.

Results for respondents from domestic banks if receiving **Level-2 HQLA**

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		Respondents from Domestic Banks	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	2	13.3	1	25.0	5	50.0	8	27.6
16 to 25 basis points	3	20.0	0	0.0	3	30.0	6	20.7
26 to 50 basis points	6	40.0	1	25.0	1	10.0	8	27.6
51 to 100 basis points	3	20.0	2	50.0	1	10.0	6	20.7
101 to 125 basis points	0	0.0	0	0.0	0	0.0	0	0.0
126 to 150 basis points	1	6.7	0	0.0	0	0.0	1	3.4
Total	15	100.0	4	100.0	10	100.0	29	100.0

Note: Fourteen respondents provided a qualitative answer, N/A, or left it blank.

Results for respondents from foreign banks if receiving **Level-2 HQLA**

Lowest Spread to the IOER Rate	Lendable Amount							
	0 to $0.5 billion		$0.5 billion to $1 billion		Over $1 billion		Respondents from Foreign Banks	
	Banks	Percent	Banks	Percent	Banks	Percent	Banks	Percent
0 to 15 basis points	1	50.0	1	33.3	4	50.0	6	46.2
16 to 25 basis points	0	0.0	1	33.3	3	37.5	4	30.8
26 to 50 basis points	0	0.0	1	33.3	1	12.5	2	15.4
51 to 100 basis points	1	50.0	0	0.0	0	0.0	1	7.7
101 to 125 basis points	0	0.0	0	0.0	0	0.0	0	0.0
126 to 150 basis points	0	0.0	0	0.0	0	0.0	0	0.0
Total	2	100.0	3	100.0	8	100.0	13	100.0

Note: Nineteen respondents provided a qualitative answer, N/A, or left it blank.

14. If your bank responded to the September 2018 Senior Financial Officer Survey and there have been any notable changes in your responses from the previous survey, please explain the factors leading to these changes.

    (9 responses)

    Factors cited by respondents included the current interest rate environment and market opportunities, reevaluation of reserve balance levels in the context of internal needs or external requirements, and changing business models as reasons for general changes in responses compared to the previous survey.

15. If there is any other information relevant to your bank's management of reserve balances that you would like to provide at this time, please do so below.

    (10 responses)

    Multiple respondents reinforced that a critical part of their reserve balance management strategies is driven by both internal and regulatory liquidity requirements and metrics.