# August 2019 Senior Financial Officer Survey

Board of Governors of the Federal Reserve System

# Summary

In August 2019, the Federal Reserve conducted a Senior Financial Officer Survey to collect qualitative and quantitative information from senior financial officers on their banks' reserve balance management practices.[1] This survey featured a few of the same questions that were included in the survey conducted in February 2019 but also introduced a number of new questions.[2] For instance, the survey again asked respondents to identify the lowest level of reserve balances that they felt 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 survey was distributed to senior financial officers at 80 banks on August 6, 2019, with replies due by August 20, 2019. The reference period for most questions was July 2019. Senior financial officers at 43 domestic banks and 34 U.S. branches and agencies of foreign banking organizations submitted responses, for a total of 77 banks.[4] The banks identified for surveying represented a range of asset sizes and business models.

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 slightly over \$652 billion; for context, these banks' total average reserve balance holdings in July 2019 were \$1,152 billion, making up about three-fourths of total system reserve balance holdings.
- The aggregate reported lowest comfortable level of reserve balances fell by about \$51 billion from the February 2019 Senior Financial Officer Survey reported level of \$703 billion, reflecting 21 repeat respondents that revised down by about \$72 billion, which was partially offset by 12 repeat respondents that revised up by about \$12 billion.
- As was the case in the February survey, the majority of respondents ranked meeting routine intraday payments flows as the most important or second most important consideration in determining their lowest comfortable level of reserve balances.[5]
- For respondents that ranked meeting routine intraday payments flows as the most important or second most important consideration, the vast majority rated their expectations for

1 The August 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 February 2019 Senior Financial Officer Survey is available at https://www.federalreserve.gov/data/sfos/files/senior-financial-officer-survey-201902.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 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 34 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. Note that one repeat domestic respondent chose to respond this round as a consolidated unit with its affiliated U.S. branch of a foreign bank.

5 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.

days on which outflows are atypically high based on analysis of historical activity as an important or very important factor in determining routine intraday payment needs.

- Roughly three-fourths of respondents from domestic banks reported increasing advances from Federal Home Loan Banks (FHLBs) as a likely or very likely action to replenish reserve balances in the short term and long term, while more than one-half of respondents from foreign banks were likely or very likely to borrow at various tenors in unsecured funding markets in order to meet funding needs in either the short or long term.
- In the event that reserve balances fall below the reported lowest comfortable level of reserves, roughly 70 percent of respondents indicated they would take same-day or next-day action to begin rebuilding their reserve balances, with many also indicating the timing of action taken would depend on the nature and circumstances of the event.
- About two-thirds of respondents that currently hold reserves significantly above their reported lowest comfortable level of reserves indicated that providing a cushion against potential outflows was an important or very important consideration.

The remainder of this summary further details responses to the questions regarding current reserve balance management strategies and practices, followed by a tabular presentation of responses.[6]

## Current Reserve Balance Management Strategies and Practices

(Table 1, questions 1–6)

**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 interest on excess reserves (IOER) rate. In aggregate, the lowest comfortable levels of reserve balances reported by all respondents summed to $652 billion, notably less than the $1,152 billion of reserve balances these banks held, on average, in July 2019.

For those respondents that participated in the February 2019 survey, the survey again asked whether their lowest comfortable level of reserve balances had changed significantly from the previous survey. About 30 percent of respondents reported a decline in their lowest comfortable level of reserve balances relative to February. Foreign banks comprised just under two-thirds of this group of respondents.

**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.[7] Nearly 50 percent of all respondents ranked meeting routine intraday payment flows as the most important driver of their lowest comfortable level of reserve balances. As was the case with the February survey, this factor received the largest share of respondents ranking it as the most important driver among the potential determinants. After meeting routine intraday payment flows, the second most important driver of the lowest comfortable level of reserves for

6 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.

7 This question is a repeat from the previous survey conducted in February 2019.

both domestic and foreign entities was meeting internal liquidity stress metrics. Roughly half of respondents, both domestic and foreign, ranked this driver as the most important or second most important.

The survey included a new question that asked respondents for more detail on factors that determined their intraday payment needs. Respondents that ranked "meeting routine intraday payment flows" as a very important factor (a 5 or 6) for determining their lowest comfortable level of reserve balances were asked to rate seven factors in determining intraday payment needs. The majority of these respondents rated their expectations for days on which outflows are atypically high relative to inflows based on a historical analysis of the bank's activity as an important or very important factor in determining routine intraday payment needs. In addition, more than half also rated their expectations for days on which outflows and inflows are considered typical based on a historical analysis of their activity as an important or very important factor in determining intraday payment needs.

**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. In response to a short-term funding need, more than half of domestic banks reported that borrowing in unsecured funding markets at tenors less than 30 days would be likely or very likely. A slightly smaller percentage of domestic banks (around 45 percent) indicated that borrowing in secured funding markets for less than 30 days would be likely or very likely in the short term. In the long term, the possible options to address a reserve level shortfall broadened beyond borrowing at short tenors in funding markets. For instance, more than 60 percent of respondents from domestic banks cited increasing their retail deposit base through offering higher rates as likely or very likely. At the same time, nearly 55 percent of respondents from domestic banks also indicated borrowing in unsecured funding markets at tenors greater than 30 days as a likely or very likely action.

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 40 percent of respondents from foreign banks were very likely to borrow in unsecured funding markets at tenors less than 30 days. In addition, more than 75 percent of respondents from foreign banks indicated they were likely or very likely to reduce lending in short-term money markets to meet a short-term funding need.

**Question on timing of actions to rebuild reserve balances**. Survey respondents were asked to indicate the timing of actions to be taken in maintaining or rebuilding reserve balances should they fall below their reported lowest comfortable level of reserve balances. Just over 70 percent of respondents cited taking action within the same day or the next day after falling below their lowest comfortable level of reserve balances.

**Question on current reserve balance levels above the reported lowest comfortable level**. Survey respondents were asked to indicate which considerations led them to hold reserve balances significantly above their lowest comfortable level of reserves, if this applied to their situation. Nearly two-thirds of respondents across both domestic and foreign entities reported that a cushion to provide against potential outflows is either an important or a very important consideration in holding reserve balances significantly above their reported lowest comfortable level. The level of the IOER rate relative to the yields on other safe, high-quality liquid assets was also cited as an important or very important consideration by half of respondents.

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# 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.

## 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 5 in this section inquire about considerations related to that determination.*

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?[8]

A.

| Totals | All Respondents | Domestic | Foreign |
|---|---|---|---|
| | (billions of dollars) | | |
| Reported lowest comfortable level of reserve balances | 652.4 | 412.0 | 240.4 |
| Average reserve balances in July 2019* | 1,152.1 | 707.6 | 444.5 |

* Federal Reserve data.

B. If you responded to the February 2019 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.

(33 responses)

Of the 33 responses, 17 were associated with respondents that decreased their reported lowest comfortable level of reserves since the February 2019 survey. Many cited realizing efficiencies in liquidity management practices, as well as taking advantage of favorable rates on alternative investments as the reason for their reduction. The remaining responses were associated with respondents that increased their reported lowest comfortable level of reserves since the last survey, many of which noted changes to their liquidity management practices or other aspects of their reserve demand calculations.

8 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 July 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.

2. Other than meeting your bank's reserve balance requirement, 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). *Note, each number rank should be used exactly once. Two separate considerations should not have the same rank.*

A.

1) Meeting routine intraday payment flows:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| 1 (Not important) | 5 | 6.5 | 0 | 0.0 | 5 | 14.7 |
| 2 | 3 | 3.9 | 3 | 7.0 | 0 | 0.0 |
| 3 | 12 | 15.6 | 9 | 20.9 | 3 | 8.8 |
| 4 | 13 | 16.9 | 7 | 16.3 | 6 | 17.6 |
| 5 | 9 | 11.7 | 6 | 14.0 | 3 | 8.8 |
| 6 (Most important) | 35 | 45.5 | 18 | 41.9 | 17 | 50.0 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

2) 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) | 6 | 7.8 | 4 | 9.3 | 2 | 5.9 |
| 2 | 16 | 20.8 | 6 | 14.0 | 10 | 29.4 |
| 3 | 11 | 14.3 | 5 | 11.6 | 6 | 17.6 |
| 4 | 18 | 23.4 | 10 | 23.3 | 8 | 23.5 |
| 5 | 23 | 29.9 | 17 | 39.5 | 6 | 17.6 |
| 6 (Most important) | 3 | 3.9 | 1 | 2.3 | 2 | 5.9 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

3) 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 | 0 | 0.0 | 1 | 2.9 |
| 2 | 8 | 10.4 | 5 | 11.6 | 3 | 8.8 |
| 3 | 14 | 18.2 | 12 | 27.9 | 2 | 5.9 |
| 4 | 15 | 19.5 | 6 | 14.0 | 9 | 26.5 |
| 5 | 20 | 26.0 | 10 | 23.3 | 10 | 29.4 |
| 6 (Most important) | 19 | 24.7 | 10 | 23.3 | 9 | 26.5 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

4) 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) | 38 | 49.4 | 24 | 55.8 | 14 | 41.2 |
| 2 | 15 | 19.5 | 8 | 18.6 | 7 | 20.6 |
| 3 | 10 | 13.0 | 6 | 14.0 | 4 | 11.8 |
| 4 | 5 | 6.5 | 4 | 9.3 | 1 | 2.9 |
| 5 | 6 | 7.8 | 0 | 0.0 | 6 | 17.6 |
| 6 (Most important) | 3 | 3.9 | 1 | 2.3 | 2 | 5.9 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

5) 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) | 7 | 9.1 | 5 | 11.6 | 2 | 5.9 |
| 2 | 17 | 22.1 | 12 | 27.9 | 5 | 14.7 |
| 3 | 26 | 33.8 | 10 | 23.3 | 16 | 47.1 |
| 4 | 14 | 18.2 | 10 | 23.3 | 4 | 11.8 |
| 5 | 7 | 9.1 | 3 | 7.0 | 4 | 11.8 |
| 6 (Most important) | 6 | 7.8 | 3 | 7.0 | 3 | 8.8 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

6) Lack of depth in late day funding markets:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| 1 (Not important) | 20 | 26.0 | 10 | 23.3 | 10 | 29.4 |
| 2 | 18 | 23.4 | 9 | 20.9 | 9 | 26.5 |
| 3 | 4 | 5.2 | 1 | 2.3 | 3 | 8.8 |
| 4 | 12 | 15.6 | 6 | 14.0 | 6 | 17.6 |
| 5 | 12 | 15.6 | 7 | 16.3 | 5 | 14.7 |
| 6 (Most important) | 11 | 14.3 | 10 | 23.3 | 1 | 2.9 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

B. If you ranked "Meeting routine intraday payment flows" as a very important consideration (that is a numerical rating of 5 or 6) for determining the amount indicated in question 1.A, please rate the importance of the following factors in determining your intraday payment needs on a scale of 1 (not important), 2 (somewhat important), 3 (important), or 4 (very important), or, if the factor is not applicable to your bank's decision, please select "N/A." *If you did not rank this consideration as very important in question 2.A above, please skip to question 3.*

1) Expectations for meeting intraday payment flows for days on which outflows and inflows are typical based on a historical analysis of the firm's activity:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 2 | 4.7 | 2 | 8.3 | 0 | 0.0 |
| Somewhat important | 8 | 18.6 | 4 | 16.7 | 4 | 21.1 |
| Important | 13 | 30.2 | 10 | 41.7 | 3 | 15.8 |
| Very important | 20 | 46.5 | 8 | 33.3 | 12 | 63.2 |
| Total | 43 | 100.0 | 24 | 100.0 | 19 | 100.0 |

Note: 34 respondents provided an answer of N/A or left it blank.

2) Expectations for meeting intraday payment flows for days on which outflows are atypically high relative to inflows based on a historical analysis of the firm's activity:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Somewhat important | 7 | 15.9 | 1 | 4.2 | 6 | 30.0 |
| Important | 14 | 31.8 | 9 | 37.5 | 5 | 25.0 |
| Very important | 23 | 52.3 | 14 | 58.3 | 9 | 45.0 |
| Total | 44 | 100.0 | 24 | 100.0 | 20 | 100.0 |

Note: 33 respondents provided an answer of N/A or left it blank.

3) Projections of payment obligations, some of which are date or time specific:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 6 | 13.6 | 4 | 16.7 | 2 | 10.0 |
| Somewhat important | 9 | 20.5 | 8 | 33.3 | 1 | 5.0 |
| Important | 14 | 31.8 | 5 | 20.8 | 9 | 45.0 |
| Very important | 15 | 34.1 | 7 | 29.2 | 8 | 40.0 |
| Total | 44 | 100.0 | 24 | 100.0 | 20 | 100.0 |

Note: 33 respondents provided an answer of N/A or left it blank.

4) Projected intraday balance needs arising from potential loss of access to intraday credit from other financial institutions:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 25 | 65.8 | 13 | 65.0 | 12 | 66.7 |
| Somewhat important | 9 | 23.7 | 5 | 25.0 | 4 | 22.2 |
| Important | 3 | 7.9 | 1 | 5.0 | 2 | 11.1 |
| Very important | 1 | 2.6 | 1 | 5.0 | 0 | 0.0 |
| Total | 38 | 100.0 | 20 | 100.0 | 18 | 100.0 |

Note: 39 respondents provided an answer of N/A or left it blank.

5) Projected intraday balance needs arising in stress from posting additional margin or collateral to comply with financial market infrastructure requirements:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 24 | 61.5 | 15 | 68.2 | 9 | 52.9 |
| Somewhat important | 6 | 15.4 | 3 | 13.6 | 3 | 17.6 |
| Important | 6 | 15.4 | 2 | 9.1 | 4 | 23.5 |
| Very important | 3 | 7.7 | 2 | 9.1 | 1 | 5.9 |
| Total | 39 | 100.0 | 22 | 100.0 | 17 | 100.0 |

Note: 38 respondents provided an answer of N/A or left it blank.

6) The need to retain capacity to make payments on behalf of customers:

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 6 | 14.6 | 4 | 18.2 | 2 | 10.5 |
| Somewhat important | 8 | 19.5 | 1 | 4.5 | 7 | 36.8 |
| Important | 14 | 34.1 | 8 | 36.4 | 6 | 31.6 |
| Very important | 13 | 31.7 | 9 | 40.9 | 4 | 21.1 |
| Total | 41 | 100.0 | 22 | 100.0 | 19 | 100.0 |

Note: 36 respondents provided an answer of N/A or left it blank.

7) Other:

| | 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 | 2 | 66.7 | 2 | 66.7 | 0 | 0.0 |
| Very important | 1 | 33.3 | 1 | 33.3 | 0 | 0.0 |
| Total | 3 | 100.0 | 3 | 100.0 | 0 | 0.0 |

Note: 74 respondents provided an answer of N/A or left it blank.

C. Other (please explain)

(Three responses)

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

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), or, if the action is not applicable to your bank (for example, your bank does not engage in the described activity), please select "N/A."

A. For a short-term funding need:

1) 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 | 14 | 18.4 | 10 | 23.8 | 4 | 11.8 |
| Unlikely | 16 | 21.1 | 9 | 21.4 | 7 | 20.6 |
| Likely | 14 | 18.4 | 5 | 11.9 | 9 | 26.5 |
| Very likely | 32 | 42.1 | 18 | 42.9 | 14 | 41.2 |
| Total | 76 | 100.0 | 42 | 100.0 | 34 | 100.0 |

Note: 1 respondent provided an answer of N/A or left it blank.

2) 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 | 22 | 29.3 | 18 | 43.9 | 4 | 11.8 |
| Unlikely | 23 | 30.7 | 11 | 26.8 | 12 | 35.3 |
| Likely | 19 | 25.3 | 7 | 17.1 | 12 | 35.3 |
| Very likely | 11 | 14.7 | 5 | 12.2 | 6 | 17.6 |
| Total | 75 | 100.0 | 41 | 100.0 | 34 | 100.0 |

Note: 2 respondents provided an answer of N/A or left it blank.

3) 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 | 22 | 29.3 | 10 | 23.8 | 12 | 36.4 |
| Unlikely | 19 | 25.3 | 12 | 28.6 | 7 | 21.2 |
| Likely | 19 | 25.3 | 10 | 23.8 | 9 | 27.3 |
| Very likely | 15 | 20.0 | 10 | 23.8 | 5 | 15.2 |
| Total | 75 | 100.0 | 42 | 100.0 | 33 | 100.0 |

Note: 2 respondents provided an answer of N/A or left it blank.

4) 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 | 40 | 54.1 | 20 | 48.8 | 20 | 60.6 |
| Unlikely | 26 | 35.1 | 14 | 34.1 | 12 | 36.4 |
| Likely | 7 | 9.5 | 6 | 14.6 | 1 | 3.0 |
| Very likely | 1 | 1.4 | 1 | 2.4 | 0 | 0.0 |
| Total | 74 | 100.0 | 41 | 100.0 | 33 | 100.0 |

Note: 3 respondents provided an answer of N/A or left it blank.

5) Borrow from the Federal Reserve discount window

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 76 | 100.0 | 42 | 100.0 | 34 | 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 | 76 | 100.0 | 42 | 100.0 | 34 | 100.0 |

Note: 1 respondent provided an answer of N/A or left it blank.

6) 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 | 27.3 | 11 | 44.0 | 4 | 13.3 |
| Unlikely | 6 | 10.9 | 3 | 12.0 | 3 | 10.0 |
| Likely | 18 | 32.7 | 4 | 16.0 | 14 | 46.7 |
| Very likely | 16 | 29.1 | 7 | 28.0 | 9 | 30.0 |
| Total | 55 | 100.0 | 25 | 100.0 | 30 | 100.0 |

Note: 22 respondents provided an answer of N/A or left it blank.

7) Reduce holdings of available-for-sale short-term securities

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 32 | 45.7 | 21 | 51.2 | 11 | 37.9 |
| Unlikely | 27 | 38.6 | 16 | 39.0 | 11 | 37.9 |
| Likely | 8 | 11.4 | 2 | 4.9 | 6 | 20.7 |
| Very likely | 3 | 4.3 | 2 | 4.9 | 1 | 3.4 |
| Total | 70 | 100.0 | 41 | 100.0 | 29 | 100.0 |

Note: 7 respondents provided an answer of N/A or left it blank.

8) Increase advances from Federal Home Loan Banks (FHLBs)[9]

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 1 | 2.6 | 1 | 2.6 | 0 | 0.0 |
| Unlikely | 1 | 2.6 | 1 | 2.6 | 0 | 0.0 |
| Likely | 10 | 26.3 | 10 | 26.3 | 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: 39 respondents provided an answer of N/A or left it blank.

[9] This action was only relevant for members of FHLBs. Nonmembers of an FHLB answered “Not applicable.”

9) Increase retail deposit base by offering higher rates

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 30 | 60.0 | 25 | 61.0 | 5 | 55.6 |
| Unlikely | 15 | 30.0 | 13 | 31.7 | 2 | 22.2 |
| Likely | 4 | 8.0 | 2 | 4.9 | 2 | 22.2 |
| Very likely | 1 | 2.0 | 1 | 2.4 | 0 | 0.0 |
| Total | 50 | 100.0 | 41 | 100.0 | 9 | 100.0 |

Note: 27 respondents provided an answer of N/A or left it blank.

10) Increase retail deposit base by offering attractive, non-rate terms

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 35 | 70.0 | 29 | 70.7 | 6 | 66.7 |
| Unlikely | 13 | 26.0 | 12 | 29.3 | 1 | 11.1 |
| Likely | 2 | 4.0 | 0 | 0.0 | 2 | 22.2 |
| Very likely | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 50 | 100.0 | 41 | 100.0 | 9 | 100.0 |

Note: 27 respondents provided an answer of N/A or left it blank.

11) Increase wholesale deposit base by offering higher rates

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 22 | 33.3 | 18 | 51.4 | 4 | 12.9 |
| Unlikely | 11 | 16.7 | 7 | 20.0 | 4 | 12.9 |
| Likely | 25 | 37.9 | 7 | 20.0 | 18 | 58.1 |
| Very likely | 8 | 12.1 | 3 | 8.6 | 5 | 16.1 |
| Total | 66 | 100.0 | 35 | 100.0 | 31 | 100.0 |

Note: 11 respondents provided an answer of N/A or left it blank.

12) 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 | 19 | 39.6 | 13 | 61.9 | 6 | 22.2 |
| Unlikely | 12 | 25.0 | 1 | 4.8 | 11 | 40.7 |
| Likely | 7 | 14.6 | 4 | 19.0 | 3 | 11.1 |
| Very likely | 10 | 20.8 | 3 | 14.3 | 7 | 25.9 |
| Total | 48 | 100.0 | 21 | 100.0 | 27 | 100.0 |

Note: 29 respondents provided an answer of N/A or left it blank.

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

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 3 | 21.4 | 3 | 33.3 | 0 | 0.0 |
| Unlikely | 5 | 35.7 | 4 | 44.4 | 1 | 20.0 |
| Likely | 2 | 14.3 | 0 | 0.0 | 2 | 40.0 |
| Very likely | 4 | 28.6 | 2 | 22.2 | 2 | 40.0 |
| Total | 14 | 100.0 | 9 | 100.0 | 5 | 100.0 |

Note: 63 respondents provided an answer of N/A or left it blank.

B. For a long-term funding need:

1) 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 | 31 | 41.3 | 20 | 48.8 | 11 | 32.4 |
| Unlikely | 30 | 40.0 | 17 | 41.5 | 13 | 38.2 |
| Likely | 8 | 10.7 | 1 | 2.4 | 7 | 20.6 |
| Very likely | 6 | 8.0 | 3 | 7.3 | 3 | 8.8 |
| Total | 75 | 100.0 | 41 | 100.0 | 34 | 100.0 |

Note: 2 respondents provided an answer of N/A or left it blank.

2) 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 | 11 | 14.7 | 8 | 19.5 | 3 | 8.8 |
| Unlikely | 17 | 22.7 | 11 | 26.8 | 6 | 17.6 |
| Likely | 27 | 36.0 | 14 | 34.1 | 13 | 38.2 |
| Very likely | 20 | 26.7 | 8 | 19.5 | 12 | 35.3 |
| Total | 75 | 100.0 | 41 | 100.0 | 34 | 100.0 |

Note: 2 respondents provided an answer of N/A or left it blank.

3) 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 | 35 | 47.3 | 18 | 43.9 | 17 | 51.5 |
| Unlikely | 24 | 32.4 | 15 | 36.6 | 9 | 27.3 |
| Likely | 12 | 16.2 | 6 | 14.6 | 6 | 18.2 |
| Very likely | 3 | 4.1 | 2 | 4.9 | 1 | 3.0 |
| Total | 74 | 100.0 | 41 | 100.0 | 33 | 100.0 |

Note: 3 respondents provided an answer of N/A or left it blank.

4) 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 | 32 | 43.8 | 14 | 35.0 | 18 | 54.5 |
| Unlikely | 22 | 30.1 | 11 | 27.5 | 11 | 33.3 |
| Likely | 16 | 21.9 | 12 | 30.0 | 4 | 12.1 |
| Very likely | 3 | 4.1 | 3 | 7.5 | 0 | 0.0 |
| Total | 73 | 100.0 | 40 | 100.0 | 33 | 100.0 |

Note: 4 respondents provided an answer of N/A or left it blank.

5) Borrow from the Federal Reserve discount window

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 75 | 100.0 | 41 | 100.0 | 34 | 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 | 75 | 100.0 | 41 | 100.0 | 34 | 100.0 |

Note: 2 respondents provided an answer of N/A or left it blank.

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

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 17 | 30.9 | 10 | 40.0 | 7 | 23.3 |
| Unlikely | 7 | 12.7 | 3 | 12.0 | 4 | 13.3 |
| Likely | 15 | 27.3 | 4 | 16.0 | 11 | 36.7 |
| Very likely | 16 | 29.1 | 8 | 32.0 | 8 | 26.7 |
| Total | 55 | 100.0 | 25 | 100.0 | 30 | 100.0 |

Note: 22 respondents provided an answer of N/A or left it blank.

7) Reduce holdings of available-for-sale short-term securities

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 20 | 28.6 | 12 | 29.3 | 8 | 27.6 |
| Unlikely | 19 | 27.1 | 9 | 22.0 | 10 | 34.5 |
| Likely | 21 | 30.0 | 12 | 29.3 | 9 | 31.0 |
| Very likely | 10 | 14.3 | 8 | 19.5 | 2 | 6.9 |
| Total | 70 | 100.0 | 41 | 100.0 | 29 | 100.0 |

Note: 7 respondents provided an answer of N/A or left it blank.

8) Increase advances from Federal Home Loan Banks (FHLBs)[10]

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 1 | 2.6 | 1 | 2.6 | 0 | 0.0 |
| Unlikely | 4 | 10.5 | 4 | 10.5 | 0 | 0.0 |
| Likely | 10 | 26.3 | 10 | 26.3 | 0 | 0.0 |
| Very likely | 23 | 60.5 | 23 | 60.5 | 0 | 0.0 |
| Total | 38 | 100.0 | 38 | 100.0 | 0 | 0.0 |

Note: 39 respondents provided an answer of N/A or left it blank.

[10] This action was only relevant for members of FHLBs. Nonmembers of an FHLB answered “Not applicable.”

9) Increase retail deposit base by offering higher rates

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 15 | 30.0 | 10 | 24.4 | 5 | 55.6 |
| Unlikely | 6 | 12.0 | 6 | 14.6 | 0 | 0.0 |
| Likely | 20 | 40.0 | 16 | 39.0 | 4 | 44.4 |
| Very likely | 9 | 18.0 | 9 | 22.0 | 0 | 0.0 |
| Total | 50 | 100.0 | 41 | 100.0 | 9 | 100.0 |

Note: 27 respondents provided an answer of N/A or left it blank.

10) Increase retail deposit base by offering attractive, non-rate terms

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 20 | 40.0 | 15 | 36.6 | 5 | 55.6 |
| Unlikely | 11 | 22.0 | 10 | 24.4 | 1 | 11.1 |
| Likely | 17 | 34.0 | 14 | 34.1 | 3 | 33.3 |
| Very likely | 2 | 4.0 | 2 | 4.9 | 0 | 0.0 |
| Total | 50 | 100.0 | 41 | 100.0 | 9 | 100.0 |

Note: 27 respondents provided an answer of N/A or left it blank.

11) Increase wholesale deposit base by offering higher rates

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Very unlikely | 13 | 19.7 | 8 | 22.9 | 5 | 16.1 |
| Unlikely | 15 | 22.7 | 8 | 22.9 | 7 | 22.6 |
| Likely | 26 | 39.4 | 13 | 37.1 | 13 | 41.9 |
| Very likely | 12 | 18.2 | 6 | 17.1 | 6 | 19.4 |
| Total | 66 | 100.0 | 35 | 100.0 | 31 | 100.0 |

Note: 11 respondents provided an answer of N/A or left it blank.

12) 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 | 21 | 42.0 | 14 | 63.6 | 7 | 25.0 |
| Unlikely | 11 | 22.0 | 1 | 4.5 | 10 | 35.7 |
| Likely | 9 | 18.0 | 4 | 18.2 | 5 | 17.9 |
| Very likely | 9 | 18.0 | 3 | 13.6 | 6 | 21.4 |
| Total | 50 | 100.0 | 22 | 100.0 | 28 | 100.0 |

Note: 27 respondents provided an answer of N/A or left it blank.

13) 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 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Likely | 10 | 66.7 | 7 | 70.0 | 3 | 60.0 |
| Very likely | 5 | 33.3 | 3 | 30.0 | 2 | 40.0 |
| Total | 15 | 100.0 | 10 | 100.0 | 5 | 100.0 |

Note: 62 respondents provided an answer of N/A or left it blank.

C. Other (please explain):

(15 respondents)

Some domestic banks cited issuing either commercial paper or certificates of deposit and drawing on collateralized lines of credit to meet shorter-term needs and senior, unsecured long-term debt or asset-backed securitization to meet longer-term needs. A number of foreign banks cited intercompany loans or deposits as a way to meet both shorter-term and longer-term liquidity needs.

4. If your bank's reserve balance fell below the amount you indicated in question 1.A, please indicate the **timing** in which you would generally take actions.

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Same day | 39 | 50.6 | 22 | 51.2 | 17 | 50.0 |
| Next day | 16 | 20.8 | 9 | 20.9 | 7 | 20.6 |
| Next 5 business days | 9 | 11.7 | 3 | 7.0 | 6 | 17.6 |
| Other | 13 | 16.9 | 9 | 20.9 | 4 | 11.8 |
| Total | 77 | 100.0 | 43 | 100.0 | 34 | 100.0 |

Respondents that answered "Other" to question 4 indicated the following:

(13 respondents)

The majority of respondents that answered "other" cited that the timing of their actions would largely depend upon the nature of the decline below their lowest comfortable level of reserves, the expected duration of its persistence, and expectations based on comprehensive cash flow forecasts.

5. If your bank's current level of reserve balances is significantly higher than the amount you indicated in question 1.A, please answer this question. Please rate the importance of the following considerations for holding reserves in excess of the amount you indicated in question 1.A on a scale of 1 (not important), 2 (somewhat important), 3 (important), or 4 (very important), or, if the factor is not applicable to your bank's decision, please select "N/A."

We tend to hold reserves in excess of the amount reported in 1.A due to:

A. The level of IOER relative to the yield on other safe, high-quality liquid assets

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 16 | 24.2 | 9 | 25.7 | 7 | 22.6 |
| Somewhat important | 17 | 25.8 | 9 | 25.7 | 8 | 25.8 |
| Important | 24 | 36.4 | 14 | 40.0 | 10 | 32.3 |
| Very important | 9 | 13.6 | 3 | 8.6 | 6 | 19.4 |
| Total | 66 | 100.0 | 35 | 100.0 | 31 | 100.0 |

Note: 11 respondents provided an answer of N/A or left it blank.

B. The zero duration characteristic of reserves

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 31 | 49.2 | 17 | 51.5 | 14 | 46.7 |
| Somewhat important | 13 | 20.6 | 8 | 24.2 | 5 | 16.7 |
| Important | 12 | 19.0 | 6 | 18.2 | 6 | 20.0 |
| Very important | 7 | 11.1 | 2 | 6.1 | 5 | 16.7 |
| Total | 63 | 100.0 | 33 | 100.0 | 30 | 100.0 |

Note: 14 respondents provided an answer of N/A or left it blank.

C. The cushion reserves provide against potential outflows

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 7 | 10.6 | 3 | 8.6 | 4 | 12.9 |
| Somewhat important | 13 | 19.7 | 7 | 20.0 | 6 | 19.4 |
| Important | 25 | 37.9 | 14 | 40.0 | 11 | 35.5 |
| Very important | 21 | 31.8 | 11 | 31.4 | 10 | 32.3 |
| Total | 66 | 100.0 | 35 | 100.0 | 31 | 100.0 |

Note: 11 respondents provided an answer of N/A or left it blank.

D. Discomfort with using intraday credit from the Federal Reserve

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 23 | 41.1 | 17 | 51.5 | 6 | 26.1 |
| Somewhat important | 16 | 28.6 | 6 | 18.2 | 10 | 43.5 |
| Important | 7 | 12.5 | 5 | 15.2 | 2 | 8.7 |
| Very important | 10 | 17.9 | 5 | 15.2 | 5 | 21.7 |
| Total | 56 | 100.0 | 33 | 100.0 | 23 | 100.0 |

Note: 21 respondents provided an answer of N/A or left it blank.

E. A desire to hold more reserves at month-end dates only

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 42 | 75.0 | 23 | 74.2 | 19 | 76.0 |
| Somewhat important | 12 | 21.4 | 6 | 19.4 | 6 | 24.0 |
| Important | 2 | 3.6 | 2 | 6.5 | 0 | 0.0 |
| Very important | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 56 | 100.0 | 31 | 100.0 | 25 | 100.0 |

Note: 21 respondents provided an answer of N/A or left it blank.

F. Other (please describe below)

| | All Respondents | | Domestic | | Foreign | |
|---|---|---|---|---|---|---|
| | Banks | Percent | Banks | Percent | Banks | Percent |
| Not important | 1 | 5.0 | 1 | 9.1 | 0 | 0.0 |
| Somewhat important | 1 | 5.0 | 0 | 0.0 | 1 | 11.1 |
| Important | 10 | 50.0 | 6 | 54.5 | 4 | 44.4 |
| Very important | 8 | 40.0 | 4 | 36.4 | 4 | 44.4 |
| Total | 20 | 100.0 | 11 | 100.0 | 9 | 100.0 |

Note: 57 respondents provided an answer of N/A or left it blank.

Respondents that rated "Other" indicated the following:

(20 respondents)

Responses were fairly mixed, with many respondents citing holding reserve balances significantly above the lowest comfortable level to ensure meeting internal liquidity stress metrics and assumptions. Some respondents cited holding additional reserves due to temporary deposit inflow activity.

6. 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 respondents)

   Multiple respondents reinforced that internal liquidity risk management, including stress metrics and regulatory requirements, remain a critical aspect of their reserve balance management strategies and practices.

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