

Board of Governors of the Federal Reserve System

Knowledge Management for the Board's Comprehensive Liquidity Analysis and Review Is Generally Effective and Can Be Further Enhanced



Office of Inspector General
Board of Governors of the Federal Reserve System
Bureau of Consumer Financial Protection



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Executive Summary, 2018-SR-B-013, September 5, 2018

Knowledge Management for the Board's Comprehensive Liquidity Analysis and Review Is Generally Effective and Can Be Further Enhanced

Findings

The Comprehensive Liquidity Analysis and Review (CLAR) program's knowledge management practices generally align with many of the leading practices described in the academic studies and *Harvard Business Review* articles we reviewed related to preserving and transferring institutional knowledge. For example, CLAR leadership has fostered a culture that prioritizes knowledge management; CLAR teams practice regular team-based collaboration; and the CLAR program uses an information-sharing application to capture, store, and share institutional knowledge. As a result, the CLAR program appears to preserve and maintain institutional knowledge related to supervisory findings and fosters effective collaboration across the three pillars, the dedicated teams, and the horizontal teams.

Although the CLAR program has generally effective knowledge management practices, the practices can be further strengthened by (1) increasing CLAR program employees' awareness of management's office hours, during which they can discuss the rationale for decisions made during the CLAR letter-writing process; (2) formalizing employee onboarding procedures; and (3) standardizing the CLAR Steering Committee's approach to meeting minutes.

Recommendations

Our report contains recommendations designed to further enhance the CLAR program's knowledge management practices. In its response to our draft report, the Board concurs with our recommendations and outlines actions to address each recommendation. We will follow up to ensure that the recommendations are fully addressed.

Purpose

We conducted this evaluation to assess the Federal Reserve System's knowledge management processes, practices, and systems in support of the CLAR program.

Background

Through the CLAR program, the Federal Reserve System conducts a horizontal supervisory assessment of liquidity risk and risk management practices across Large Institution Supervision Coordinating Committee firms. The horizontal component of the CLAR program is divided into three pillars covering the various topics necessary for assessing each firm's liquidity position and liquidity risk management practices. Each pillar executes a distinct component of the CLAR program. The results from each pillar contribute to an assessment that includes each firm's final liquidity rating and overall liquidity assessment.



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Recommendations, 2018-SR-B-013, September 5, 2018

Knowledge Management for the Board’s Comprehensive Liquidity Analysis and Review Is Generally Effective and Can Be Further Enhanced

Finding 1: CLAR Program Knowledge Management Practices Generally Align With Leading Practices Outlined in Academic Literature

Number	Recommendation	Responsible office
	No recommendations.	

Finding 2: Process Enhancements Can Further Strengthen the CLAR Program’s Knowledge Management Practices

Number	Recommendation	Responsible office
1	Continue to formalize the office hours practice, including expanding communication efforts to increase awareness of the practice throughout the CLAR program.	Division of Supervision and Regulation
2	Ensure that the CLAR program implements onboarding policies and procedures, including guidance specific to horizontal pillar staff, Liquidity Risk Specialists, and members of the CLAR SC.	Division of Supervision and Regulation
3	Improve CLAR SC meeting minutes by developing a standard approach to minutes that includes, at a minimum, a. the topics discussed and conclusions reached on any decision points. b. the time, date, and location of the meeting.	Division of Supervision and Regulation



Office of Inspector General

Board of Governors of the Federal Reserve System
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MEMORANDUM

DATE: September 5, 2018

TO: Michael S. Gibson
Director, Division of Supervision and Regulation
Board of Governors of the Federal Reserve System

FROM: Melissa Heist 
Associate Inspector General for Audits and Evaluations

SUBJECT: OIG Report 2018-SR-B-013: *Knowledge Management for the Board's Comprehensive Liquidity Analysis and Review Is Generally Effective and Can Be Further Enhanced*

We have completed our report on the subject evaluation. We conducted this evaluation to assess the effectiveness of knowledge management processes, practices, and systems related to the Comprehensive Liquidity Analysis and Review (CLAR) program.

Our report notes that the CLAR program is generally effective at preserving and maintaining institutional knowledge, and our report contains recommendations to further strengthen the program's knowledge management practices. We provided you with a draft of our report for review and comment. In your response, you concur with our recommendations and outline actions that have been or will be taken to address our recommendations. We have included your response as appendix B to our report.

We appreciate the cooperation that we received from CLAR program employees. Please contact me if you would like to discuss this report or any related issues.

cc: Jennifer Burns, Deputy Director, Division of Supervision and Regulation
Molly Mahar, Associate Director, Division of Supervision and Regulation
Steven Spurry, Assistant Director, Division of Supervision and Regulation
Jennifer Hynes, Assistant Vice President, Federal Reserve Bank of Boston
Adam Ashcraft, Senior Vice President, Funding and Liquidity Risk, Federal Reserve Bank of New York
Brian Hefferle, Vice President, Funding and Liquidity Risk, Federal Reserve Bank of New York
Christy Cleare, Vice President, Federal Reserve Bank of Richmond
Jon Read, Senior Manager, Federal Reserve Bank of Richmond
Ricardo A. Aguilera, Chief Financial Officer and Director, Division of Financial Management
Tina White, Senior Manager, Compliance and Internal Control, Division of Financial Management



Contents

Introduction	6
Objective	6
Background	6
CLAR Program Governance	7
CLAR Program	9
Finding 1: CLAR Program Knowledge Management Practices Generally Align With Leading Practices Outlined in Academic Literature	12
Program Culture Encourages Collaboration	12
Policies Enable Knowledge Management Through the Documentation of Work Processes	13
Open Floor Plans Encourage Knowledge Sharing	13
Collaboration Across Pillars and Examination Teams Supports Knowledge Sharing	14
Information-Sharing Application Effectively Facilitates Knowledge Management	14
Technology Enables Collaboration Across Different Geographic Locations	15
Knowledge Related to Supervisory Findings and Emerging Risks Is Effectively Preserved	16
Finding 2: Process Enhancements Can Further Strengthen the CLAR Program’s Knowledge Management Practices	17
Increasing Awareness of the CLAR Program’s Office Hours Practice Would Address Employee Concerns	17
Written Onboarding Procedures Would Improve the Transfer of CLAR Information	18
Consistency of CLAR SC Meeting Minutes Documentation Can Be Improved	19
Management Actions Taken	20
Recommendations	20
Management’s Response	20
OIG Comment	21
Appendix A: Scope and Methodology	22
Appendix B: Management’s Response	24
Abbreviations	26



Introduction

Objective

The Comprehensive Liquidity Analysis and Review (CLAR; pronounced *SEE-lar*) program is an annual horizontal supervisory program¹ for Large Institution Supervision Coordinating Committee (LISCC)² firms subject to Federal Reserve System oversight. The CLAR program, established in 2012, is a key component of the System’s assessment of liquidity risk for evaluating each LISCC firm’s liquidity position and liquidity risk management practices.

In a 2014 evaluation, we identified opportunities to improve the Board of Governors of the Federal Reserve System’s (Board) knowledge management practices related to supervising a specific systemically important firm. The Board has addressed all the recommendations in that report.³

Our objective for this evaluation was to further assess the effectiveness of the Board’s and the Federal Reserve Banks’ knowledge management processes, practices, and tools supporting a key financial institution supervision program, specifically, CLAR. We use the term *knowledge management* to refer to transferring and preserving institutional knowledge between both (1) the supervisory teams dedicated to a particular LISCC firm and the horizontal teams involved in executing the CLAR program and (2) from one supervisory cycle to the next.⁴ We focused on documented and undocumented knowledge.

To accomplish our objective, we interviewed 42 System employees who participate in the CLAR program, reviewed academic studies as well as *Harvard Business Review* (HBR) articles to identify leading knowledge management practices, and reviewed relevant policies and procedures. For additional information about our scope and methodology, see appendix A.

Background

As outlined in Supervision and Regulation Letter (SR Letter) 12-17, *Consolidated Supervision Framework for Large Financial Institutions*, the financial crisis demonstrated the need for stronger regulatory and supervisory assessments of firms’ financial resiliency. The Board noted weaknesses in the adequacy of

¹ A *horizontal examination* is a review of a specific activity, business line, or risk management practice across a group of institutions. Horizontal examinations are conducted to understand the range of industry practices for a specific activity, product, risk management practice, or control; to ensure the consistent application of established supervisory expectations; and to confirm the consistent assignment of ratings.

² The LISCC portfolio includes the largest, most complex U.S. and foreign financial organizations subject to consolidated supervision by the System.

³ Office of Inspector General, *The Board Should Enhance Its Supervisory Processes as a Result of Lessons Learned From the Federal Reserve’s Supervision of JPMorgan Chase & Company’s Chief Investment Office*, [OIG Report 2014-SR-B-017](#), October 17, 2014.

⁴ As part of the supervisory oversight program for LISCC firms, dedicated supervisory teams are responsible for maintaining real-time views of the safety and soundness of each LISCC firm. These teams are primarily responsible for overseeing the execution of the firm-specific components of the LISCC Operating Committee–approved programs and for collaborating on horizontal work like the CLAR program. The dedicated supervisory teams communicate supervisory messages and priorities to the LISCC firms.

supervised institutions' point-in-time regulatory capital to cover accumulated and prospective risks, as well as in firms' liquidity buffers and risk management practices.

SR Letter 12-17 establishes the fundamental expectations that underpin the supervisory program for large financial institutions. This guidance describes the supervisory approach for the largest, most complex U.S. and foreign financial organizations subject to consolidated supervision by the Board. The LISCC framework seeks to strengthen traditional microprudential supervision of individual firms and enhance the safety and soundness of those firms. It also incorporates macroprudential considerations to reduce broader potential threats to the stability of the financial system through annual programs like CLAR and the Comprehensive Capital Analysis and Review and to provide insights into financial market trends. The consolidated supervision framework for large financial institutions has two primary objectives: (1) to enhance the resiliency of a firm to lower the probability of its failure or an inability to serve as a financial intermediary and (2) to reduce the effect on the financial system and the broader economy of a firm's failure or material weakness.⁵

CLAR Program Governance

The CLAR program operates on authority delegated from LISCC. Specifically, the Board's Director of the Division of Supervision and Regulation delegated oversight responsibility for the LISCC supervisory program to the LISCC Operating Committee (OC). In turn, the LISCC OC delegated responsibility for executing the liquidity program, a component of the LISCC supervisory program that includes horizontal and firm-specific liquidity events, to the CLAR Steering Committee (SC). The CLAR cochairs lead the CLAR SC and manage the strategic direction of the CLAR program (figure 1).

⁵ SR Letter 12-17, *Consolidated Supervision Framework for Large Financial Institutions*.

Figure 1. LISCC Oversight of the CLAR Program



Source. Generated by OIG based on the *LISCC Program Manual* and the *CLAR Program Manual*.

The CLAR SC, comprising members from across the System, collaborates with the LISCC OC and its Vetting Committee to vet each LISCC firm’s annual liquidity component rating and the results from the annual CLAR work.⁶ While the CLAR SC is responsible for the strategic direction of the CLAR program, the CLAR Subcommittee reports to the CLAR SC and oversees the tactical decisions necessary to execute this supervisory program. The CLAR Subcommittee meets at least monthly to oversee the day-to-day execution of liquidity risk supervision across the LISCC portfolio. One of the CLAR Subcommittee’s key responsibilities is to receive status updates on outstanding formal supervisory findings, such as Matters Requiring Attention (MRAs) and Matters Requiring Immediate Attention (MRIAs).

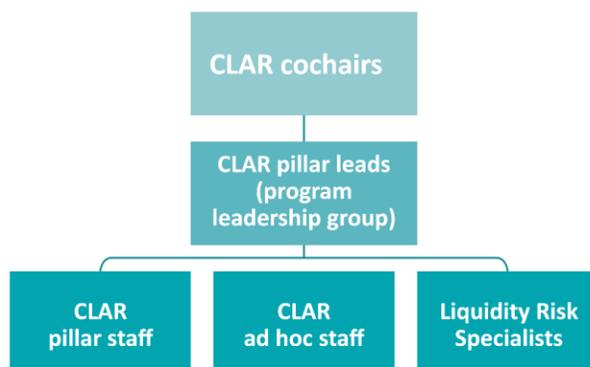
Also reporting to the CLAR SC, the CLAR Letter Oversight Group oversees the production and review of the CLAR feedback letters to firms (discussed below). Some of the group’s key responsibilities include (1) ensuring that conclusions reached during vetting sessions with the CLAR SC have been appropriately reflected in CLAR feedback letters, (2) reviewing and adjusting thematic and firm-specific supervisory findings in CLAR feedback letters, and (3) coordinating with stakeholders to receive and incorporate any feedback before final letter issuance.

⁶ The LISCC OC’s Vetting Committee is a forum to discuss the results of key components of the supervisory program and to provide feedback and guidance to the dedicated supervisory or LISCC horizontal teams. The Vetting Committee seeks to promote quality and consistency in supervisory approaches, key examination work and related communications, risk and risk management assessments, and supervisory actions and messages sent to individual firms.

CLAR Program

Through the CLAR program, the System conducts a horizontal supervisory assessment of liquidity risk and risk management practices across LISCC firms. CLAR program leadership—the cochairs and the three pillar leads—oversee pillar staff, ad hoc staff, and the Liquidity Risk Specialists (figure 2).

Figure 2. CLAR Program Leadership and Staff



Source. Generated by OIG based on the *LISCC Program Manual* and the *CLAR Program Manual*.

Although the CLAR program is a primary component of the Board’s assessment of liquidity risk, it is supplemented by firm-specific supervisory events conducted by LISCC-dedicated supervisory teams and Liquidity Risk Specialists.⁷ CLAR program employees seek to minimize the duplication of efforts, ensure consistent messaging, and effectively allocate staffing resources to key efforts by coordinating all liquidity-related supervisory events across each of the LISCC firms.

Three Pillars

The horizontal component of the CLAR program is divided into three pillars covering the various topics necessary for assessing each LISCC firm’s liquidity risk and liquidity risk management practices. Pillar I conducts assessments of the banks’ internal liquidity stress testing, Pillar II analyzes liquidity position, and Pillar III assesses liquidity risk management. The results from the pillars contribute to each firm’s liquidity position assessment and the liquidity risk management assessment, which in turn results in a firm’s final liquidity rating.

⁷ SR Letter 10-6, *Interagency Policy Statement on Funding and Liquidity Risk Management*, defines *liquidity* as a financial institution’s capacity to meet its cash and collateral obligations at a reasonable cost. The letter further defines *liquidity risk* as the risk that an institution’s financial condition or overall safety and soundness is adversely affected by an inability (or a perceived inability) to meet its obligations.

Pillar I

Pillar I work is generally conducted by full-time employees who are primarily located at the Board. This pillar evaluates a firm's internal liquidity risk measurement capabilities by conducting a comprehensive supervisory assessment of a firm's liquidity risk measurement practices. This assessment includes an evaluation of the internal stress testing frameworks used to evaluate its liquidity position under that firm's assumptions. This pillar, in conjunction with Pillar III, is also responsible for coordinating the completion of any liquidity risk reviews necessary for the Supervisory Assessment of Resolution and Recovery Preparedness.

Pillar II

Pillar II work is conducted by Federal Reserve Bank of New York employees. This pillar performs an independent liquidity risk analysis for each firm and measures the liquidity position of a firm using the Federal Reserve's internal metrics and publicly available models and data. This pillar assesses whether a firm has sufficient liquid assets to match its outflows and an adequate funding structure to decrease the likelihood that disruptions to its regular funding sources will affect that firm's liquidity position.

Pillar III

During our review period, Pillar III work was conducted by employees from various Reserve Banks.⁸ Pillar leadership selected these employees for their experience and subject-matter expertise. Pillar III evaluates a firm's liquidity risk management using methods other than internal stress testing. This component of the program informs the overall assessment of each firm's risk management practices. This pillar, in conjunction with Pillar I, is also responsible for coordinating the completion of any liquidity risk reviews necessary for the Supervisory Assessment of Resolution and Recovery Preparedness.

Horizontal Teams

The horizontal teams involved in conducting the CLAR program are responsible for reviewing a specific activity, business line, or risk management practice across a group of LISCC institutions. These teams conduct examinations that seek to determine the range of industry practices for a specific activity, product, risk management practice, or control. These horizontal supervisory exercises help to foster consistent application of established supervisory expectations and provide a consistent basis for assigning ratings.

Liquidity Risk Specialists

Firm-specific Liquidity Risk Specialists participate on dedicated supervisory teams to conduct the supervisory reviews that ultimately lead to a comprehensive assessment of a firm's liquidity position and risk management practices.⁹ These specialists act as the primary point of contact for the CLAR program horizontal team and provide firm-specific background and analytical information. They communicate

⁸ The staffing approach for Pillar III was in flux during our review period.

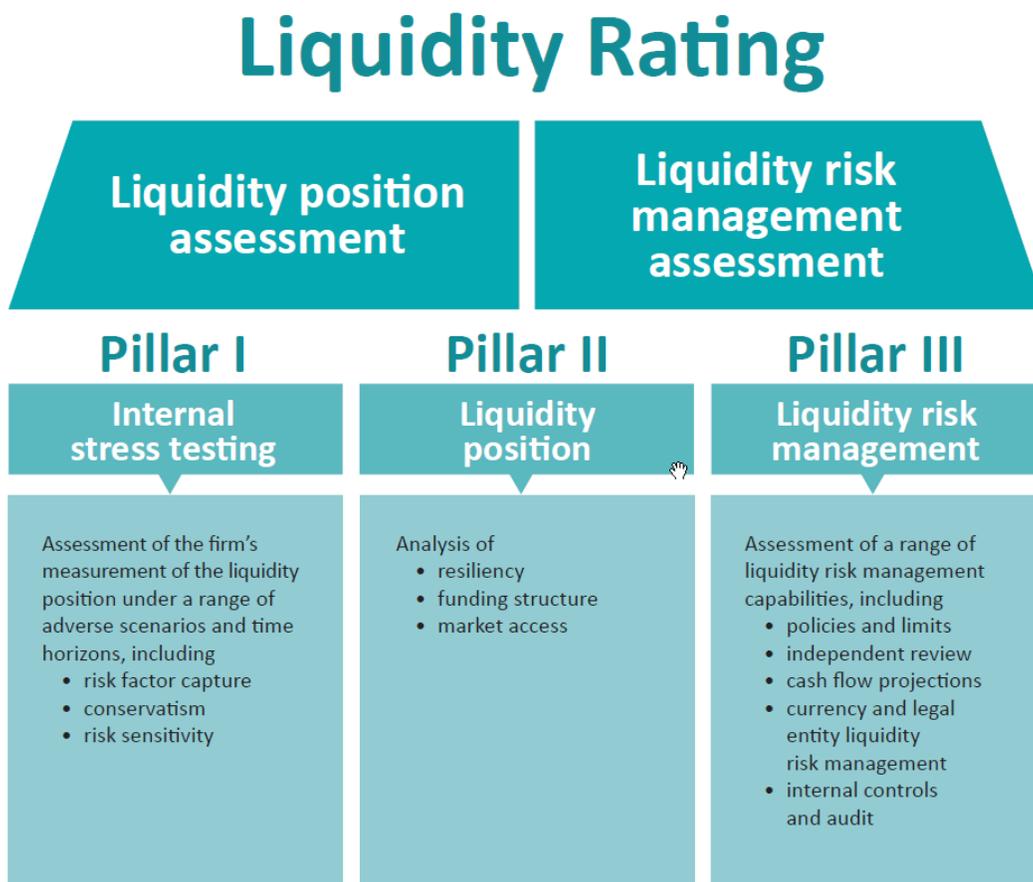
⁹ The dedicated supervisory teams are assigned to each LISCC firm. These teams seek to maintain a coherent, real-time view of the safety and soundness of the assigned LISCC firm. These teams are primarily responsible for overseeing the execution of the firm-specific components of the LISCC OC-approved supervisory events and programs and for collaborating on horizontal work like the CLAR program. The dedicated supervisory teams generally have responsibility for communicating supervisory messages and priorities to the LISCC firms.

CLAR results and the liquidity component rating to a supervised institution. The Liquidity Risk Specialists also report to pillar leadership during CLAR-related monitoring work. For dedicated supervisory team activities unrelated to CLAR, they report within the organizational structure established by their respective Reserve Bank.

CLAR Feedback Letters

Firms subject to the CLAR program receive two formal CLAR feedback letters each year: the midyear letter and the final letter. Both letters include a liquidity component rating and consolidate feedback from CLAR horizontal examinations and the supervisory evaluation of the adequacy of a firm’s liquidity position and its liquidity risk management practices. The letters contain the key liquidity-related supervisory messages that need to be shared with a firm’s board of directors and senior management. Figure 3 depicts the various components of the liquidity rating and the roles of the different pillars to determine the rating.

Figure 3. Liquidity Rating Components



Source. Generated by OIG based on the LISCC Program Manual and the CLAR Program Manual.



Finding 1: CLAR Program Knowledge Management Practices Generally Align With Leading Practices Outlined in Academic Literature

The CLAR program’s knowledge management practices generally align with many of the practices in the academic literature we reviewed. We reviewed a number of frequently cited academic studies in addition to HBR articles that describe leading practices related to the preservation and transfer of institutional knowledge. These articles feature certain key themes of knowledge management, which emphasize the importance of organizational culture, process documentation, collaboration, and technology. For example, CLAR program leadership has fostered a culture that prioritizes knowledge management.¹⁰ That culture is evidenced by documenting key work processes; using open floor plans for CLAR program employees in Pillars I and II; and practicing regular, team-based collaboration. In addition, the CLAR program uses an information-sharing application to capture, store, and share institutional knowledge. As a result, the CLAR program has preserved and maintained institutional knowledge related to supervisory findings and fostered effective collaboration across the three pillars, the dedicated teams, and the horizontal teams.

Program Culture Encourages Collaboration

Interviewees noted that CLAR program leadership has helped to create a culture that encourages employees to practice effective knowledge management behaviors. For example, interviewees from both the horizontal and dedicated supervisory teams noted that leadership emphasizes the importance of the timely upload of supervisory documentation to the CLAR program’s information-sharing application. In addition, interviewees across the program indicated that CLAR program leadership encourages open communication and team-based collaboration across the pillars and between the dedicated supervisory teams and the horizontal review teams.

One of the studies in our literature review highlights the importance of an organization’s leadership in effective knowledge management. This study notes that leadership can be a key influence on knowledge sharing in an organization and recommends that leaders show a willingness to share knowledge freely.¹¹ We believe that CLAR program leadership’s focus on knowledge management encourages a culture that provides CLAR program employees with access to the critical institutional knowledge required for future liquidity assessment decisions.

¹⁰ We consider CLAR leadership to include the CLAR program cochair and the three pillar leads.

¹¹ M. Birasnav, Alok Goel, and Renu Rastogi, “Leadership Behaviors, Organizational Culture, and Knowledge Management Practices: An Empirical Investigation,” *Amity Global Business Review* 7, 2012, 7–13.

Policies Enable Knowledge Management Through the Documentation of Work Processes

CLAR leadership has developed extensive policies to document the steps necessary to execute the CLAR program. In a prior report, we noted that turnover of examination employees can present various risks, including the loss of institutional knowledge.¹² However, the CLAR program's documentation mitigates the risks that turnover will result in a loss of institutional knowledge.

This practice aligns with a key theme from an article we reviewed, which notes that documenting work processes helps to increase collaboration and preserve knowledge.¹³ The *CLAR Program Manual* documents the program's core work processes. It provides an overview of the program, details on liquidity component rating assessment standards, and procedures associated with program execution. In addition, the manual includes documentation standards and annual supervisory planning guidance, among other topics.

The Division of Supervision and Regulation is finalizing the *LISCC Program Manual*, which provides an overview of the LISCC program and includes information about conducting the liquidity program, including the CLAR program. The *LISCC Program Manual* sets forth the roles and responsibilities of the committees that compose the LISCC program's governance structure.

We believe that the CLAR and LISCC program manuals effectively document the core components of the CLAR program and thus help to preserve and transfer certain program-level institutional knowledge for current and new CLAR employees.

Open Floor Plans Encourage Knowledge Sharing

During our evaluation, we learned about CLAR leadership's focus on knowledge sharing in designing its physical workspace for CLAR Pillar II employees at the Federal Reserve Bank of New York. In a previous report, we discussed some of the potential benefits of open floor plans, such as increased employee collaboration.¹⁴ We had the opportunity to tour the workspace of the Pillar II team at the Federal Reserve Bank of New York. During the tour, we learned that the Federal Reserve Bank of New York continues to renovate and remodel its office space, using open-floor-plan concepts. When we toured two of the newly renovated floors, we noted that the open floor plans had low-walled, cubicle-style workspaces, which are more conducive to information sharing. In contrast, floors that had not been renovated contained higher internal walls and multiple private offices. Our observations during a tour of the similar open-floor-plan office space for the CLAR Pillar I team in Washington, DC, support our view that open floor plans encourage greater collaboration among CLAR team members.

¹² Office of Inspector General, *The Board Should Enhance Its Supervisory Processes as a Result of Lessons Learned From the Federal Reserve's Supervision of JPMorgan Chase & Company's Chief Investment Office*, [OIG Report 2014-SR-B-017](#), October 17, 2014.

¹³ John W. Strachan, "Preserving Team Knowledge Is a Must," *TD: Talent Development* 72, no. 2, February 2018, 20–22.

¹⁴ Office of Inspector General, *Opportunities Exist to Increase Employees' Willingness to Share Their Views About Large Financial Institution Supervision Activities*, [OIG Report 2016-SR-B-014](#), November 14, 2016.

Employees we interviewed for this evaluation noted that the open floor plan’s glass walls and conference rooms, as well as senior management’s presence on the floor with employees rather than in walled offices, help employees feel more comfortable approaching senior management with concerns or questions. In addition, an interviewee shared that there is increased communication and team cohesiveness among the CLAR Pillar I and II teams as a result of the open floor plans.

Collaboration Across Pillars and Examination Teams Supports Knowledge Sharing

CLAR leadership, pillar staff, and the dedicated supervisory and horizontal teams collaborate across the program as necessary. According to interviewees, collaboration among the pillar leads occurs regularly through scheduled and ad hoc meetings. For example, during Liquidity Risk Forum meetings, Liquidity Risk Specialists identify the emerging risks they are observing at their institutions. In addition, CLAR horizontal examination teams meet with the Liquidity Risk Specialists in certain circumstances to come to agreement on the facts prior to the vetting sessions for the CLAR assessment letters.

Such meetings and other previously mentioned coordination efforts help to mitigate any risks of information loss between the dedicated supervisory teams and the horizontal teams within a given supervisory cycle. An HBR article we reviewed supports this concept: “Rather than one person shouldering the burden of absorbing knowledge by passively observing others, people can more effectively learn through collaborative, two-way interactions with others.”¹⁵

Finally, we learned about Pillar I’s whiteboarding sessions, which are meetings held to conduct training on the areas being reviewed. A CLAR official stated that these whiteboarding sessions provide an opportunity to train employees and for employees to ask questions.

In conclusion, CLAR leadership’s focus on knowledge management has helped to ensure that the CLAR program has adequately preserved and maintained past and current institutional knowledge. In addition, the program’s culture of collaboration supports broad coordination across the pillars and the horizontal and dedicated supervisory teams and helps to ensure that institutional knowledge is shared throughout the program.

Information-Sharing Application Effectively Facilitates Knowledge Management

As noted previously, the CLAR program uses an information-sharing application for storing and managing documents that serves as the program’s primary tool for formal knowledge management. CLAR employees create a new program site in the information-sharing application for each supervisory cycle. Each site stores information including, but not limited to, pillar-specific documentation, all written CLAR-related correspondence with firms, CLAR governance meeting documentation, and CLAR feedback letters.

¹⁵ Christopher G. Myers, “Is Your Company Encouraging Employees to Share What They Know?” *Harvard Business Review Digital Articles*, 2015, 2–5.

CLAR SC members, examination employees assigned to horizontal CLAR reviews, and Liquidity Risk Specialists from the dedicated supervisory teams have access to this information-sharing application. Typically, the Liquidity Risk Specialists from the dedicated supervisory teams upload firm-specific documentation, making this information available to employees from the three CLAR pillars. This practice aligns with a key theme in an HBR article we reviewed that suggests organizations should use technology to create a process to continually capture and store institutional knowledge.¹⁶

The CLAR Project Manager maintains access rights and ensures that access is granted only to individuals with a need to know information about the CLAR program. The CLAR Project Manager vets ad hoc requests for access to the information-sharing application and contacts the pillar leads or other CLAR leadership to determine whether the individual has a need to access the information. After the individual completes work during a CLAR program cycle, their access is revoked and must be reinstated as part of the next cycle.

We also found, based on our interviews, that CLAR leadership has created an expectation for employees to upload relevant documentation to the application in a timely manner. These management expectations may help the CLAR program to preserve its institutional knowledge and to mitigate the risk of loss of institutional knowledge across supervision cycles.

We believe that the CLAR program's use of a central tool as a document repository and management's reliance on the application for knowledge sharing enables the CLAR program to effectively capture and store programwide institutional knowledge. In addition, the CLAR Project Manager's active management of system access helps to ensure that system access is appropriately limited while providing dedicated supervisory teams and horizontal teams with access to all the supervisory information they need to be effective in their roles in the CLAR program.

Technology Enables Collaboration Across Different Geographic Locations

CLAR leadership has effectively encouraged the use of information-sharing technologies to help facilitate collaboration between CLAR program and dedicated supervisory team employees in multiple geographic locations.¹⁷ Reliance on the information-sharing application and video conferencing mitigates the communication barriers between teams or across supervisory cycles that can result from geographic dispersion. Interviewees noted that although it is ideal to work in the same location as your teammates, the technologies used by the CLAR program effectively facilitate collaboration between examiners working in different cities.

¹⁶ Ron Ashkenas, "How to Preserve Institutional Knowledge," *Harvard Business Review*, March 2013.

¹⁷ Supervision of financial institutions is a function the Board delegates to the Reserve Banks. Four of the 12 Reserve Banks—Boston, New York, Richmond, and San Francisco—are responsible for supervising at least one LISCC firm. As a result, horizontal supervisory programs such as CLAR are subject to logistical issues caused by this geographic dispersion.

Knowledge Related to Supervisory Findings and Emerging Risks Is Effectively Preserved

During our review, we analyzed a sample of corrective actions (MRAs and MRIAs) for supervised institutions resulting from CLAR exercises in a prior supervisory cycle to determine whether we could track the status of these corrective actions from one supervisory cycle to the next during the 2014–2016 supervisory cycles.¹⁸ Based on our analysis of the CLAR feedback letters and individual examination reports, we found that CLAR employees had preserved sufficient supervisory documentation to support the closure of the 32 corrective actions noted as *closed* during the 2014–2016 CLAR cycles. For the 15 corrective actions noted as *open*, CLAR employees accurately conveyed the status of those corrective actions in the respective CLAR assessment letters. We believe that these results can be attributed to CLAR leadership’s focus on the preservation of knowledge as a management priority.

Additionally, interviewees demonstrated a broad understanding of how emerging risks that do not yet rise to the level of an MRA should be addressed within the CLAR program. We learned that members of the dedicated supervisory teams are responsible for preserving, tracking, and monitoring knowledge related to emerging risks and escalating concerns as they arise. In addition, the CLAR program is currently using a firm-specific quarterly monitoring template to summarize supervisory activities completed in the prior quarter. This form provides detailed accounts of the emerging risks observed at each of the LISCC firms over the monitoring period.

Memorializing emerging risks on the quarterly monitoring template helps to preserve these risks and share these potential areas of focus with future examination teams. The results of our analysis and the use of this form show that the CLAR program is effectively preserving institutional knowledge related to supervisory findings and emerging risks.

¹⁸ See appendix A for a description of our sampling methodology.



Finding 2: Process Enhancements Can Further Strengthen the CLAR Program’s Knowledge Management Practices

Although the CLAR program has generally effective knowledge management practices, certain processes can further strengthen the overall effectiveness of knowledge-sharing activities. Specifically, opportunities include improving the communication of office hours held for employees to increase transparency into the CLAR letter-writing process, formalizing employee onboarding procedures, and enhancing CLAR SC meeting minutes. As stated in a frequently cited academic study,¹⁹ an HBR article,²⁰ and a report from another Office of Inspector General focused on knowledge management practices,²¹ documenting and formalizing processes improves information sharing and knowledge retention. These enhancements will help ensure that the CLAR program improves its preservation and sharing of institutional knowledge.

Increasing Awareness of the CLAR Program’s Office Hours Practice Would Address Employee Concerns

During our evaluation, we learned that the CLAR program offers employees the option to attend office hours with the CLAR Letter Oversight Group. Office hours provide employees participating in CLAR and the dedicated supervisory team members an opportunity to share feedback and ask questions about the letter-writing process. Currently, CLAR leadership communicates office hours to CLAR employees before the letter-writing process begins. The practice enables any CLAR participant to set up an appointment to discuss relevant questions with a member of the Letter Oversight Group or CLAR leadership. When issues may have broader implications beyond a specific firm, CLAR leadership updates supervisory documents as appropriate.

Although the office hours are available, it appears that the practice had not been widely publicized before our interviews. Three interviewees expressed specific concerns about the transparency of the CLAR letter-writing process. These employees noted that it would be beneficial to receive greater clarity as to how decisions are made during vetting meetings and the rationale for the messages dedicated supervisory teams are communicating back to firms, but they did not mention office hours as a possible

¹⁹ D.J. Hall, D.B. Paradise, and J.F. Courtney, “Creating Feedback Loops to Support Organizational Learning and Knowledge Management in Inquiring Organizations,” Proceedings of the 34th Annual Hawaii International Conference on System Sciences, January 2001.

²⁰ Paul Axtell, “Two Things to Do After Every Meeting,” *Harvard Business Review*, November 26, 2015.

²¹ United States Postal Service Office of Inspector General, *Postal Service Knowledge Management Process*, report number DP-AR-14-002, March 7, 2014.

forum for addressing such concerns.²² This lack of awareness among employees may be attributed to limited prior communications from the CLAR SC about office hours.

As noted in a report from another Office of Inspector General focused on knowledge management practices,²³ communication channels enable and enhance knowledge management activities. The report also indicates that organizations can implement tools and processes to improve knowledge retention, such as designing effective feedback loops. Further, a frequently cited academic study that examines how feedback loops support organizational learning and knowledge management notes that feedback loops function continuously within an organization, providing it with information as employees identify needs or results from prior decisionmaking activity.²⁴ The study indicates that the lack of feedback loops makes it difficult for an organization to gauge whether a course of action on which it embarks will lead to the desired outcome. Therefore, we believe that the office hours practice serves as a potential communication channel that could be an effective feedback loop for the letter-writing process.

Written Onboarding Procedures Would Improve the Transfer of CLAR Information

We learned from several interviewees that the CLAR program's onboarding process was informal. One interviewee stated that their pillar's onboarding experience was esoteric at times and that they had about 6 weeks to review hundreds of pages of relevant information about a firm's issues after joining the program. The individual indicated that it took about a year and a full CLAR cycle to gain a general understanding of the CLAR program and to feel comfortable in their role. Similarly, a former CLAR SC member indicated that although the *CLAR Program Manual* was helpful for onboarding, it is a dense document to review.

A formal onboarding program may help new CLAR employees navigate and prioritize relevant program information. The former CLAR SC member also noted that onboarding for new SC members or employees in the CLAR program would be useful, particularly for the SC members from nonsupervisory divisions. The individual indicated that a standard onboarding module would be beneficial to address basic supervisory terminology questions.

The CLAR program conducts annual self-assessment exercises following the completion of CLAR cycles. The report assessing the 2016 CLAR cycle noted that infrastructure improvements would be a priority to ensure that program employees are consistently onboarded. The report indicated that developing role-based training is a future initiative planned for horizontal pillar staff, Liquidity Risk Specialists, and members of the CLAR SC as the program transitions to the liquidity program.

However, the CLAR program currently relies on the Reserve Banks for employee onboarding and has not developed any written onboarding policies or procedures. An onboarding program for employees into the

²² We became aware of the office hours process after conducting these three interviews.

²³ United States Postal Service Office of Inspector General, *Postal Service Knowledge Management Process*, report number DP-AR-14-002, March 7, 2014.

²⁴ Hall, Paradise, and Courtney, "Creating Feedback Loops."

CLAR program that is not comprehensive may extend their learning curve. In addition, new employees may not obtain all the requisite background information required to successfully perform their role.

Therefore, we believe that the CLAR program should develop an onboarding program that includes a mix of standard elements and some elements customized to an individual's role and experience. For example, the standard elements could include information specific to the supervision process and cover commonly used, CLAR-specific terminology. Further, the customized elements could include pillar- or firm-specific information.

Consistency of CLAR SC Meeting Minutes Documentation Can Be Improved

We found that the documentation of CLAR SC meeting minutes was inconsistent across supervisory cycles. The intended purpose of meeting minutes is to memorialize the topics discussed and decisions made during SC meetings. However, the CLAR program did not record SC meeting minutes during a year of our scope period, the 2014 CLAR cycle.²⁵ For the 2015 and 2016 CLAR cycles, the CLAR program documented meeting minutes, but the minutes did not always contain the same range of information in a similar format. For example, 10 sets of meeting minutes contained an informal, transcript-style reflection of the discussion that occurred, while most of the remaining 24 sets resembled a meeting agenda, with high-level, bullet-point summaries of discussed topics. Also, meeting minutes sometimes lacked contextual information, such as the date; the time; the location; or, in one instance, the name of the institution being discussed. Additionally, the minutes did not always reflect conclusions or decisions made by the committee.

We reviewed an HBR article that presented a key theme of the benefits of documenting meetings. The article notes that if a conversation is not captured in a form that can be easily retrieved later, the substance of the discussion and the rationale for conclusions can be lost. Meeting minutes also help to inform those who were not in attendance about the results of the discussion. Capturing the key points and specific commitments for each topic allows nonattendees to have a sense of the events that occurred. The article also indicates that having notes that include each topic discussed, the key takeaways, and a list of specific actions that will be taken improves the preservation of knowledge subsequent to meetings.²⁶

We attribute the lack of consistency of the CLAR SC meeting minutes to a lack of formal guidance on how to document the meeting minutes. Inconsistent meeting minutes may result in the loss of institutional knowledge from these SC meetings, including the names of meeting participants and any decisions made. CLAR SC members who are not able to attend a meeting may miss out on the full context of the topics discussed and may not be in a position to fully assess the effect of firm-specific information that may be pertinent for future rating and liquidity assessment discussions. We believe that implementing formal

²⁵ A CLAR employee indicated that the CLAR SC did not document formal meeting minutes for the 2014 cycle because minutes were not required at the time. During the 2015 CLAR cycle, the documentation of these minutes was required.

²⁶ Axtell, "Two Things to Do After Every Meeting."

guidance for this process will help the CLAR SC improve the consistency and thoroughness of the meeting minutes to evidence the discussion and rationale behind decisions throughout the CLAR program.

Management Actions Taken

During the 2017 supervision cycle, the CLAR program team began to compile detailed summaries of the midyear and year-end vetting meetings.²⁷ These summary documents outline MRA and MRIA issuance and release decisions for supervised entities and provide information on key risks areas for future supervisory letters. A CLAR employee indicated that all CLAR program participants receive these summary documents to foster greater transparency into the rationale for rating decisions. In addition, starting in June 2018, all CLAR team members will be invited to SC meetings, where vetting discussions occur and rating decisions are made. We believe that these recent changes may help to address the previously noted concerns about the need to understand the rationale for certain rating decisions.

In addition, we learned that the documentation of CLAR SC meeting minutes became more consistent during the 2017 and 2018 supervisory cycles. In our review of all documented CLAR SC minutes from these two cycles, we noted that a standard approach to the meeting minutes appears to have been implemented.²⁸ Specifically, all meeting minutes are in the same format, which includes transcript-style notes of important discussion points, the date and time of the meeting, a list of attendees, and any conclusions or decisions reached. We believe this revised approach to CLAR SC meeting minutes resolves the issues we identified above. Therefore, recommendation 3 below is closed.

Recommendations

We recommend that the Director of the Division of Supervision and Regulation

1. Continue to formalize the office hours practice, including expanding communication efforts to increase awareness of the practice throughout the CLAR program.
2. Ensure that the CLAR program implements onboarding policies and procedures, including guidance specific to horizontal pillar staff, Liquidity Risk Specialists, and members of the CLAR SC.
3. Improve CLAR SC meeting minutes by developing a standard approach to minutes that includes, at a minimum,
 - a. the topics discussed and conclusions reached on any decision points.
 - b. the time, date, and location of the meeting.

Management's Response

In its response to our draft report, the Board concurs with each of the recommendations associated with this finding. In response to recommendation 1, the agency notes that the liquidity program management will expand communication efforts to encourage dedicated supervisory team staff to avail themselves of

²⁷ The 2017 and 2018 supervision cycles were outside of our evaluation's scope period.

²⁸ We reviewed documentation from 14 CLAR SC meeting minutes from the 2017 and 2018 supervisory cycles.

the office hour opportunities. Specifically, the CLAR cochairs will reinforce the notifications provided by the CLAR program Operations Lead. In addition, management has recently decided to invite all CLAR program employees, including dedicated supervisory team Liquidity Risk Specialists, to CLAR SC meetings as optional observers. To further promote transparency into the decisionmaking and letter-writing processes, management also invited all CLAR program employees as optional observers to the CLAR SC's summary session of the 2018 midpoint vetting.

In response to recommendation 2, the Board notes that the CLAR program Operations Lead is working with the Office of the Operating Committee's high-priority initiative workgroup to develop LISCC program onboarding and offboarding procedures. Program leadership will implement the Office of the Operating Committee's recommendations when they are finalized as well as develop liquidity program-specific procedures for onboarding new program participants. Procedures are expected to outline onboarding processes based on the entrant's role in the program. The procedures will include role-specific reading materials as well as recommend routine in-person meetings or conference calls with the individual's program manager or liquidity program leadership to further the onboarding process.

As noted above, recommendation 3 has been closed based on management actions taken. The Board notes that it will continue to adhere to the meeting documentation standards implemented in 2017.

OIG Comment

The actions described by the Board appear to be responsive to our recommendations. We will follow up to ensure that the recommendations are fully addressed.



Appendix A: Scope and Methodology

We focused our review on assessing the effectiveness of knowledge management processes, practices, and systems in the CLAR program. We reviewed the supervisory plans, midyear and final CLAR feedback letters, and examination reports related to the CLAR program for the three LISCC firms in our sample for the 2014, 2015, and 2016 CLAR supervisory cycles. We also tracked 47 MRAs and MRIAs issued during our scope period for these three firms.

We reviewed a sample of MRAs and MRIAs to determine whether we could track their status through the 2014–2016 CLAR supervisory cycles; we also reviewed academic literature and relevant documents, policies, and procedures. We also reviewed available CLAR program self-assessment documents from our scope period.

We obtained a list of LISCC firms subject to the CLAR program. We then selected a nonstatistical, nonrandom sample of three large domestic institutions, selecting only from the domestic firms because of their inclusion in nearly all CLAR examinations. For these firms, we obtained and reviewed the midyear and final CLAR feedback letters from the 2014–2016 supervisory cycles. We tracked 47 MRAs and MRIAs across the three institutions in our sample by using the CLAR feedback letters and reviewing individual examination reports. The CLAR program uses the Consolidated Supervision Comparative Analysis, Planning and Execution System (C-SCAPE) to document, track, and monitor MRAs, MRIAs, and other supervisory actions. We used C-SCAPE in certain instances to complete our tracking of the MRAs and MRIAs. We also reviewed CLAR supervisory plans and a number of CLAR SC presentations and CLAR SC monthly meeting minutes from our scope period.

We also reviewed relevant CLAR knowledge management policies and procedures, specifically, those related to onboarding and training. Additionally, we reviewed the CLAR information-sharing application and C-SCAPE to determine whether information was available for examination employees.

We reviewed knowledge management literature, including frequently cited academic studies, HBR articles, and a report from another Office of Inspector General:

- M. Birasnav, Alok Goel, and Renu Rastogi, “Leadership Behaviors, Organizational Culture, and Knowledge Management Practices: An Empirical Investigation,” *Amity Global Business Review* 7, 2012, 7–13.
- D.J. Hall, D.B. Paradise, and J.F. Courtney, “Creating Feedback Loops to Support Organizational Learning and Knowledge Management in Inquiring Organizations,” Proceedings of the 34th Annual Hawaii International Conference on System Sciences, January 2001.
- Christopher G. Myers, “Is Your Company Encouraging Employees to Share What They Know?” *Harvard Business Review* Digital Articles, 2015, 2–5.
- Ron Ashkenas, “How to Preserve Institutional Knowledge,” *Harvard Business Review*, March 2013.
- Paul Axtell, “Two Things to Do After Every Meeting,” *Harvard Business Review*, November 26, 2015.

- United States Postal Service Office of Inspector General, *Postal Service Knowledge Management Process*, report number DP-AR-14-002, March 7, 2014.
- John W. Strachan, “Preserving Team Knowledge Is a Must,” *TD: Talent Development* 72, no. 2, February 2018, 20–22.

Based on these sources, we sought to identify leading knowledge management practices and compare those practices to those of the CLAR program.

We interviewed a sample of Board and Reserve Bank examination employees, pillar staff, and CLAR SC members across the CLAR portfolio, including individuals from three Reserve Banks and the Board, to gain their perspectives on how knowledge is transferred and preserved within and across the CLAR program. We interviewed 14 Board employees and 28 Reserve Bank employees (21 from New York, 6 from Richmond, and 1 from Boston) responsible for supervising the institutions in our sample. Our sample also included one person in the process of offboarding and another who recently joined the CLAR program. In total, we interviewed 14 current and former CLAR SC members, 5 CLAR employees from Pillar I, 6 from Pillar II, 10 from Pillar III, and 7 other Board and Reserve Bank employees. Among our interviewees, we spoke with 11 ad hoc CLAR employees and 9 Liquidity Risk Specialists.²⁹ Two of our interviewees work in the Board’s Legal Division.

Lastly, we reviewed information in C-SCAPE and a number of financial regulator document repositories that contain confidential supervisory information. Our Office of Information Technology has reviewed those systems and their information security controls and is following up on the issues identified in the relevant audit reports.³⁰ Therefore, we did not assess whether the relevant systems adequately protected confidential information as part of this evaluation.

We conducted our fieldwork from August 2017 through May 2018. We performed our evaluation in accordance with the *Quality Standards for Inspection and Evaluation* issued in January 2012 by the Council of the Inspectors General on Integrity and Efficiency.

²⁹ The number of interviewees in this sentence does not equal the total number of interviewees in the prior sentence because some people had multiple roles related to CLAR during our scope period. For example, an interviewee was a Liquidity Risk Specialist but also served as an ad hoc CLAR employee in Pillar III.

³⁰ Office of Inspector General, *Security Control Review of the Board’s National Examination Database System*, [OIG Report 2013-IT-B-009](#), July 19, 2013; Office of Inspector General, *Security Control Review of the Board’s Consolidated Supervision Comparative Analysis, Planning and Execution System*, [OIG Report 2015-IT-B-015](#), September 2, 2015.

Appendix B: Management's Response



BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
WASHINGTON, DC 20551

August 13, 2018

Melissa Heist
Associate Inspector General
Board of Governors
of the Federal Reserve System
20th Street and Constitution Avenue, NW
Washington, DC 20551

Dear Melissa:

Thank you for the opportunity to comment on your draft report, *Knowledge Management for the Comprehensive Liquidity Analysis and Review is Generally Effective and Can Be Further Enhanced*. We appreciate the Office of Inspector General's (OIG) effort in developing this report and the recommendations for improving knowledge management in the LISSC Liquidity Program.

The draft report contains two findings and three recommendations. Regarding *Finding 1: CLAR Knowledge Management Practices Generally Align with Leading Practices Outlined in Academic Literature*, we appreciate the feedback and will continue to engage in and promote broad collaboration and information sharing across the Program.

Regarding *Finding 2: Process Enhancements Can Further Strengthen CLAR's Knowledge Management Practices*, we agree with the recommendations and have taken steps to address these issues.

- i. Recommendation 1: Increasing Awareness of CLAR's Office Hours Practice Would Address Employee Concerns

We agree with the OIG's observation that the letter writing office hours are an important process for allowing dedicated supervisory team ("DST") members to share feedback and ask questions regarding the letter writing process. In addition, OIG staff noted that Liquidity Program interviewees expressed specific concerns about the transparency of the letter writing process. Liquidity Program management will expand communication efforts to encourage DST staff to avail themselves of the office hour opportunities. Specifically, the Steering Committee's Co-Chairs will reinforce the notifications provided by the Program's Operations Lead. In addition, management has recently decided to invite all Program staff, including DST liquidity risk specialists, to Steering Committee meetings as optional observers. To further promote transparency into the decision making and letter writing processes, Program management also invited all Program staff members as optional observers (via conference line) to the

Steering Committee's summary session of the 2018 in-person "midpoint" vetting. This meeting occurred on 8/1/2018.

ii. Recommendation 2: Written Onboarding Procedures Would Improve the Transfer of CLAR Information

Liquidity Program leadership agrees with this recommendation. The program Operations Lead is working with the Office of the Operating Committee's (OOC) high-priority initiative (HPI) workgroup to develop LISCC program onboarding and off-boarding procedures. Program leadership will implement the OOC's HPI recommendations when they are finalized as well as develop Liquidity program-specific procedures for onboarding new program participants. Procedures are expected to outline onboarding processes based on the entrant's role within the program (i.e. Steering Committee member, pillar staff, and DST liquidity risk specialist). The procedures will include role-specific reading materials as well as recommend routine in-person or conference calls with the individual's program manager and/or liquidity program leadership.

iii. Recommendation 3: The Consistency of CLAR SC Meeting Minutes Documentation Can Be Improved

We appreciate the OIG factoring into its overall assessment the progress made in improving the consistency of CLAR Steering Committee minutes and the associated closure of this recommendation. We will continue to adhere to the meeting documentation standards implemented in 2017.

Regards,



Michael S. Gibson
Director
Division of Supervision and Regulation



Abbreviations

Board	Board of Governors of the Federal Reserve System
CLAR	Comprehensive Liquidity Analysis and Review
C-SCAPE	Consolidated Supervision Comparative Analysis, Planning and Execution System
HBR	<i>Harvard Business Review</i>
LISCC	Large Institution Supervision Coordinating Committee
MRA	Matters Requiring Attention
MRIA	Matters Requiring Immediate Attention
OC	Operating Committee
SC	Steering Committee
SR Letter	Supervision and Regulation Letter

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