



FEDERAL RESERVE SYSTEM

12 CFR Part 234

Regulation HH; Docket No. R-1477

RIN No. 7100-AE09

Financial Market Utilities

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Final rule.

SUMMARY: The Board of Governors of the Federal Reserve System (Board) is publishing a final rule revising the risk-management standards in its Regulation HH, Designated Financial Market Utilities. The Board is replacing the existing two sets of risk-management standards for payment systems and for central securities depositories and central counterparties with a common set of risk-management standards for all types of designated financial market utilities (FMUs) and making conforming changes to the definitions. The new common set of risk-management standards and the definitions are based on the *Principles for Financial Market Infrastructures* (PFMI), which were developed by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) and published in April 2012.

DATES: This final rule is effective December 31, 2014. Designated FMUs must be in compliance with the rule by the effective date, with the exception of establishing plans for recovery and orderly wind-down, set forth in § 234.3(a)(3)(iii); addressing uncovered credit losses, set forth in § 234.3(a)(4)(vi); addressing liquidity shortfalls, set forth in § 234.3(a)(7)(viii); maintaining sufficient liquid net assets funded by equity and a viable capital plan, set forth in § 234.3(a)(15)(i) and (ii); managing risks arising in tiered

participation arrangements, set forth in § 234.3(a)(19); and providing comprehensive public disclosure, set forth in § 234.3(a)(23)(iv), which have a compliance date of December 31, 2015.

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SUPPLEMENTARY INFORMATION:

I. Background

Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act or Act), titled the “Payment, Clearing, and Settlement Supervision Act of 2010,” was enacted to mitigate systemic risk in the financial system and to promote financial stability, in part, through an enhanced supervisory framework for FMUs that have been designated systemically important (designated FMUs) by the Financial Stability Oversight Council (Council).¹ Section 803(6) of the Act defines an FMU as a person that manages or operates a multilateral system for the purposes of transferring, clearing, or settling payments, securities, or other financial transactions among financial institutions or between financial institutions and the person. Pursuant to section 805(a)(1)(A) of the Act, the Board is required

¹ The Dodd-Frank Act, Pub. L. No. 111-203, 124 Stat. 1376, was signed into law on July 21, 2010.

to prescribe risk-management standards governing the operations related to the payment, clearing, and settlement activities of certain designated FMUs.²

In July 2012, the Board adopted Regulation HH, Designated Financial Market Utilities, to implement, among other things, the statutory provisions under section 805(a)(1)(A) of the Act.³ Regulation HH established two sets of risk-management standards for certain designated FMUs: one set of risk-management standards for designated FMUs that operate a payment system (§ 234.3(a)) and another set for designated FMUs that operate a central securities depository or a central counterparty (CCP) (§ 234.4(a)).⁴ The Regulation HH risk-management standards do not apply to designated FMUs for which the U.S. Commodity Futures Trading Commission (CFTC) or the U.S. Securities and Exchange Commission (SEC) is the Supervisory Agency under Title VIII of the Dodd-Frank Act.⁵

In adopting Regulation HH, the Board considered relevant international standards that were in effect at the time the rule was proposed in March 2011 as well as the Board's

² The risk-management standards promulgated by the Board under section 805(a)(1)(A) apply to designated FMUs for which the Board is the Supervisory Agency. The term "Supervisory Agency" is defined in Title VIII as the "Federal agency that has primary jurisdiction over a designated financial market utility under Federal banking, securities, or commodity futures laws" (12 U.S.C. 5462(8)). Currently, the Board is the Supervisory Agency for two FMUs that have been designated by the Council – The Clearing House Payments Company, L.L.C., on the basis of its role as operator of the Clearing House Interbank Payments System, and CLS Bank International. These standards also apply to any designated FMU for which another Federal banking agency is the appropriate Title VIII Supervisory Agency. At this time, there are no designated FMUs in this category.

³ 12 CFR part 234.

⁴ At the time of the rulemaking, the Board acknowledged that designated FMUs that operate as central securities depositories or CCPs generally would be subject to the risk-management standards promulgated by the U.S. Commodity Futures Trading Commission (CFTC) or U.S. Securities and Exchange Commission (SEC). The Board, however, adopted standards for designated FMUs that operate as central securities depositories, CCPs, or both, to address the event that a designated FMU operates as one of the two types of FMUs and is not required to register as a derivatives clearing organization or a clearing agency with the CFTC or SEC, respectively.

⁵ 12 CFR §234.1.

Federal Reserve Policy on Payment System Risk (PSR policy).⁶ In April 2012, CPSS and IOSCO published the PFMI, which updated, harmonized, strengthened, and replaced the previous international risk-management standards for payment systems that are systemically important, central securities depositories, securities settlement systems, and CCPs.⁷ The PFMI is now widely recognized as the most relevant set of international risk-management standards for payment, clearing, and settlement systems.

In January 2014, the Board published for comment a notice of proposed rulemaking (NPRM) to revise the risk-management standards in Regulation HH based on the PFMI.⁸ The revisions were proposed to replace the risk-management standards in §§ 234.3 and 234.4 with a common set of risk-management standards applicable to all types of designated FMUs in proposed § 234.3. The Board also made conforming changes to the definitions in proposed § 234.2. The public comment period for the proposed revisions closed on March 31, 2014.

II. Summary of public comments and analysis

The Board received four public comment letters that were responsive to the NPRM, all from entities that operate designated FMUs. The Board considered each of these

⁶ The relevant international standards were the 2001 CPSS report on the *Core Principles for Systemically Important Payment Systems*, the 2001 CPSS-IOSCO report on the *Recommendations for Securities Settlement Systems*, and the 2004 CPSS-IOSCO report on the *Recommendations for Central Counterparties*. The Board previously incorporated these international standards into its PSR policy.

⁷ The PFMI also establishes minimum requirements for trade repositories, which have emerged internationally as an important category of financial market infrastructure. The term “financial market utility,” as defined in Title VIII of the Act, excludes trade repositories.

⁸ Concurrent with the NPRM, the Board issued in a separate *Federal Register* notice proposed revisions to part I of the PSR policy based on the PFMI. These revisions incorporated the headline standards from the 24 principles with no modification as the relevant risk-management standards for all central securities depositories, securities settlement systems, CCPs, and trade repositories, as well as certain payment systems. (79 FR 2838, January 16, 2014.)

comments as well as subsequent staff analysis in developing its final rule as discussed below. Except as noted herein, the Board is adopting the rule text as proposed.⁹

A. Overall approach

The Board proposed to amend Regulation HH by replacing the existing risk-management standards with a set of standards based on the PFMI and making conforming changes to the definitions. Commenters were generally supportive of the Board's overall approach. One commenter, however, raised two general concerns with respect to the Board's overall approach. The commenter expressed concern that one uniform set of standards that applies to all designated FMUs and all designs of the same type of designated FMU does not sufficiently take into account material differences that can be found among the same types of system. The commenter also expressed concern that differences in language between the risk-management standards in Regulation HH and in part I of the PSR policy may result in two different sets of risk-management standards for FMUs.

With respect to differences among types of systems, the Board believes that a uniform set of standards for all types of designated FMU is appropriate because all designated FMUs potentially face and must manage many of the same types of risk. Although the design of systems may vary, the flexibility in the standards allows individual designated FMUs to implement, and supervisors to enforce, the standards appropriately based on the design of and risks that arise in a particular designated FMU. The Board also believes that a uniform set of standards promotes financial stability because it facilitates effective and consistent risk management across different types of FMUs and markets. Furthermore, the Board has noted

⁹ The Board is also making several technical edits, which are not specifically addressed in the discussion below.

in the rule when a particular requirement applies only to certain types of designated FMU because of its specific design or function (for example, only designated FMUs that operate a CCP are required to have a risk-based margin system to cover credit risk). For these reasons, the Board continues to believe the overall approach is appropriate.

With respect to the differences in the language between Regulation HH and part I of the PSR policy, the Board continues to believe that such differences are appropriate. Regulation HH is an enforceable rule applicable to designated FMUs other than those supervised by the CFTC or SEC, so additional details from the key considerations and explanatory notes of the PFMI were incorporated in the rule text to provide greater clarity on the Board's expectations. The PSR policy, on the other hand, is a policy statement that provides guidance with respect to the Board's exercise of its other supervisory or regulatory authority over other financial market infrastructures (including those operated by the Federal Reserve Banks) or their participants, its participation in cooperative oversight arrangements for financial market infrastructures, or the provision of intraday credit to eligible Federal Reserve account holders. Incorporating the headline standards from the PFMI is consistent with the purpose of the document and the Board's long-standing principles-based approach to its PSR policy. Further, the Board has stated that it will be guided by the key considerations and the explanatory text of the PFMI in its application of the PSR policy. The Board does not intend for differences in language in the two documents to lead to inconsistent policy results.

B. Proposed § 234.2 – Definitions

The Board proposed amendments to the definitions in § 234.2 by revising three definitions, adding six definitions, and deleting one definition.¹⁰ The revisions were proposed for clarity and consistency with the revised risk-management standards. The Board received one comment letter that addressed several of the proposed changes to the definitions in § 234.2. The Board has revised the definitions of “recovery” and “wind-down” in response to these comments. In addition, the Board has decided to make clarifying edits to the proposed definition of “link” and to add a definition for “trade repository.”

Recovery. The Board proposed to add a definition for the term “recovery” as used in proposed § 234.3(a)(3) and § 234.3(a)(15). The proposal defined “recovery” for the purposes of § 234.3(a)(3) and § 234.3(a)(15) as “the actions of a designated financial market utility consistent with its rules, procedures, and other *ex-ante* contractual arrangements, to address any uncovered credit loss, liquidity shortfall, capital inadequacy, or business, operational or other structural weakness, including the replenishment of any depleted prefunded financial resources and liquidity arrangements, as necessary to maintain the designated financial market utility’s viability as a going concern.” The term “recover” was also used, with a different meaning, in proposed § 234.3(a)(17) on operational risk in the context of business continuity management.

The commenter requested clarification between “recovery” as used in proposed § 234.3(a)(3) and proposed § 234.3(a)(15) and “recover” as used in proposed § 234.3(a)(17). The commenter suggested that the concept of recovery is financial in nature and that the reference to operational weakness in the proposed definition concerns the financial impact of

¹⁰ The Board proposed deletion of the term “payment system” because it was not used in the proposed single set of standards for all designated FMUs. If, in the future, the Board revises Regulation HH to provide risk-management standards specific to payment systems, it anticipates, at that time, reinserting a definition of the term “payment system,” if necessary.

an operational issue. The Board agrees with the commenter's understanding of "recovery" as used in proposed § 234.3(a)(3) and proposed § 234.3(a)(15). The reference in the definition to the designated FMU's "viability as a going concern" is intended to indicate that the objective of the recovery plan is a return to financial health. Therefore, a designated FMU should consider in its recovery plan scenarios in which an operational event could cause the designated FMU to become insolvent. The use of "recover" in proposed § 234.3(a)(17), however, refers to a designated FMU's ability to recover and resume its critical operations and services in a timely manner after an operational disruption. This use of the term is operational in nature, not financial. The Board is making technical edits to the definition for clarity.

Wind-down. The Board proposed to add a definition for the term "wind-down," which is used in proposed § 234.3(a)(3) and proposed § 234.3(a)(15). The proposal defined "wind-down" as "the actions of a designated financial market utility to effect the permanent cessation, sale, or transfer of one or more of its critical operations or services." The commenter requested additional guidance on whether a wind-down plan should consider appropriate notice to participants and the market, or whether the plan should focus only on the amount of time required to wind down the corporate entity.

Although the commenter referred to the definition of "wind-down" in its comment, the Board understands that the commenter is referring to the requirement in proposed § 234.3(a)(3) to develop and maintain a plan for an orderly wind-down. As stated in the proposed rule, the Board requires the designated FMU to plan for an *orderly* wind-down, which would include providing appropriate notice to the market to allow participants to transition to alternative arrangements in an orderly manner. This would likely require the

designated FMU to assume a longer period for wind-down than if the requirement were only to wind down the corporate entity as quickly as possible. Given that the term “wind-down” is only used in the context of an “orderly wind-down” in the proposed rule, the Board has replaced the definition of “wind-down” with a definition for “orderly wind-down.” The new definition is intended to clarify that if a designated FMU were to wind down, it would be expected to do so in a manner that would not increase the risk of significant liquidity or credit problems spreading among financial institutions or markets and thereby threaten the stability of the U.S. financial system.

Link. The Board proposed to add a definition for “link,” which is used in proposed § 234.3(a)(20). The proposal defined “link” as “for purposes of § 234.3(a)(20), a set of contractual and operational arrangements between two or more central counterparties, central securities depositories, or securities settlement systems that connect them directly or indirectly, such as for the purposes of participating in settlement, cross margining, or expanding their services to additional instruments and participants.”

Because of the difference in the definition of financial market infrastructure in the PFMI, which includes trade repositories, and financial market utility in the Dodd-Frank Act, which does not, this definition inadvertently excluded links to trade repositories. Upon further consideration, the Board has added these links to the definition for consistency with the PFMI, defined trade repository in § 234.2 as “an entity that maintains a centralized electronic record of transaction data, such as a swap data repository or a security-based swap data repository,” and made conforming changes to § 234.3(a)(20).

C. Governance

Proposed § 234.3(a)(2) outlined the requirements for a designated FMU's governance arrangements. The comments the Board received on the proposed rule are discussed below.

Support for public interest considerations. Proposed § 234.3(a)(2)(iii) required the designated FMU to have governance arrangements that support the stability of the broader financial system, other relevant public interest considerations, and the legitimate interests of relevant stakeholders. One commenter noted that public interest considerations is a vague concept, and that private-sector systems should not be required to consider public interest considerations and should focus exclusively on the needs of participants. The Board believes that, in addition to supporting the stability of the broader financial system, a designated FMU should support public interest considerations that are consistent with the other objectives of Title VIII of the Act to promote robust risk management, promote the safety and soundness of the designated FMU, and reduce systemic risks. For example, in the NPRM, the Board listed supporting fair and efficient markets as a possible relevant public interest consideration because a designated FMU that creates inefficiencies in the market may drive market participants toward less-safe alternatives that could increase systemic risks. Market transparency is another public interest consideration that may be relevant. For example, a designated FMU that provides information to relevant authorities and the public about payment flows may help to identify and reduce sources of systemic risk. For certain designated FMUs, however, stability of the broader financial system may be the predominant or only relevant public interest consideration.

Further, in the NPRM, the Board asked whether proposed § 234.3(a)(2)(iii) should specify “other relevant public interest considerations” for a specific type of or a particular designated FMU. One commenter responded that the examples given in the NPRM –

fostering fair and efficient markets, market transparency, and investor protection – in combination with the Board’s guidance through the supervisory process would be sufficient to assist a designated FMU in identifying relevant public interests. The Board is adopting the text of the rule as proposed.

Representation on the board of directors. Proposed § 234.3(a)(2)(iv)(D) required that the designated FMU’s board of directors include a majority of individuals who are not executives, officers, or employees of the designated FMU or an affiliate. In the NPRM, the Board asked whether it should set a specific minimum percentage of these individuals on the board of directors and whether it should set any requirements for the participation of outside directors (that is, directors who are not participants in or executives, officers, or employees of the designated FMU or an affiliate). Commenters generally indicated that the final rule should retain flexibility on board representation and did not advocate for a change to the proposed text. The Board is adopting the text of the rule as proposed to provide some flexibility in the composition of the board of directors. The Board, however, believes that outside directors should exercise predominate influence over the board of directors to ensure robust governance and oversight of the designated FMU.

In the NPRM, the Board also asked whether there should be a requirement that the chair of the board of directors be (a) an individual who is not an executive, officer, or employee of the designated FMU or an affiliate of the designated FMU or (b) a different individual than the designated FMU’s chief executive officer. One commenter responded that the chair of the board of directors should be an independent director. Although it believes designating an independent director as board chair generally results in more robust governance, the Board recognizes that other board structures, such as the appointment of a

lead independent director, may achieve a similar outcome as having an independent director as board chair. Therefore, the Board is adopting the text of the rule as proposed to provide flexibility in the structure of the board of directors. If the Board has governance concerns regarding the FMU, however, it may ask, as part of the supervisory process, a designated FMU that has a single person serving as the chief executive officer and the board chair to consider splitting these roles or adding a lead independent director.

Performance reviews of the board of directors. Proposed § 234.3(a)(2)(iv)(E) required the board of directors to establish policies and procedures to review its own performance. In the NPRM, the Board asked whether there should be a requirement for these regular reviews to include periodic independent assessments of the board of directors. One commenter responded that an independent party should perform such reviews but that the precise frequency, scope, and specifics of the review should be determined by the designated FMU. An independent review of board performance is a good practice that can help strengthen the governance of the designated FMU. A designated FMU might consider conducting such reviews on a periodic basis. The Board has decided, however, to retain flexibility with respect to the manner in which a designated FMU reviews performance of its board of directors. The Board is adopting the text of the rule as proposed. If the Board has governance concerns regarding the FMU, however, it may direct, through the supervisory process, a designated FMU to obtain an independent performance review of the board of directors.

Structure and composition of the committees of the board of directors. Proposed § 234.3(a)(2)(iv)(H)-(I) required that the risk-management and internal audit functions be overseen by a committee of the board of directors. In the NPRM, the Board asked whether

the designated FMU's board of directors should be required to have a committee of the board of directors that has only audit responsibilities to which the audit function reports and a risk committee of the board of directors that has only risk-management responsibilities to which the risk-management function reports. The Board also asked whether, alternatively, the designated FMU's audit and risk-management functions should be required to report directly to the entire board of directors. One commenter stated that a designated FMU's board of directors should have an audit committee and a risk-management committee and that independent directors should chair board committees where possible. Another commenter stated that the structure of the audit and risk-management committees should be left to the designated FMU's discretion and that the audit and risk-management committees can be composed of professionals who are not members of the board of directors so long as there is reporting to the board of directors.

After further consideration, the Board agrees that the requirement should not be overly prescriptive with respect to the structure of board committees. The specific decisions regarding how the board of directors will structure its committees to oversee the audit and risk-management functions should be left to the designated FMU's discretion. The Board is adopting the text of the rule as proposed.

Reporting lines for the internal audit and risk-management functions. Proposed § 234.3(a)(2)(iv)(H)-(I) required that the risk-management and internal audit functions have sufficient authority, resources, and independence and that each have a direct reporting line to and be overseen by a committee of the board of directors. A commenter stated that a designated FMU's risk-management function should have a primary functional reporting line

to the executive management of the designated FMU, whereas in the case of audit, the reporting line should be independent of executive management.

Although a reporting line from the risk-management function to executive management is certainly reasonable and useful, the Board believes that the risk-management function should have a reporting line to a committee of the board of directors to ensure that the risk-management function has sufficient independence from executive management. The proposed rule required the risk-management function to have a direct reporting line to a committee of the board of directors, but it does not preclude a reporting line to executive management as well. The Board is adopting the text of the rule as proposed.

D. Framework for the Comprehensive Management of Risks

Proposed § 234.3(a)(3) required a designated FMU to have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, general business, custody, investment, and other risks that arise in or are borne by the designated FMU. One commenter raised several issues with the requirements in proposed § 234.3(a)(3), and they are discussed below.

Frequency of review of the risk-management framework. Proposed § 234.3(a)(3) required, among other things, that the framework for the comprehensive management of risks be subject to periodic review. In the NPRM, the Board asked whether it should establish an annual or longer minimum frequency of review for the overall framework. The commenter responded that the Board should not be overly prescriptive with respect to the review frequency, noting that different standards have different review frequencies and that establishing a general review frequency for the comprehensive risk-management framework could be duplicative or contradict the review frequencies in other proposed standards. The

Board agrees that a specific frequency for review is not necessary, and is adopting the proposed text in § 234.3(a)(3) regarding periodic review for the overall framework.

Requirement to maintain plans for recovery and orderly wind-down. Proposed § 234.3(a)(3)(iii) required that a designated FMU's risk-management framework include plans for the designated FMU's recovery or orderly wind-down that contain the elements listed at proposed § 234.3(a)(3)(iii)(A) to (F). The commenter stated that a designated FMU's regulator should have the discretion to determine if the designated FMU would be required to produce both a recovery plan and an orderly wind-down plan.

The Board understands that there may have been some ambiguity regarding whether proposed § 234.3(a)(3)(iii) required both a recovery plan and an orderly wind-down plan or just one of the two. The Board expects a designated FMU to prepare plans for both recovery and orderly wind-down. Recovery plans should not be based on assumptions of government intervention or support. In addition, the Board believes that the recovery and orderly wind-down plans should be integrated because there may be circumstances in which a designated FMU attempts to recover but the recovery effort eventually fails. In such circumstances, the designated FMU should have a plan as well as sufficient capital to transition to and execute an orderly wind-down. The Board is therefore clarifying in § 234.3(a)(3)(iii) that a designated FMU must prepare integrated plans for recovery and orderly wind-down.¹¹ The Board is also making conforming edits in § 234.3(a)(3)(iii)(C) through (F) and, for greater clarity, has revised the requirement in § 234.3(a)(15)(i)(A) with respect to the cost to implement the plans to refer back to the requirements in § 234.3(a)(3)(iii).

¹¹ As noted above, the compliance date for preparing plans for recovery and orderly wind-down is December 31, 2015. Designated FMUs are encouraged to share with supervisors drafts of these plans, as well as other required plans, procedures, or documents, in advance of the compliance date so that final versions are in place by December 31, 2015.

Scenarios addressed by recovery and orderly wind-down plans. Proposed § 234.3(a)(3)(iii)(B) required that a designated FMU's plans identify scenarios that may potentially prevent the FMU from being able to provide its critical operations and services as a going concern, including uncovered credit losses, uncovered liquidity shortfalls, and general business losses. The commenter noted that such scenarios should contemplate severe and extreme scenarios and that each scenario should be distinct so that the analysis of the scenarios would not be duplicative. The Board agrees that the scenarios addressed by recovery and orderly wind-down plans should include severe and systemic stress events beyond those contemplated by business continuity planning, normal crisis-management, or failure-management tools. In particular, as indicated by the reference to the designated FMU's inability to continue as a going concern, these scenarios involve shocks that could potentially cause the designated FMU to become insolvent and cease operations. The Board also agrees that such scenarios should be sufficiently distinct so the analysis related to a particular scenario is not duplicative. The Board believes, however, that the text of the rule is sufficiently clear on these points. The Board is adopting the text of the rule as proposed.

Triggers for implementation of recovery and orderly wind-down plans. Proposed § 234.3(a)(3)(iii)(C) required that a designated FMU's plans identify criteria that could trigger the implementation of the recovery or orderly wind-down plans. The commenter stated that the designated FMU should have discretion to decide whether it will continue its services that are deemed noncritical, provided that the financial consequences are not material to its ability to operate the critical services. The commenter also noted that that triggers should be flexible and that management, working with its regulators and other stakeholders, should make the decision whether to trigger the plan based on the relevant facts

and circumstances of the given situation. Finally, the commenter noted that triggers should not be required to be defined solely in quantifiable or monetary terms.

The Board agrees with the comments provided on the triggers for the implementation of the recovery and orderly wind-down plans. The designated FMU would have discretion to decide whether it will continue its noncritical services, as long as the decision would not impair its ability to recover its critical operations and services or to wind them down in an orderly manner. Also, the decision to trigger a recovery or orderly wind-down plan will depend on the relevant facts and circumstances at the time and any such decision will likely include discussions between the designated FMU and its supervisor. This is consistent with the requirement in proposed § 234.3(a)(3)(iii)(F) that the recovery and orderly wind-down plans include procedures for informing the Board if the designated FMU is considering initiating one of the plans. The Board did not propose inclusion of automatic triggers based solely on quantifiable or monetary terms and is not adopting such terms in the final rule.

Requirement for rules, procedures, policies, and tools for recovery and orderly wind-down plans. Proposed § 234.3(a)(3)(iii)(D) required that the plans include rules, procedures, policies, and any other tools the designated FMU would use in a recovery or orderly wind-down to address the scenarios addressed in proposed § 234.3(a)(3)(iii)(B). The commenter stated that the application of certain tools, such as expense reduction or refinancing, will depend on the circumstances at the time of distress and therefore may not fit well into the designated FMU's "rules, policies, and procedures." The Board believes that if a designated FMU contemplates using a particular type of tool in the event of a recovery or orderly wind-down, it should develop rules, policies, and procedures to provide a basis for using the tool as well as transparency to its participants regarding how the tool may be used.

The Board expects the designated FMU to provide as much detail in the rules, policies, and procedures as possible, but recognizes that some components may need to be general, because the specific implementation of the tool may depend on the circumstances. The Board is not revising the final rule in response to this comment.

Requirements for informing the Board of initiation of the recovery or orderly wind-down plan. Proposed § 234.3(a)(3)(iii)(F) required that the designated FMU have procedures to inform the Board, as soon as practicable, if it is considering initiating the recovery or orderly wind-down plan. The commenter stated that certain tools, such as loss allocation, could be triggered automatically pursuant to ex ante agreements. In such circumstances, a notification to the Board could be contemporaneous with or after use of such tools. The Board believes that a designated FMU should notify the Board that it is considering initiating the recovery or orderly wind-down plan before initiating the relevant plan if at all possible. If there are specific tools or elements of a plan that may be activated automatically, the requirement proposed in § 234.3(a)(3)(iii)(F) that notification be “as soon as practicable” permits the designated FMU, in such circumstances, to provide notification contemporaneous with or immediately after use of such tools. Accordingly, the Board is not revising the final rule in response to this comment.

Frequency of review of recovery and orderly wind-down plans. The proposed rule did not specify a frequency of review for the recovery and orderly wind-down plans required under proposed § 234.3(a)(3)(iii), but the Board stated in the NPRM that these plans should be reviewed and tested at least annually or following material changes to the designated FMU’s operations or risk profile. The commenter urged that such reviews occur every other year, assuming no interim material change in the designated FMU’s risk exposure, as this

frequency would provide sufficient time to amend, draft, negotiate, and discuss any such changes with stakeholders. The commenter also noted this frequency would be aligned with the requirements for public disclosure in proposed § 234.3(a)(23)(v).

The Board agrees that a designated FMU should review its recovery and orderly wind-down plans the earlier of every two years or following changes to the designated FMU or the environment in which it operates that would significantly affect the viability or execution of the plans. After considering the comments, the Board believes a minimum requirement for review of the plans of every two years is more appropriate than an annual review because an annual review cycle may not allow sufficient time to analyze, discuss with stakeholders and supervisors, and implement any required changes. The Board is revising the rule text to clarify the requirement in § 234.3(a)(3)(iii)(G) that the designated FMU review the plans the earlier of every two years or following changes to its system or the environment in which it operates that would significantly affect the viability or execution of the plans.

E. Credit risk

Proposed § 234.3(a)(4) required a designated FMU to measure, monitor, and manage effectively its credit exposures to its participants and the credit exposures arising from its payment, clearing, and settlement processes. The Board received two comments on this proposed provision that are addressed below.

Replenishment of financial resources. Proposed § 234.3(a)(4)(vi)(B) required that a designated FMU establish rules and procedures that explicitly describe the designated FMU's process to replenish financial resources employed during a stress event. One commenter

noted that circumstances would dictate how a designated FMU manages the replenishment of financial resources employed in a stress scenario and that the Board should revise the proposed rule to allow greater flexibility. The Board acknowledges that the details of the replenishment process may depend on the particular circumstances that the designated FMU faces in a stress event and that it may not be possible to predict fully the future. The rules and procedures regarding replenishment, however, should be explicit and as specific as possible in order to provide guidance to the designated FMU's staff, participants, and other stakeholders during an actual stress event. Moreover, given that a designated FMU cannot predict the exact circumstances it may face, its rules and procedures for replenishment should address a wide range of potential circumstances. The Board is adopting the text of the rule as proposed.

Triggers for a “cover 2” requirement. Proposed § 234.3(a)(4)(ii) provided that the Board may direct a designated FMU that operates as a CCP to maintain additional prefunded financial resources that are sufficient to cover its credit exposure under a wide range of significantly different stress scenarios, including the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions (a “cover 2” requirement). The proposal stated further that the Board may direct such a CCP to meet a “cover 2” requirement if it either is involved in activities with a more-complex risk profile, such as clearing financial market instruments characterized by discrete jump-to-default price changes or that are highly correlated with potential participant defaults, or has been determined by another jurisdiction to be systemically important in that jurisdiction.

A commenter stated that, in applying this provision, the Board should also consider “the *proportion* of the CCP’s clearing activities involving products with complex risk profiles as well as the manner in which the CCP manages those risks.”

The commenter asked the Board to confirm that the “cover 2” requirement would not be triggered if a CCP has a small amount of activity with a complex risk profile relative to overall activity or if the CCP addresses the added risk incurred, such as through enhanced margin systems. In making its determination with respect to a “cover 2” requirement, the Board would consider all relevant facts and circumstances, including the CCP’s product mix and risk profile. Except for minor technical edits, the Board is adopting the text of the rule as proposed.¹²

F. Collateral

Proposed § 234.3(a)(5) required a designated FMU that uses collateral to manage its or its participants’ credit exposure to accept collateral with low credit, liquidity, and market risks and to set and enforce appropriately conservative haircuts and concentration limits. One commenter supported flexibility in the wording of the requirement and urged that it not be interpreted to exclude the use of equity securities as collateral for equity options. The Board believes that the text in proposed § 234.3(a)(5) retains the necessary flexibility to permit, where appropriate, a designated FMU to integrate the management of risk from participant positions with the risk from fluctuations in the value of collateral provided by participants. One example would be for the designated FMU to hold equity securities as collateral for options on those same securities. Therefore, the Board is adopting the text of the rule as proposed.

¹² The Board has revised § 234.3(a)(4)(ii) to clarify that it is the Board that makes the determination with respect to a “cover 2” requirement.

G. Liquidity risk

Proposed § 234.3(a)(7) required a designated FMU to measure, monitor, and manage effectively the liquidity risk that arises in or is borne by the designated FMU. The comments received on specific elements of the liquidity risk-management requirements are discussed below.

Participants' affiliates. Under proposed § 234.3(a)(7)(ii), a designated FMU was required to maintain sufficient liquid resources in all relevant currencies to effect same-day and, as applicable, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of significantly different potential stress scenarios, including the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the designated FMU in extreme but plausible market conditions.¹³ One commenter stated that the inclusion of the liquidity obligations of a defaulting participant's affiliates in calculating the largest aggregate liquidity obligation in proposed § 234.3(a)(7)(ii) should be clarified or removed because "a designated FMU may not have the authority to demand detailed information on participants' affiliates, particularly for affiliates in peripheral lines of business."

The Board believes this requirement is sufficiently clear as written. Participants' affiliates that would generate liquidity obligations to the designated FMU would be known to the designated FMU. Such affiliates may include affiliates that are also participants in the designated FMU, liquidity providers to the designated FMU, and custodians of the assets held in accounts for the designated FMU. Affiliates in peripheral lines of business would be

¹³ The Board believes that deliveries of currency are payment obligations, rather than physical deliveries under § 234.3(a)(10), and expects a designated FMU subject to Regulation HH to manage effectively the liquidity risk related to these payments.

unlikely to generate liquidity obligations to the designated FMU. Therefore, the Board is retaining the text of the rule as proposed.

Qualifying liquid resources. For purposes of meeting the liquid resource requirement under proposed § 234.3(a)(7)(ii), proposed § 234.3(a)(7)(iii) required the designated FMU to maintain these liquid resources in cash in each relevant currency at the central bank of issue or at creditworthy commercial banks, or in assets that are readily available and convertible into cash through committed arrangements without material adverse change conditions. These committed arrangements included, but were not limited to, collateralized lines of credit, foreign exchange swaps, and repurchase agreements. Proposed § 234.3(a)(7)(iii) required these arrangements to be committed in order to ensure that the resources are highly reliable even in extreme but plausible market conditions.¹⁴

A commenter stated that meeting the minimum liquid resource requirement in proposed § 234.3(a)(7)(ii) with only cash and committed arrangements, as required in proposed § 234.3(a)(7)(iii), would be challenging for cash market CCPs and their participants. Furthermore, the commenter stated that requiring committed arrangements for sovereign debt, such as U.S. Treasury securities, is inconsistent with CFTC’s final rule for systemically important derivatives clearing organizations, the SEC’s proposed rules for

¹⁴ The Board recognized that the language on qualifying liquid resources under Principle 7 of the PFMI is phrased differently. Principle 7 requires qualifying liquid resources to be, among other things, highly marketable collateral held in custody and investments that are readily available and convertible into cash with “prearranged and highly reliable” funding arrangements. The Board has had a longstanding expectation that FMUs under its authority maintain cash or committed arrangements for converting noncash assets into cash to meet the minimum liquidity resource requirement. The Board believes that, in order for arrangements to be “highly reliable,” they must be “prearranged and committed.” The legal enforceability of committed arrangements helps to ensure obligations will be fulfilled even in extreme but plausible market conditions. The Board recognizes, however, that such commitments do not guarantee performance. Supplemental resources beyond amounts needed to meet the minimum liquid resource requirement in § 234.3(a)(7) may be obtained on an uncommitted basis.

covered clearing agencies, and the rules for financial market infrastructures in foreign jurisdictions, and that requiring committed arrangements could significantly reduce the total amount of liquidity available to CCPs. The commenter also stated that the proposal is inconsistent with the Board's treatment of Treasury securities for systemically important financial institutions (SIFIs) under the Board's Liquidity Coverage Ratio rule. The commenter recommended that uncommitted arrangements for converting U.S. Treasury securities into cash, such as customary repurchase agreements or pre-established dealer accounts to facilitate same-day market sales, be included as qualifying liquid resources.

After consideration of the comments, the Board has determined not to include uncommitted arrangements for U.S. Treasuries as qualifying liquid resources. The Board believes that legal enforceability of committed arrangements helps to ensure that obligations are fulfilled even in extreme but plausible market conditions. For example, the Board believes committed arrangements provide an additional level of assurance that U.S. Treasury securities would be converted into cash in large quantities on a same-day basis, even in stressed market conditions. Furthermore, the Board believes a more-robust requirement is necessary for designated FMUs than for SIFIs because the timely completion of settlement is an essential function of an FMU and an explicit expectation of the Board for these entities. The failure of an FMU to complete settlement as expected can create broader liquidity dislocations and undermine confidence in the FMU's ability to manage effectively a default by absorbing rather than transmitting shocks to the financial system.

After consideration of the comments, however, the Board has added a new category of liquidity arrangements in § 234.3(a)(7)(iii)(C) of the final rule that would allow prearranged uncommitted arrangements for converting noncash assets into cash to be

considered qualifying liquid resources if they are determined by the Board to be highly reliable in extreme but plausible market conditions. The Board is adding this category in order to allow flexibility for future innovation in arrangements for converting noncash assets into cash on a same-day basis. The Board believes that including this category improves consistency with the text of the CFTC's final rule and the SEC's proposed rule. The Board is also adopting conforming edits to § 234.3(a)(7)(iv) in the final rule.

Testing. Proposed § 234.3(a)(7) contained multiple testing requirements for the management of liquidity risk. Proposed § 234.3(a)(7)(iv) required a designated FMU to evaluate and confirm, at least annually, whether each provider of its committed liquidity arrangements has sufficient information to understand and manage that provider's associated liquidity risks and whether the provider has the capacity to perform as required under the commitment. Proposed § 234.3(a)(7)(v) required the designated FMU to maintain and test its procedures and operational capacity for accessing each type of its liquid resources at least annually. Proposed § 234.3(a)(7)(vi) required the designated FMU to determine the amount and regularly stress-test the sufficiency of the liquid resources necessary to meet the minimum liquid resource requirement (A) daily using standard and predetermined stress scenarios, parameters, and assumptions and (B) at least monthly through a comprehensive and thorough analysis of the existing stress scenarios, models, and underlying parameters and assumptions. Proposed § 234.3(a)(7)(viii) required an annual validation of the designated FMU's liquidity risk-management model.

A commenter stated that the testing of the procedures and operational capacity for accessing liquid resources required by proposed § 234.6(a)(7)(v) should not cause disruption to the designated FMU's participants or involve the use of large amounts of participant

funds. The commenter also suggested generalizing the requirement in proposed § 234.6(a)(7)(vi)(B) to perform monthly stress testing and avoid being overly prescriptive because the monthly review requirement may not be appropriate for all models or all types of designated FMUs.

The Board agrees that none of the testing requirements need to be or should be met in a manner that would cause significant disruption to the designated FMU's participants or the market or involve the use of large amounts of participant funds. In addition, after consideration of the comments, the Board continues to believe that the requirement in § 234.3(a)(7)(vi) to perform an analysis of the existing stress scenarios, models, and underlying parameters and assumptions at least monthly is appropriate. The Board believes that all designated FMUs should assess the effectiveness of their stress testing at least monthly to ensure that the designated FMU will not neglect to consider any relevant new information in its stress-testing methodology and that the stress tests continue to be appropriate for achieving the designated FMU's identified liquidity needs in light of current and evolving market conditions. The Board is adopting the text of the rule as proposed.

H. Settlement finality

Proposed § 234.3(a)(8) required, in part, the designated FMU to provide clear and certain final settlement intraday or in real time as appropriate, and at a minimum, by the end of the value date. One commenter requested confirmation that the proposed provision would not require a designated FMU that is a CCP to accelerate its novation of certain noncompetitive transactions, such as backloaded over-the-counter options. The proposed requirement in § 234.3(a)(8) applied to a designated FMU's obligations to deliver funds and other financial instruments, at a minimum, by the end of the value date in accordance with

the terms of the underlying contract, and did not address the timing of novation. The Board is adopting the text of the rule as proposed.

I. Participant-default rules and procedures

Proposed § 234.3(a)(13) required the designated FMU to have effective and clearly defined participant-default rules and procedures that are designed to ensure that the designated FMU can take timely action to contain losses and liquidity pressures and continue to meet its obligations. The proposal also required the designated FMU to test and review its default procedures, including any closeout procedures, at least annually or following material changes to these rules and procedures. One commenter stated that the required testing should not be so extensive as to cause disruption to the designated FMU's members, participants, or broader financial markets, nor require the use of participant funds, nor unnecessarily stress the designated FMU's critical services.

The Board agrees that any testing pursuant to the requirement in proposed § 234.3(a)(13) should not cause disruption to the designated FMU's members, participants, or broader financial markets. To the extent such testing would require use of participant funds, it would likely be limited to small or *de minimus* amounts. The Board is adopting the text of the rule as proposed.

J. Segregation and portability

Proposed § 234.3(a)(14) required a designated FMU that operates as a CCP to have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the designated FMU with respect to those positions. The Board received two comment letters on this proposed rule that addressed portability requirements and alternative segregation regimes.

Portability requirement. One commenter noted that while porting positions is a highly desirable result when feasible, there may be scenarios in which liquidating positions is preferred. The commenter suggested that the rule text permit a designated FMU to retain broad discretion to liquidate positions promptly where it has determined that timely transfer would not be feasible. The proposed rule requires that the designated FMU's rules and procedures enable the segregation and portability of positions, and does not exclude the possibility that liquidation of positions may take place if a timely transfer would not be feasible. For these reasons, the Board is adopting the text of the rule as proposed.

Alternative segregation regimes. One commenter encouraged the Board to retain the flexibility to permit different segregation regimes as appropriate for different markets and different classes of market participant. Another commenter requested that the final text of the rule acknowledge the different legal frameworks for cash markets. The Board acknowledged in the NPRM that effective segregation and portability arrangements depend not only on the operational capabilities of the designated FMU but also on the applicable legal framework. The Board notes that a CCP serving certain cash markets, for example, may operate in a legal regime that offers the same degree of protection for a participant's customers as the segregation and portability approaches under proposed § 234.3(a)(14). Where an alternative regime exists, the Board will consider the CCP's assessment of whether the applicable legal or regulatory framework achieves the same degree of protection and efficiency for customers that would otherwise be achieved by segregation and portability arrangements at the CCP level described in the proposed requirement. Additionally, the Board will review whether the CCP's own rules enable the operation of the relevant legal and regulatory framework. The Board believes segregation and portability

arrangements may differ depending on the design of and the products and markets served by the CCP and would work with any applicable designated FMU through the supervisory process to determine how best to meet the requirements in § 234.3(a)(14).

Where alternative segregation and portability arrangements offer the same degree of protection, proposed § 234.3(a)(14) would not prohibit the use of such arrangements. As noted above, the requirement is that the designated FMU's rules and procedures enable segregation and portability of positions and does not prescribe a single means by which this could be achieved. The Board is adopting the text of the rule as proposed.

K. General business risk

Proposed § 234.3(a)(15) required a designated FMU to identify, monitor, and manage its general business risk. To this end, proposed § 234.3(a)(15)(i) required a designated FMU to maintain unencumbered liquid financial assets that are sufficient to cover the greater of the cost to implement the designated FMU's recovery or orderly wind-down plan to address general business losses or six months of current operating expenses. This provision also required a designated FMU to hold equity that is greater than or equal to the amount of unencumbered liquid financial assets held to meet the requirement. Proposed § 234.3(a)(15)(ii) required a designated FMU to maintain and update annually a plan for raising additional equity before the designated FMU's equity falls below the amount required under § 234.3(a)(15)(i).

The Board received four comment letters that addressed this provision. The commenters generally supported proposed § 234.3(a)(15) but raised specific concerns that are discussed below.

Recovery and orderly wind-down plans. Proposed § 234.3(a)(15)(i)(A)(I) referred to the cost to implement the recovery or orderly wind-down plan to address general business losses as required under proposed § 234.3(a)(3)(iii) as one possible determinant of the amount of liquid net assets funded by equity the designated FMU must hold. One commenter stated that recovery and orderly wind-down plans should be calibrated to take into account the existence of alternative systems or arrangements that provide similar services to those of the designated FMU. The Board expects that the designated FMU will take into consideration in its recovery and orderly wind-down plans any viable alternatives to its critical operations and services. The commenter did not suggest any changes to the proposed rule text on this point. For clarity and to streamline the rule text, however, the Board is revising § 234.3(a)(15)(i)(A)(I) to require the designated FMU to cover the cost to implement the plans to address general business losses as required under § 234.3(a)(3)(iii).

Required amount of unencumbered liquid financial assets. Proposed § 234.3(a)(15)(i)(A) required a designated FMU to hold unencumbered liquid financial assets equal to the greater of the cost to implement its recovery or orderly wind-down plan to address general business losses or six months of current operating expenses or as otherwise determined by the Board. Two commenters provided comments on the type of operating expenses that should be included in the calculation of six months of current operating expenses. Both stated that the requirement to hold unencumbered liquid financial assets and equity to fund current operating expenses would overstate the amount actually needed in a recovery or orderly wind-down scenario because an FMU that suffers losses will likely eliminate or reduce certain expenses, such as travel and marketing expenses. The

commenters proposed that the amount be calculated instead as the current expenses required to operate the FMU's critical operations and services in such a scenario.

After consideration of the comments, the Board continues to believe that the calculation of six months of current operating expenses (or as otherwise determined by the Board) should include all business-as-usual operating expenses. Although certain expenses may decrease in a recovery or orderly wind-down, the Board believes that certain other expenses, such as legal and consulting fees, would likely increase in a recovery or orderly wind-down scenario and that it is difficult to predict the net effect on the designated FMU's expenses in such a scenario. Therefore, the requirement to hold six months of business-as-usual operating expenses (or as otherwise determined by the Board) is intended to set a floor for the designated FMU's holdings of unencumbered liquid assets and equity that is independent of the assumptions about the specifics of the recovery and orderly wind-down scenarios as well as easy to calculate and verify because the information is included on the designated FMU's income statement. The Board, however, does expect that if the designated FMU foresees significant and lasting increases or decreases in its business-as-usual operating expenses due to structural or other changes to the designated FMU's operating environment, the designated FMU will include this information in its calculation. For these reasons, the Board is adopting § 234.3(a)(15)(i)(A)(2) as proposed.

Type of liquid assets required. Proposed § 234.3(a)(15)(i)(A) would require the designated FMU to hold unencumbered liquid financial assets, such as cash or highly liquid securities. One commenter stated that a designated FMU should be able to include as unencumbered liquid financial assets revenues that are projected to be received by the designated FMU over the same six-month period, subject to an appropriate haircut, because

the designated FMU may be able to expect to continue to generate fees in a recovery or orderly wind-down scenario.

The intent of the proposed standard, however, is to ensure that the designated FMU has the necessary liquid assets and equity on hand at any particular time. Projected revenues would not meet the requirement because projected revenues are not assets held on the balance sheet. Furthermore, the Board does not consider accounts receivable to qualify as unencumbered liquid financial assets under this provision because the funds associated with those receivables have not yet been collected and therefore are not available for immediate use. In a recovery or orderly wind-down scenario, the designated FMU may not be able to collect its accounts receivable in the amounts expected because market participants may be unable to pay amounts owed to the designated FMU. For these reasons, neither projected revenues nor accounts receivable should be included in types of unencumbered liquid financial assets held to meet the requirement in proposed § 234.3(a)(15)(i)(A).

It may be appropriate, however, for a designated FMU to consider its expected revenues, subject to an appropriate haircut, in its calculation of the cost to implement its recovery and orderly wind-down plans. Depending on the structure of the market it serves, a designated FMU may expect to earn revenues in a recovery or orderly wind-down scenario that could partially offset the cost of recovering or winding down. The size of the haircut applied to the expected revenues would likely need to reflect this market structure. For example, a designated FMU that operates in a market with viable alternatives to the services of the designated FMU should not assume that it would receive a large amount of revenue during an orderly wind-down.

Type of equity required. Proposed § 234.3(a)(15)(i)(B) lists common stock, disclosed reserves, and other retained earnings as examples of equity that should be held to meet the requirement. Two commenters stated that noncumulative perpetual preferred stock should be included in the types of equity allowed to meet the requirements in proposed § 234.3(a)(15)(i)(B) because some designated FMUs do not have ready access to public capital markets to replenish capital. One of these commenters also stated that such stock should be redeemable at the discretion of the designated FMU after five years.

Proposed § 234.3(a)(15)(i)(B) provided a non-exhaustive illustrative list of types of equity that would be acceptable. There may be other types of equity, in addition to common stock, disclosed reserves, and other retained earnings, that could be held to meet the requirement in proposed § 234.3(a)(15)(i)(B). The purpose of the requirement is to ensure that the designated FMU can absorb general business losses on an ongoing basis. Equity that has characteristics similar to debt will not be counted toward the requirement. Designated FMUs should work with supervision staff to assess whether specific equity holdings meet the intent of the requirement. The Board is adopting the text of the rule as proposed.

Application of § 234.3(a)(15)(i) to a DFMU that is part of a larger legal entity. In the NPRM, the Board asked whether the proposed rule should require a designated FMU that is part of a larger legal entity to take into account, when calculating the cost to implement its recovery and orderly wind-down plans, recovery or wind-down scenarios in which other business lines in the legal entity or the legal entity itself may face an adverse business environment. One commenter stated that a designated FMU should consider “any adverse environment that may be faced by the other business lines within the legal entity, or by the legal entity itself.” Another stated that the FMU should “treat the service that caused it to be

designated as systemically important as a separate division of the company and require liquid assets and capital to be earmarked for that service, so that the company's other services are not taken into account when calculating these requirements.”

In the NPRM, the Board also asked, for a designated FMU that is engaged in several business lines, but is designated as systemically important for purposes of Title VIII of the Dodd-Frank Act for only one of those business lines, whether there are any reasonable methodologies for determining which of the liquid net assets and equity held at the legal entity level belong to a particular business line. As a single legal entity, the firm's equity supports all the business lines, but it is a designated FMU for purposes of Title VIII of the Dodd-Frank Act with respect to only one of those business lines. One commenter stated that “it is difficult to determine the capital specific to a designated FMU when the designated FMU is part of a larger legal entity” and that “in insolvency it may not be possible to ring-fence assets within a legal entity.” Another commenter suggested, however, that separate pro forma balance sheets and income statements could be created for a particular business line.

After consideration of the comments, the Board has determined to adopt the rule text as proposed. When developing its recovery and orderly wind-down plans and calculating the cost of implementing those plans, a designated FMU that also engages in business lines for which it has not been designated by the Council under Title VIII should consider business shocks to other business lines if those shocks could potentially cause the designated FMU to need to recover or wind down the critical operations and services of the business line for which it has been designated. When calculating six months of current operating expenses (or as otherwise determined by the Board), however, the designated FMU may include only the current operating expenses of the business line for which it was designated rather than the

current operating expenses of the whole legal entity.¹⁵ Furthermore, when determining whether the designated FMU has sufficient unencumbered liquid financial assets and equity on its balance sheet to equal or exceed the greater of the cost to implement the recovery and orderly wind-down plans to address general business losses or six months of current operating expenses, the designated FMU may use the assets and equity held at the legal entity level that would be available to meet the requirement rather than having to attribute assets and equity to a certain business line.

Content of the plan for raising additional equity. Proposed § 234.3(a)(15)(ii) required the designated FMU to maintain a viable plan for raising additional equity before the designated FMU's equity falls below the amount required in proposed § 234.3(a)(15)(i). Two commenters stated that raising equity may take time, especially in stressed market conditions. Another commenter suggested that the designated FMU have a cushion above the required amount as an alternative to a plan to raise capital before equity falls below the minimum amount. Commenters also suggested methods for raising equity, such as a committed contingent funding plan or a refinancing plan involving a loan until an orderly equity recapitalization can be executed. A commenter also suggested that the designated FMU should consider the probability of an event that could cause equity to fall below the required amount and the period over which the event is likely to occur.

The Board agrees that it may not be possible in all cases to have a viable plan to raise equity before the designated FMU's equity falls below the required amount. Business shocks may cause equity levels to fall rapidly and unexpectedly and in circumstances under which it may be difficult to raise capital quickly. The Board does not believe, however, that the rule

¹⁵ The designated FMU's current operating expenses should include the designated FMU's share of overhead and support costs and any cost of shared services that are allocated to the designated FMU.

should specify the features of the plan or the methods for raising capital, because the details of the plan will depend on the ownership structure of the designated FMU and the environment in which it operates. Therefore, the Board is modifying the text of proposed § 234.3(a)(15)(ii) to require a designated FMU to maintain a viable plan for raising equity *should its equity fall below* the amount required under proposed § 234.3(a)(15)(i).

Schedule for updating the plan for raising additional equity. Proposed § 234.3(a)(15)(ii) required the designated FMU to update its plan for raising additional equity at least annually. One commenter stated that the plan should be reviewed every three years instead of annually. The commenter also stated that the plan could be reviewed more frequently when there are material changes to the designated FMU's financial position or to the capital markets.

After consideration of the comment, the Board agrees that annual review of the plan may not be necessary in the absence of material changes to the designated FMU's financial position or to the capital markets. The Board believes, however, that the plan should be reviewed at least every other year, consistent with the required review frequency of the recovery and orderly wind-down plans in § 234.3(a)(3)(iii)(G) and the public disclosure in § 234.3(a)(23)(vi). For these reasons, the Board is modifying proposed § 234.3(a)(15)(ii) to require a designated FMU to update its plan the earlier of every two years or following changes to the designated FMU or the environment in which it operates that would significantly affect the viability or execution of the plan.

L. Operational risk

Proposed § 234.3(a)(17) required a designated FMU to manage its operational risks by establishing a robust operational risk-management framework, which includes a business

continuity plan. Proposed § 234.3(a)(17)(vii)(B) required a designated FMU to have a business continuity plan that is designed to ensure that critical information technology systems can recover and resume operations no later than two hours following disruptive events. One commenter stated that ensuring that critical information technology systems can meet the two-hour recovery objective in the case of an extreme cyberattack could be very costly and require substantial changes to the designated FMU's production infrastructure, potentially including creating additional replicas of production infrastructure and systems. The commenter supported the Board's proposal in the NPRM to address reasonable approaches to preparing for potential extreme cyberattacks through the supervisory process.

The Board believes that it is imperative to financial stability that a designated FMU be able to recover and resume operations quickly after disruptive events and to complete settlement by the end of the day of the disruption. For many types of disruptive scenarios, such as a wide-scale physical disruption, the technology and methods exist to enable a designated FMU to recover and resume operations within two hours of the disruption. The Board understands, however, that certain threats to the designated FMU's operations as well as the technology to mitigate those threats are continually evolving. The Board expects that a designated FMU's business continuity planning will be a dynamic process in which the designated FMU works on an ongoing basis to update its plan to recover and resume operations no later than two hours following disruptive events and to complete settlement by the end of the day of the disruption, even in extreme circumstances. In areas where threats and technology are evolving, such as is the case for certain extreme cyberattacks, the Board recognizes that it may not be possible at this time for the designated FMU to recover within two hours. In such cases, the Board will work with the designated FMU through the

supervisory process to identify reasonable approaches to preparing for and recovering from such attacks. The Board is revising proposed § 234.3(a)(17)(vii)(B) to indicate this intent.

The Board is also making a technical edit to § 234.3(a)(17)(ii) to clarify that a designated FMU should identify, monitor, and manage the material risks its operations may pose to trade repositories as well as to other financial market utilities. As mentioned above, because of the differences in the definition for financial market infrastructure in the PFMI, which includes trade repositories, and the definition of financial market utility in the Dodd-Frank Act, which does not, the Board inadvertently excluded consideration of risks posed to trade repositories.

M. Tiered participation arrangements

Proposed § 234.3(a)(19) required a designated FMU to identify, monitor, and manage the material risks to the designated FMU arising from tiered participation arrangements. These arrangements are those in which firms that are not members in the designated FMU (indirect participants) rely on the services provided by members (direct participants) of the designated FMU to access the designated FMU's payment, clearing, and settlement facilities.

Three commenters addressed this provision of the proposed rule. Two commenters opposed the adoption of the provision as drafted. The third commenter supported the proposal.

Applicability of the proposed requirements. Two commenters addressed the applicability of the proposed requirements to them. One commenter opposed the proposed rule because it does not believe that it or its participants bear any significant risk from its participants' relationships with their customers. Another commenter supported the view that a designated FMU needs to understand the risks associated with the relationships between

direct participants and their customers in order to be able to understand and assess what risks, if any, the tiered arrangements may present to the designated FMU and its other participants. This commenter mentioned that it had developed a document that identifies risks that arise from tiered participation arrangements and best practices for mitigating these risks. This commenter also monitors settlement and funding metrics for indirect participants, and encourages indirect participants that exceed certain thresholds to become direct participants in order to reduce systemic risk.

After consideration of the comments and further analysis, the Board continues to believe that for certain designated FMUs, based on the design of their settlement arrangements, material risks could arise from tiered participation arrangements that are borne by the FMU or by its participants. For example, in an FMU in which a direct participant processes large transaction values on behalf of a large customer such as a large correspondent bank, the failure of the customer could jeopardize the direct participant's ability to meet its obligations to the FMU or to the other participants in the FMU. The failure to meet these obligations could result in liquidity dislocations that would pose significant liquidity risk to the FMU or to the other participants in the FMU. The Board acknowledges that certain designated FMUs with particular system designs may not face material risks arising from tiered participation arrangements, but these designated FMUs should present an analysis to that effect.

Tiered participation arrangements could also pose other risks to the designated FMU and its participants, including operational risk. For example, a designated FMU may want to understand how its direct participants manage any spikes or peaks in volume submitted to the designated FMU on behalf of indirect participants. Understanding the potential for spikes in

volume will allow the designated FMU to prepare to have the scalable operational capacity necessary to process those volumes effectively, such that it is able to achieve its service-level objectives.

The Board believes that a designated FMU should seek to understand the risks associated with the relationships between direct participants and their customers in order to assess whether any material risk to the designated FMU or its other participants exists. If material risks exist, the designated FMU should mitigate or manage this risk. However, the Board does not expect a designated FMU to manage all risks that arise between a direct participant and its customers, but rather to manage only the material risks to the designated FMU itself or to its other participants as a result of their participation in the system. The Board is revising § 234.3(a)(19) to clarify that the designated FMU should assess the material risks arising from tiered participation arrangements that are borne by the designated FMU or by its other participants as a result of their participation in the system.

Duplicative monitoring. One commenter stated that a requirement for a designated FMU to monitor the risks posed by indirect participants would be costly and duplicative of monitoring activities of regulators and the direct participants in the designated FMU. After consideration of the comment, the Board continues to believe that monitoring by direct participants or by their supervisors may not fully and effectively address all risks that may arise from tiered participation arrangements. Direct participants would likely monitor risks posed to them by their customers but may not consider how their actions to mitigate or manage those risks could affect the FMU or its other participants. In addition, the supervisory focus for certain direct participants is typically different from that for designated FMUs, and their supervisory monitoring might not take into account the effects of tiered

participation arrangements on the designated FMU or its other participants. Direct participants in a designated FMU may also be subject to varying degrees of supervision. Therefore, the onus should be on the designated FMU to understand the tiered participation arrangements in the system and the impact of these relationships on the designated FMU and its participants.

Requirements for an FMU with respect to tiered participation arrangements. One commenter stated that the proposed rule was ambiguous about what would actually be required of a designated FMU to comply with § 234.3(a)(19). The commenter stated that the Board should make clear that an FMU that does not bear any risk from its participants or their customers should not need to take any action to comply with the proposed rule. Another commenter stated that a designated FMU should be required to ensure that its direct participants have sufficient information to assess their relationships with their customers. The designated FMU should also ensure that its direct participants have sufficient information to evaluate and manage their risks with respect to participation in the designated FMU.

After consideration of the comments, the Board continues to believe that designated FMUs should manage material risks arising from tiered participation arrangements. The Board is adopting provisions in the final rule that clarify what would be expected from a designated FMU. The Board is including § 234.3(a)(19)(i) to clarify that the designated FMU should conduct an analysis to determine whether material risks arise from tiered participation arrangements. Depending on the nature of their payment, clearing, or settlement activities, designated FMUs' methodologies for conducting the analysis may differ. For example, some designated FMUs may choose to gather information about the

volume and value of activity processed by direct participants on behalf of indirect participants in the designated FMU or other relevant information. Where such information would be useful, a designated FMU may want to consider defining reasonable thresholds and other factors for gathering the information in order to minimize burden.

The Board is including § 234.3(a)(19)(ii) to clarify that, where material risks from tiered participation arrangements are identified, the designated FMU must mitigate or manage such risks. The appropriate actions to mitigate or manage the material risks identified will depend on the circumstances of the designated FMU and the risks identified. For example, one commenter noted that it provides a set of best practices with respect to tiered participation arrangements to guide participants' understanding and facilitate the assessment of risks related to tiered participation. This revision to the rule is also intended to clarify that the designated FMU is required to take additional action only if material risks are identified pursuant to § 234.3(a)(19)(i).

The Board is including § 234.3(a)(19)(iii) to clarify that a designated FMU will be required to review and update its analysis of risks arising from tiered participation arrangements at the earlier of every two years or following material changes to the system design or operations or the environment in which the designated FMU operates if those changes could affect the analysis conducted as required in § 234.3(a)(19)(i). If a designated FMU's review of its analysis indicates that the designated FMU faces no material risks from tiered participation arrangements, then no further action would be required. This provision is intended to clarify, in response to concerns raised by one commenter, that a designated FMU will not be required to monitor constantly the risks posed by tiered participation arrangements. The review requirement is also intended to be responsive to another comment

that the review frequency for the assessment of risks arising from tiered participation arrangements should be consistent with the review standards under proposed § 234.3(a)(3). The Board agrees and is also adopting a requirement for biennial review of the recovery and orderly wind-down plans in § 234.3(a)(3)(iii).

Definition of ‘indirect participants’. Proposed § 234.3(a)(19) refers to firms that are not members of the designated FMU (indirect participants) that rely on the services provided by direct participants to access the designated FMU’s payment, clearing, or settlement facilities. One commenter stated that the Board should limit the application of the rule to firms that are known by the designated FMU, have an agreement binding them to the FMU’s rules, and may have a direct connection to the FMU. The Board believes that material risks can originate from arrangements with a range of indirect participants having a range of relationships or arrangements with the FMU. If such arrangements may pose material risks, the designated FMU should seek to gather information from its direct participants on those arrangements and assess the risks from those arrangements. Therefore, the Board is retaining the concept of indirect participant as those firms that access the services of the designated FMU through a direct participant, whether or not they are bound by some part of the rules or have a direct connection to the designated FMU.¹⁶ The Board wishes to clarify, however, that the designated FMU should focus its analysis on the direct customers of the direct participants and need not extend its analysis to other tiers of customers, such as the customers of the customers of the direct participants.

¹⁶ For example, some firms may submit transactions or instructions to an FMU directly under the account of a direct participant. In this case, the firm may be bound by the FMU’s rules, but the direct participant would be accountable for the firm’s performance on its obligations. In other FMUs, indirect participants are not bound by the rules of the FMU and do not have a direct connection to the FMU.

Thresholds for identifying indirect participants that could pose risk to the designated FMU. In the preamble to the proposed rule, the Board asked how, if at all, the Board should define the thresholds for identifying indirect participants responsible for a significant proportion of transactions processed by the designated FMU and for identifying indirect participants whose transaction volumes or values are large relative to the capacity of the direct participant through which the indirect participants access the designated FMU. One commenter stated that the Board should not be too prescriptive in defining these thresholds, because they may vary across individual designated FMUs. The Board is not defining specific thresholds for identifying indirect participants that may pose risk to the designated FMU.

Conflicts of interest and antitrust issues. One commenter stated that the proposed rule raises conflict-of-interest and antitrust issues. The commenter stated that the collection of data on indirect participation that the Board proposed in the NPRM would give the board of directors of the designated FMU a complete picture of each participant's relationships with its most important customers, which could create a conflict of interest if the designated FMU's board of directors is made up of representatives of the member banks. The commenter also stated that the proposed requirement appeared to require designated FMUs to encourage indirect participants that are large relative to their direct participants to move to a larger direct participant or become direct participants themselves, which could create antitrust issues if the designated FMU's actions to comply with the requirement appear to third parties as an effort by the designated FMU to favor its owner banks.

The Board believes that any conflicts of interest or antitrust issues that may arise from the requirements in proposed § 234.3(a)(19) can be avoided through the careful design of the

information-gathering and risk-management processes developed by the designated FMU. First, the designated FMU's board of directors does not have to see a complete picture of each participant's relationships with its customers. The designated FMU can put controls in place that would minimize potential conflicts to ensure that information is shared in an appropriate manner that would allow the board of directors to carry out its responsibility for the comprehensive management of risks. Second, the rule does not require the designated FMU to encourage indirect participants that are large relative to their direct participants to move to a larger direct participant or become direct participants themselves. The designated FMU may choose other methods for mitigating or managing risks to the designated FMU from tiered participation arrangements. For example, if the designated FMU is concerned that a direct participant's exposures to its customers could cause it to default to the designated FMU, the designated FMU may require the direct participant to provide additional collateral to mitigate the relevant financial risks posed by its relationships with its customers. Therefore, the Board does not believe it is necessary to modify the rule to address these concerns.

N. Efficiency and effectiveness

Proposed § 234.3(a)(21) required a designated FMU to be efficient and effective in meeting the requirements of its participants and the markets it serves. In the NPRM, the Board explained that efficiency generally encompasses what a designated FMU chooses to do, how it does it, and the resources required by the designated FMU to perform its functions. Effectiveness refers to whether the designated FMU is meeting its goals and objectives, which include the requirements of its participants and the markets it serves.

One commenter stated that the Board has not given sufficient weight to market

judgments regarding an FMU's effectiveness and that an FMU that does not meet the requirements of its participants and the markets it serves or that does not meet its objectives efficiently will not survive in the market. The commenter suggested that the Board remove the requirement or redefine efficiency and effectiveness in terms of market judgments.

The Board continues to believe that a requirement for a designated FMU to be efficient and effective should be included in § 234.3(a) and that the terms efficiency and effectiveness should not be defined solely in terms of market judgments. The Board agrees with the comment that market forces may encourage an FMU to be efficient and effective, particularly in cases where it has a direct competitor. Many markets for payment, clearing and settlement services, however, are monopolies or oligopolies. Furthermore, it may be difficult for market participants to determine if a particular designated FMU is efficient and effective because of imperfect information about the designated FMU. Therefore, market judgments alone may be insufficient to encourage the designated FMU to operate efficiently and effectively. The Board does not believe that changes to the proposed requirement are necessary and is adopting the text of the rule as proposed.

O. Disclosure of rules, procedures and market data

Proposed § 234.3(a)(23) required the designated FMU to disclose relevant information about its operations and risk management to its participants and to the public. Proposed § 234.3(a)(23)(ii) required a designated FMU to disclose publicly all rules and key procedures, including key aspects of its default rules and procedures. Proposed § 234.3(a)(23)(iii) required a designated FMU to provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the designated FMU. The Board also asked a question in the NPRM

about whether a designated FMU should disclose information about fees and discount policies to the public.

The Board received two comment letters that addressed this provision of the proposed rule. In response to the proposed rule, one commenter stated that certain procedures should not be publicly disclosed because they would help unauthorized persons gain access to the system. The Board agrees that certain procedures should not be disclosed to the public in detail if such detail would create vulnerabilities for the designated FMU or undermine its safety and soundness. Although the Board expects disclosures to be robust, it does not expect a designated FMU to disclose to the public sensitive information, such as its detailed business continuity plan. In such cases, it may be sufficient to disclose to the public only the key highlights of the plan.

In response to the Board's question about public disclosure of information on fees and discount policies, one commenter stated that high-level information about pricing principles and rationale for the designated FMU's pricing principles should be disclosed, while another commenter opposed such a requirement. After consideration of the comments, the Board has determined not to include a requirement for a designated FMU to disclose information about fees and discount policies to the public. Although the Board believes that public disclosure of, at a minimum, high-level information about the designated FMU's pricing principles and rationale for those principles is a best practice for transparency purposes, the Board believes that a requirement to disclose specific details about fees and discounts to the public is not relevant to the objectives of Title VIII to promote robust risk management, promote safety and soundness, reduce systemic risks, and support the stability of the broader financial system. For these reasons, the Board is not introducing this

requirement in § 234.3(a)(23).

P. Compliance dates

In the NPRM, the Board proposed that the revisions to § 234.3(a) become effective 30 days from the date final rules are published in the *Federal Register*. The Board proposed that designated FMUs be expected to comply with the requirements in the final rule 30 days from the date final rules are published in the *Federal Register*, with the exception of establishing plans for recovery and orderly wind-down, set forth in proposed § 234.3(a)(3)(iii); addressing uncovered credit losses, set forth in proposed § 234.3(a)(4)(vi); addressing liquidity shortfalls, set forth in proposed § 234.3(a)(7)(viii); maintaining sufficient liquid net assets funded by equity and a viable capital plan, set forth in proposed § 234.3(a)(15)(i) and (ii); managing risks arising in tiered participation arrangements, set forth in proposed § 234.3(a)(19); and providing comprehensive public disclosure, set forth in proposed § 234.3(a)(23)(iv). The Board proposed that compliance with these requirements be required within six months of publication of the final rules.

The Board received three comment letters that addressed the extension to the compliance date for certain requirements. Two commenters agreed with the six-month extension for these requirements. The third commenter stated that a minimum of 18 months would be required to comply with requirements in the proposed rule, especially if the requirements set forth in proposed § 234.3(a)(19) were adopted as proposed. One of the commenters also stated that the compliance date for proposed § 234.3(a)(20) on links to other FMUs should also be extended for at least six months because implementation of that rule will require extensive cooperation and coordination between FMUs.

The Board has adopted the effective date of December 31, 2014 for the final rule.

Designated FMUs are also expected to comply with the requirements in the final rule on December 31, 2014, with the exception of establishing plans for recovery and orderly wind-down, set forth in § 234.3(a)(3)(iii); addressing uncovered credit losses, set forth in § 234.3(a)(4)(vi); addressing liquidity shortfalls, set forth in § 234.3(a)(7)(viii); maintaining sufficient liquid net assets funded by equity and a viable capital plan, set forth in § 234.3(a)(15)(i) and (ii); managing risks arising in tiered participation arrangements, set forth in § 234.3(a)(19); and providing comprehensive public disclosure, set forth in § 234.3(a)(23)(iv). Compliance with these provisions will be required on or before December 31, 2015. Designated FMUs, however, are encouraged to comply with the provisions as soon as possible.

The Board is making these changes to the effective date and the compliance dates after consideration of the public comments as well as internal analysis. The Board decided to extend the compliance date for the new and heightened requirements in order to allow sufficient time to the designated FMUs to complete their processes and procedures for changes to their rulebooks and to minimize burden on the designated FMUs and the markets they serve. Also, the Board has decided not to include § 234.3(a)(20) in the list of provisions for which there is an extension to the compliance period because this provision does not apply to the designated FMUs that will be subject to the revisions to § 234.3(a) on the effective date of the final rule.

III. Administrative Law Matters

A. Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) (“RFA”) generally requires an agency to perform an initial and a final regulatory flexibility analysis on the impact a rule is expected to have on small entities. However, under section 605(b) of the RFA, the regulatory flexibility analysis otherwise required under section 604 of the RFA is not required if an agency certifies, along with a statement providing the factual basis for such certification, that the rule will not have a significant economic impact on a substantial number of small entities. Based on current information, the Board believes that the payment systems that have been designated by the Council are not “small entities” for purposes of the RFA, and so, the final rule likely would not have a significant economic impact on a substantial number of small entities. However, the Board has prepared the following final regulatory flexibility analysis pursuant to section 604 of the RFA.

1. *Statement of the need for, and objectives of, the final rule.* In accordance with Sections 805(a) of the Dodd-Frank Act, the Board is adopting the final rule. The final rule amends the risk-management standards for systemically important FMUs in consideration of the new international standards. The reasons and justification for the final rule are described above in the Supplementary Information.

2. *Summary of the significant issues raised by public comment on the Board’s initial analysis, the Board’s assessment of such issues, and a statement of any changes made as a result of such comments.* The Board did not receive any public comments regarding its initial regulatory flexibility analysis. In addition, the Board did not receive any comments filed by

the Chief Counsel for Advocacy of the Small Business Administration in response to the proposed rule.

3. *Small entities affected by the final rule.* The final rule would affect FMUs that the Council designates as systemically important to the U.S. financial system for which the Board is the Supervisory Agency. Pursuant to regulations issued by the Small Business Administration (the “SBA”) (13 CFR 121.201), a “small entity” includes an establishment engaged in (i) providing financial transaction processing, reserve and liquidity services, or clearinghouse services with an average annual revenue of \$38.5 million or less (NAICS code 522320); (ii) securities and/or commodity exchange activities with an average annual revenue of \$38.5 million or less (NAICS code 523210); and (iii) trust, fiduciary, and/or custody activities with an average annual revenue of \$38.5 million or less (NAICS code 523991). As noted in the NPRM, based on current information, the Board does not believe that any of the FMUs that have been designated by the Council, and in particular the two designated FMUs for which the Board is the Supervisory Agency under Title VIII of the Dodd-Frank Act, would be “small entities” pursuant to the SBA regulation. In addition, the Board is not, and is not likely to become, the Supervisory Agency pursuant to section 803(8) of the Dodd-Frank Act for any designated FMU that operates as a central securities depository or central counterparty.

4. *Recordkeeping, reporting, and compliance requirements.* The final rule imposes certain reporting and recordkeeping requirements for a designated FMU. (See, for example, § 234.3(a)(3) (requiring policies, procedures, and systems that enable the designated FMU to identify, measure, monitor, and manage the risks that arise in or are borne by the designated FMU), § 234.3(a)(13) (requiring effective and clearly defined rules and procedures to

manage a participant default), and § 234.3(a)(23) (requiring a comprehensive public disclosure of its legal, governance, risk management, and operating framework.) The final rule also contains a number of compliance requirements, including the standards that the designated FMU must meet, such as (i) having a well-founded, clear, transparent and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions (§ 234.3(a)(1)), (ii) effectively measuring, monitoring, and managing its credit exposures under a wide range of significantly different stress scenarios (§ 234.3(a)(4)), (iii) effectively measuring, monitoring, and managing the liquidity risk that arises or is borne by the designated FMU (§ 234.3(a)(7)), and (iv) managing its operational risks by establishing a robust operational risk-management framework (§ 234.3(a)(17)). Designated FMUs for which the Board is the Supervisory Agency are generally already expected to meet most of these standards, or are at least familiar with these or similar standards, so these requirements would not likely impose material additional costs on those designated FMUs.

The final rule, however, also includes a number of new or heightened standards that may impose new or additional compliance costs on the designated FMUs for which the Board is the Supervisory Agency. For example, as explained above in the Supplementary Information, the final rule includes requirements for integrated plans for the designated FMU's recovery and orderly wind-down (§ 234.3(a)(3)(iii)); policies and procedures that explicitly address uncovered credit losses (§ 234.3(a)(4)(vi)); policies and procedures that explicitly address liquidity shortfalls (§ 234.3(a)(7)(viii)); maintaining sufficient liquid net assets funded by equity sufficient to ensure a recovery or orderly wind-down of critical operations and services and a viable plan for raising additional equity should the designated FMU's equity fall below the amount required for a recovery or orderly wind-down (§

234.3(a)(15)(i) and (ii)); managing risks arising in tiered participation arrangements (§ 234.3(a)(19)); and providing comprehensive public disclosure (§ 234.3(a)(23)(iv)).

All of these requirements would likely require professional skills in the legal, risk management, finance, payments operations, and accounting areas.

5. *Significant alternatives to the revisions.* Section 805(a) of the Dodd-Frank Act requires the Board to prescribe risk-management standards governing the operations related to payment, clearing, and settlement activities of designated FMUs, so other administrative methods for accomplishing the goals of the Act were not considered. In prescribing the risk-management standards, Section 805(a) of the Act also requires the Board to take into consideration relevant international standards, among other things. The PFMI is now widely recognized as the most relevant set of international risk-management standards for payment, clearing, and settlement systems. Consistent with the PFMI, the proposed rule generally employed a flexible, principles-based approach to permit a designated FMU to employ a cost-effective method for compliance. In consultation with the Council and the other Supervisory Agencies, the Board has included additional detail in developing the final rule where necessary or appropriate, such as specific testing frequencies or other requirements to provide the designated FMUs with sufficient guidance for compliance with the standard. As noted above, the Board has revised the level of detail provided in the risk-management standards in the final rule, as appropriate, in response to the public comments. In addition, after consideration of the public comments as well as additional Board analysis, the Board has delayed the compliance date for several of the new or heightened requirements in order to allow designated FMUs for which the Board is the Supervisory Agency sufficient time to revise their rules and associated processes and procedures and to minimize burden on the

designated FMUs and the markets they serve. As noted above, the Board does not believe that the alternative adopted in the final rule will have a significant economic impact on small entities.

B. Competitive Impact Analysis

As a matter of policy, the Board subjects all operational and legal changes that could have a substantial effect on payment system participants to a competitive impact analysis, even if competitive effects are not apparent on the face of the proposal.¹⁷ Pursuant to this policy, the Board assesses whether proposed changes “would have a direct and material adverse effect on the ability of other service providers to compete effectively with the Federal Reserve in providing similar services” and whether any such adverse effect “was due to legal differences or due to a dominant market position deriving from such legal differences.” If, as a result of this analysis, the Board identifies an adverse effect on the ability to compete, the Board then assesses whether the associated benefits – such as improvements to payment system efficiency or integrity – can be achieved while minimizing the adverse effect on competition.

This final rule promulgates revised Regulation HH risk-management standards, which are based on the PFMI, for certain designated FMUs as required by Title VIII of the Dodd-Frank Act. In a separate, related *Federal Register* notice, the Board finalized concurrently revisions to part I of its PSR policy, which applies to the Federal Reserve Bank-operated Fedwire Services, based on the PFMI. At least one currently designated FMU that is subject to Regulation HH (The Clearing House Payments Company, L.L.C., with respect to its

¹⁷ See “The Federal Reserve in the Payments System,” Fed. Res. Reg. Svc. §§ 9-1550, 9-1558 (Apr. 2009).

operation of the Clearing House Interbank Payments System (CHIPS)) competes with the Fedwire Funds Service. One commenter expressed concern that differences in language between the risk-management standards in Regulation HH and in part I of the PSR policy may result in two different sets of risk-management standards for FMUs. The commenter also stated that the Board should ensure that the requirements in § 234.3(a)(15) with respect to general business risk for designated FMUs should also be imposed on the equivalent Reserve Bank service.

The final revisions to the risk-management and transparency expectations in part I of the PSR policy are consistent with those in final Regulation HH. As discussed above, a different level of detail is required for Regulation HH as compared to part I of the PSR policy. Regulation HH is an enforceable rule applicable to designated FMUs other than those supervised by the CFTC or SEC, so additional details from the key considerations and explanatory notes of the PFMI were incorporated in the rule text to provide greater clarity on the Board's expectations. The PSR policy, on the other hand, is a policy statement that provides guidance with respect to the Board's exercise of its other supervisory or regulatory authority over other financial market infrastructures (including those operated by the Federal Reserve Banks) or their participants, its participation in cooperative oversight arrangements for financial market infrastructures, or the provision of intraday credit to eligible Federal Reserve account holders. Incorporating the headline standards from the PFMI is consistent with the purpose of the document and the Board's long-standing principles-based approach to its PSR policy. The Board has stated that it will be guided by the key considerations and the explanatory text of the PFMI in its application of the PSR policy. The Board does not intend

for differences in language in the two documents to lead to inconsistent requirements for Reserve Bank-operated FMUs and their private sector competitors.

The Board recognizes the critical role that the Fedwire Services play in the financial system and is committed to applying risk-management standards to the Reserve Banks' Fedwire Funds Service that are at least as stringent as the applicable Regulation HH standards applied to designated FMUs that provide similar services. The final revisions to part I of the PSR policy provide that the treatment of Reserve Bank systems will be consistent with that of private-sector systems in order to avoid any material adverse effect on the ability of other service providers to compete effectively with the Reserve Banks.

There are, however, several risk-management standards for which flexibility in implementation will be necessary for the Fedwire Services given the Federal Reserve's legal framework and structure and its roles as monetary authority and liquidity provider.¹⁸ The Board does not expect that the difference in approach to implementing these standards for the Fedwire Funds Service as compared to the requirements for its private-sector competitor would create a significant difference in operating costs for the two entities, with the possible exception of the expectation to hold unencumbered liquid financial assets and equity under § 234.3(a)(15)(i). In order to foster competition with private-sector systems, the Board will incorporate the cost of this requirement into the pricing of the Fedwire Funds Service. Although the Fedwire Funds Service does not face the risk that a business shock would cause the service to wind down in a disorderly manner and disrupt the stability of the financial system, in order to foster competition with private-sector systems, the Board will require the

¹⁸ These standards include principle 2 on governance, principle 3 on the framework for the comprehensive management of risks, principle 4 on credit risk, principle 5 on collateral, principle 7 on liquidity risk, principle 13 on participant-default rules and procedures, principle 15 on general business risk, and principle 18 on access and participation requirements.

Fedwire Funds Service to impute the cost of maintaining liquid assets and equity to cover general business losses, similar to the requirement for designated FMUs in § 234.3(a)(15)(i). The Board will also monitor the implementation of the final regulation and policy for issues of consistency and competitive equity between private-sector systems and the Fedwire Funds Service. Therefore, the Board does not believe the final rule promulgating risk-management standards for designated FMUs under Title VIII will have any direct and material adverse effect on the ability of other service providers to compete with the Reserve Banks.

C. Paperwork Reduction Act Analysis

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3506; 5 CFR part 1320, Appendix A.1), the Board reviewed the final rule under the authority delegated to the Board by the Office of Management and Budget. As noted in the proposal, for purposes of calculating burden under the Paperwork Reduction Act, a “collection of information” involves 10 or more respondents. Any collection of information addressed to all or a substantial majority of an industry is presumed to involve 10 or more respondents (5 CFR 1320.3(c) introductory text and (c)(4)(ii)). The Board estimates there are fewer than 10 respondents, and these respondents do not represent all or a substantial majority of the participants in payment, clearing, and settlement systems. Therefore, no collections of information pursuant to the Paperwork Reduction Act are contained in the final rule. The Board did not receive any comments on this analysis.

Text of Final Rule

List of Subjects in 12 CFR 234

Banks, Banking, Credit, Electronic funds transfers, Financial market utilities, Securities.

Authority and Issuance

For the reasons set forth in the preamble, the Board amends 12 CFR part 234 as set forth below.

PART 234 – DESIGNATED FINANCIAL MARKET UTILITIES (REGULATION HH)

1-2. The authority citation for part 234 continues to read as follows:

Authority: 12 U.S.C. 5461 *et seq.*

3. Revise § 234.2 to read as follows:

§ 234.2 Definitions.

- (a) *Backtest* means the *ex post* comparison of realized outcomes with margin model forecasts to analyze and monitor model performance and overall margin coverage.
- (b) *Central counterparty* means an entity that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer.
- (c) *Central securities depository* means an entity that provides securities accounts and central safekeeping services.

- (d) *Designated financial market utility* means a financial market utility that is currently designated by the Financial Stability Oversight Council under section 804 of the Dodd-Frank Act (12 U.S.C. 5463).
- (e) *Financial market utility* has the same meaning as the term is defined in section 803(6) of the Dodd-Frank Act (12 U.S.C. 5462(6)).
- (f) *Link* means, for purposes of § 234.3(a)(20), a set of contractual and operational arrangements between two or more central counterparties, central securities depositories, or securities settlement systems, or between one or more of these financial market utilities and one or more trade repositories, that connect them directly or indirectly, such as for the purposes of participating in settlement, cross margining, or expanding their services to additional instruments and participants.
- (g) *Orderly wind-down* means the actions of a designated financial market utility to effect the permanent cessation, sale, or transfer of one or more of its critical operations or services in a manner that would not increase the risk of significant liquidity or credit problems spreading among financial institutions or markets and thereby threaten the stability of the U.S. financial system.

- (h) *Recovery* means, for purposes of § 234.3(a)(3) and (15), the actions of a designated financial market utility, consistent with its rules, procedures, and other *ex ante* contractual arrangements, to address any uncovered loss, liquidity shortfall, or capital inadequacy, whether arising from participant default or other causes (such as business, operational, or other structural weaknesses), including actions to replenish any depleted prefunded financial resources and liquidity arrangements, as necessary to maintain the designated financial market utility's viability as a going concern and to continue its provision of critical services.
- (i) *Securities settlement system* means an entity that enables securities to be transferred and settled by book entry and allows transfers of securities free of or against payment.
- (j) *Stress test* means the estimation of credit or liquidity exposures that would result from the realization of potential stress scenarios, such as extreme price changes, multiple defaults, and changes in other valuation inputs and assumptions.
- (k) *Supervisory Agency* has the same meaning as the term is defined in section 803(8) of the Dodd-Frank Act (12 U.S.C. 5462(8)).
- (l) *Trade repository* means an entity that maintains a centralized electronic record of transaction data, such as a swap data repository or a security-based swap data repository.

4. In § 234.3, revise paragraph (a) to read as follows:

§ 234.3 Standards for designated financial market utilities.

- (a) A designated financial market utility must implement rules, procedures, or operations designed to ensure that it meets or exceeds the following risk-management standards with respect to its payment, clearing, and settlement activities.

(1) *Legal basis.* The designated financial market utility has a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

(2) *Governance.* The designated financial market utility has governance arrangements that –

- (i) Are clear, transparent, and documented;
- (ii) Promote the safety and efficiency of the designated financial market utility;
- (iii) Support the stability of the broader financial system, other relevant public interest considerations such as fostering fair and efficient markets, and the legitimate interests of relevant stakeholders, including the designated financial market utility’s owners, participants, and participants’ customers; and
- (iv) Are designed to ensure –
 - (A) Lines of responsibility and accountability are clear and direct;
 - (B) The roles and responsibilities of the board of directors and senior management are clearly specified;
 - (C) The board of directors consists of suitable individuals having appropriate skills to fulfill its multiple roles;
 - (D) The board of directors includes a majority of individuals who are not executives, officers, or employees of the designated financial market utility or an affiliate of the designated financial market utility;
 - (E) The board of directors establishes policies and procedures to identify, address, and manage potential conflicts of interest of board members and to review its performance and the performance of individual board members on a regular basis;

- (F) The board of directors establishes a clear, documented risk-management framework that includes the designated financial market utility's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decisionmaking in crises and emergencies;
- (G) Senior management has the appropriate experience, skills, and integrity necessary to discharge operational and risk-management responsibilities;
- (H) The risk-management function has sufficient authority, resources, and independence from other operations of the designated financial market utility, and has a direct reporting line to and is overseen by a committee of the board of directors;
- (I) The internal audit function has sufficient authority, resources, and independence from management, and has a direct reporting line to and is overseen by a committee of the board of directors; and
- (J) Major decisions of the board of directors are clearly disclosed to relevant stakeholders, including the designated financial market utility's owners, participants, and participants' customers, and, where there is a broad market impact, the public.

(3) *Framework for the comprehensive management of risks.* The designated financial market utility has a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, general business, custody, investment, and other risks that arise in or are borne by the designated financial market utility. This framework is subject to periodic review and includes –

- (i) Risk-management policies, procedures, and systems that enable the designated financial market utility to identify, measure, monitor, and manage the risks that arise in or are borne by the designated financial market utility, including those posed by other entities as a result of interdependencies;
- (ii) Risk-management policies, procedures, and systems that enable the designated financial market utility to identify, measure, monitor, and manage the material risks that it poses to other entities, such as other financial market utilities, settlement banks, liquidity providers, or service providers, as a result of interdependencies; and
- (iii) Integrated plans for the designated financial market utility's recovery and orderly wind-down that –
 - (A) Identify the designated financial market utility's critical operations and services related to payment, clearing, and settlement;
 - (B) Identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern, including uncovered credit losses (as described in paragraph (a)(4)(vi)(A) of this section), uncovered liquidity shortfalls (as described in paragraph (a)(7)(viii)(A) of this section), and general business losses (as described in paragraph (a)(15) of this section);
 - (C) Identify criteria that could trigger the implementation of the recovery or orderly wind-down plan;
 - (D) Include rules, procedures, policies, and any other tools the designated financial market utility would use in a recovery or orderly wind-down to

address the scenarios identified under paragraph (a)(3)(iii)(B) of this section;

- (E) Include procedures to ensure timely implementation of the recovery and orderly wind-down plans in the scenarios identified under paragraph (a)(3)(iii)(B) of this section;
- (F) Include procedures for informing the Board, as soon as practicable, if the designated financial market utility is considering initiating recovery or orderly wind-down; and
- (G) Are reviewed the earlier of every two years or following changes to the system or the environment in which the designated financial market utility operates that would significantly affect the viability or execution of the plans.

(4) *Credit risk.* The designated financial market utility effectively measures, monitors, and manages its credit exposures to participants and those arising from its payment, clearing, and settlement processes. In this regard, the designated financial market utility maintains sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, the designated financial market utility –

- (i) If it operates as a central counterparty, maintains additional prefunded financial resources that are sufficient to cover its credit exposure under a wide range of significantly different stress scenarios that includes the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure

to the designated financial market utility in extreme but plausible market conditions;

- (ii) If it operates as a central counterparty, may be directed by the Board to maintain additional prefunded financial resources that are sufficient to cover its credit exposure under a wide range of significantly different stress scenarios that includes the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the designated financial market utility in extreme but plausible market conditions. The Board may consider such a direction if the central counterparty –

- (A) Is involved in activities with a more-complex risk profile, such as clearing financial instruments characterized by discrete jump-to-default price changes or that are highly correlated with potential participant defaults, or

- (B) Has been determined by another jurisdiction to be systemically important in that jurisdiction;

- (iii) If it operates as a central counterparty, determines the amount and regularly tests the sufficiency of the total financial resources available to meet the requirements of this paragraph by –

- (A) On a daily basis, conducting a stress test of its total financial resources using standard and predetermined stress scenarios, parameters, and assumptions;

- (B) On at least a monthly basis, and more frequently when the products cleared or markets served experience high volatility or become less liquid, or when the size or concentration of positions held by the central counterparty's participants increases significantly, conducting a comprehensive and

thorough analysis of the existing stress scenarios, models, and underlying parameters and assumptions such that the designated financial market utility meets its required level of default protection in light of current and evolving market conditions; and

- (C) Having clear procedures to report the results of its stress tests to decisionmakers at the central counterparty and using these results to evaluate the adequacy of and adjust its total financial resources;
- (iv) If it operates as a central counterparty, excludes assessments for additional default or guaranty fund contributions (that is, default or guaranty fund contributions that are not prefunded) in its calculation of financial resources available to meet the total financial resource requirement under this paragraph;
- (v) At least annually, provides for a validation of the designated financial market utility's risk-management models used to determine the sufficiency of its total financial resources that –
 - (A) Includes the designated financial market utility's models used to comply with the collateral provisions under paragraph (a)(5) of this section and models used to determine initial margin under paragraph (a)(6) of this section; and
 - (B) Is performed by a qualified person who does not perform functions associated with the model (except as part of the annual model validation), does not report to such a person, and does not have a financial interest in whether the model is determined to be valid; and
- (vi) Establishes rules and procedures that explicitly –

- (A) Address allocation of credit losses the designated financial market utility may face if its collateral and other financial resources are insufficient to cover fully its credit exposures, including the repayment of any funds a designated financial market utility may borrow from liquidity providers; and
- (B) Describe the designated financial market utility’s process to replenish any financial resources that the designated financial market utility may employ during a stress event, including a participant default.

(5) *Collateral.* If it requires collateral to manage its or its participants’ credit exposure, the designated financial market utility accepts collateral with low credit, liquidity, and market risks and sets and enforces conservative haircuts and concentration limits, in order to ensure the value of the collateral in the event of liquidation and that the collateral can be used in a timely manner. In this regard, the designated financial market utility –

- (i) Establishes prudent valuation practices and develops haircuts that are tested regularly and take into account stressed market conditions;
- (ii) Establishes haircuts that are calibrated to include relevant periods of stressed market conditions to reduce the need for procyclical adjustments;
- (iii) Provides for annual validation of its haircut procedures, as part of its risk-management model validation under paragraph (a)(4)(v) of this section;
- (iv) Avoids concentrated holdings of any particular type of asset where the concentration could significantly impair the ability to liquidate such assets quickly without significant adverse price effects;

- (v) Uses a collateral management system that is well-designed and operationally flexible such that it, among other things, –
 - (A) Accommodates changes in the ongoing monitoring and management of collateral; and
 - (B) Allows for the timely valuation of collateral and execution of any collateral or margin calls.

(6) *Margin.* If it operates as a central counterparty, the designated financial market utility covers its credit exposures to its participants for all products by establishing a risk-based margin system that –

- (i) Is conceptually and methodologically sound for the risks and particular attributes of each product, portfolio, and markets it serves, as demonstrated by documented and empirical evidence supporting design choices, methods used, variables selected, theoretical bases, key assumptions, and limitations;
- (ii) Establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves;
- (iii) Has a reliable source of timely price data;
- (iv) Has procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable;
- (v) Marks participant positions to market and collects variation margin at least daily and has the operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants;

- (vi) Generates initial margin requirements sufficient to cover potential changes in the value of each participant's position during the interval between the last margin collection and the closeout of positions following a participant default by –
 - (A) Ensuring that initial margin meets an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure; and
 - (B) Using a conservative estimate of the time horizons for the effective hedging or closeout of the particular types of products cleared, including in stressed market conditions; and
- (vii) Is monitored on an ongoing basis and regularly reviewed, tested, and verified through –
 - (A) Daily backtests;
 - (B) Monthly sensitivity analyses, performed more frequently during stressed market conditions or significant fluctuations in participant positions, with this analysis taking into account a wide range of parameters and assumptions that reflect possible market conditions that captures a variety of historical and hypothetical conditions, including the most volatile periods that have been experienced by the markets the designated financial market utility serves; and
 - (C) Annual model validations of the designated financial market utility's margin models and related parameters and assumptions, as part of its risk-management model validation under paragraph (a)(4)(v) of this section.

(7) *Liquidity risk.* The designated financial market utility effectively measures, monitors, and manages the liquidity risk that arises in or is borne by the designated financial market utility. In this regard, the designated financial market utility –

- (i) Has effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity;
- (ii) Maintains sufficient liquid resources in all relevant currencies to effect same-day and, where applicable, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of significantly different potential stress scenarios that includes the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the designated financial market utility in extreme but plausible market conditions;
- (iii) Holds, for purposes of meeting the minimum liquid resource requirement under paragraph (a)(7)(ii) of this section, –
 - (A) cash in each relevant currency at the central bank of issue or creditworthy commercial banks;
 - (B) assets that are readily available and convertible into cash, through committed arrangements without material adverse change conditions, such as collateralized lines of credit, foreign exchange swaps, and repurchase agreements; or
 - (C) subject to the determination of the Board, highly marketable collateral and investments that are readily available and convertible into cash with

prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions;

- (iv) Evaluates and confirms, at least annually, whether each provider of the arrangements as described in paragraphs (a)(7)(iii)(B) and (C) of this section has sufficient information to understand and manage that provider's associated liquidity risks, and whether the provider has the capacity to perform;
- (v) Maintains and tests its procedures and operational capacity for accessing each type of liquid resource required under this paragraph at least annually;
- (vi) Determines the amount and regularly tests the sufficiency of the liquid resources necessary to meet the minimum liquid resource requirement under this paragraph by –
 - (A) On a daily basis, conducting a stress test of its liquid resources using standard and predetermined stress scenarios, parameters, and assumptions;
 - (B) On at least a monthly basis, and more frequently when products cleared or markets served experience high volatility or become less liquid, or when the size or concentration of positions held by the designated financial market utility's participants increases significantly, conducting a comprehensive and thorough analysis of the existing stress scenarios, models, and underlying parameters and assumptions such that the designated financial market utility meets its identified liquidity needs and resources in light of current and evolving market conditions; and
 - (C) Having clear procedures to report the results of its stress tests to decisionmakers at the designated financial market utility and using these

results to evaluate the adequacy of and make adjustments to its liquidity risk-management framework;

- (vii) At least annually, provides for a validation of its liquidity risk-management model by a qualified person who does not perform functions associated with the model (except as part of the annual model validation), does not report to such a person, and does not have a financial interest in whether the model is determined to be valid; and
- (viii) Establishes rules and procedures that explicitly –
 - (A) Address potential liquidity shortfalls that would not be covered by the designated financial market utility’s liquid resources and avoid unwinding, revoking, or delaying the same-day settlement of payment obligations; and
 - (B) Describe the designated financial market utility’s process to replenish any liquid resources that it may employ during a stress event, including a participant default.

(8) *Settlement finality.* The designated financial market utility provides clear and certain final settlement intraday or in real time as appropriate, and at a minimum, by the end of the value date. The designated financial market utility clearly defines the point at which settlement is final and the point after which unsettled payments, transfer instructions, or other settlement instructions may not be revoked by a participant.

(9) *Money settlements.* The designated financial market utility conducts its money settlements in central bank money where practical and available. If central bank money is

not used, the designated financial market utility minimizes and strictly controls the credit and liquidity risks arising from conducting its money settlements in commercial bank money, including settlement on its own books. If it conducts its money settlements at a commercial bank, the designated financial market utility –

- (i) Establishes and monitors adherence to criteria based on high standards for its settlement banks that take account of, among other things, their applicable regulatory and supervisory frameworks, creditworthiness, capitalization, access to liquidity, and operational reliability;
- (ii) Monitors and manages the concentration of credit and liquidity exposures to its commercial settlement banks; and
- (iii) Ensures that its legal agreements with its settlement banks state clearly –
 - (A) When transfers on the books of individual settlement banks are expected to occur;
 - (B) That transfers are final when funds are credited to the recipient’s account; and
 - (C) That the funds credited to the recipient are available immediately for retransfer or withdrawal.

(10) *Physical deliveries.* A designated financial market utility that operates as a central counterparty, securities settlement system, or central securities depository clearly states its obligations with respect to the delivery of physical instruments or commodities and identifies, monitors, and manages the risks associated with such physical deliveries.

(11) *Central securities depositories.* A designated financial market utility that operates as a central securities depository has appropriate rules and procedures to help ensure the integrity of securities issues and minimizes and manages the risks associated with the safekeeping and transfer of securities. In this regard, the designated financial market utility maintains securities in an immobilized or dematerialized form for their transfer by book entry.

(12) *Exchange-of-value settlement systems.* If it settles transactions that involve the settlement of two linked obligations, such as a transfer of securities against payment or the exchange of one currency for another, the designated financial market utility eliminates principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

(13) *Participant-default rules and procedures.* The designated financial market utility has effective and clearly defined rules and procedures to manage a participant default that are designed to ensure that the designated financial market utility can take timely action to contain losses and liquidity pressures so that it can continue to meet its obligations. In this regard, the designated financial market utility tests and reviews its default procedures, including any closeout procedures, at least annually or following material changes to these rules and procedures.

(14) *Segregation and portability.* A designated financial market utility that operates as a central counterparty has rules and procedures that enable the segregation and portability of

positions of a participant's customers and the collateral provided to the designated financial market utility with respect to those positions.

(15) *General business risk.* The designated financial market utility identifies, monitors, and manages its general business risk, which is the risk of losses that may arise from its administration and operation as a business enterprise (including losses from execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses) that are neither related to participant default nor separately covered by financial resources maintained for credit or liquidity risk. In this regard, in addition to holding financial resources required to manage credit risk (paragraph (a)(4) of this section) and liquidity risk (paragraph (a)(7) of this section), the designated financial market utility –

- (i) Maintains liquid net assets funded by equity that are at all times sufficient to ensure a recovery or orderly wind-down of critical operations and services such that it –
 - (A) Holds unencumbered liquid financial assets, such as cash or highly liquid securities, that are sufficient to cover the greater of –
 - (1) The cost to implement the plans to address general business losses as required under paragraph (a)(3)(iii) of this section and
 - (2) Six months of current operating expenses or as otherwise determined by the Board; and
 - (B) Holds equity, such as common stock, disclosed reserves, and other retained earnings, that is at all times greater than or equal to the amount of

unencumbered liquid financial assets that are required to be held under paragraph (a)(15)(i)(A) of this section; and

- (ii) Maintains a viable plan, approved by the board of directors, for raising additional equity should the designated financial market utility's equity fall below the amount required under paragraph (a)(15)(i) of this section, and updates the plan the earlier of every two years or following changes to the designated financial market utility or the environment in which it operates that would significantly affect the viability or execution of the plan.

(16) *Custody and investment risks.* The designated financial market utility –

- (i) Safeguards its own and its participants' assets and minimizes the risk of loss on and delay in access to these assets by –
 - (A) Holding its own and its participants' assets at supervised and regulated entities that have accounting practices, safekeeping procedures, and internal controls that fully protect these assets; and
 - (B) Evaluating its exposures to its custodian banks, taking into account the full scope of its relationships with each; and
- (ii) Invests its own and its participants' assets –
 - (A) In instruments with minimal credit, market, and liquidity risks, such as investments that are secured by, or are claims on, high-quality obligors and investments that allow for timely liquidation with little, if any, adverse price effect; and

- (B) Using an investment strategy that is consistent with its overall risk-management strategy and fully disclosed to its participants.

(17) *Operational risk.* The designated financial market utility manages its operational risks by establishing a robust operational risk-management framework that is approved by the board of directors. In this regard, the designated financial market utility –

- (i) Identifies the plausible sources of operational risk, both internal and external, and mitigates their impact through the use of appropriate systems, policies, procedures, and controls that are reviewed, audited, and tested periodically and after major changes;
- (ii) Identifies, monitors, and manages the risks its operations might pose to other financial market utilities and trade repositories, if any;
- (iii) Has policies and systems that are designed to achieve clearly defined objectives to ensure a high degree of security and operational reliability;
- (iv) Has systems that have adequate, scalable capacity to handle increasing stress volumes and achieve the designated financial market utility’s service-level objectives;
- (v) Has comprehensive physical, information, and cyber security policies, procedures, and controls that address potential and evolving vulnerabilities and threats;
- (vi) Has business continuity management that provides for rapid recovery and timely resumption of critical operations and fulfillment of its obligations, including in the event of a wide-scale disruption or a major disruption; and

- (vii) Has a business continuity plan that –
 - (A) Incorporates the use of a secondary site that is located at a sufficient geographical distance from the primary site to have a distinct risk profile;
 - (B) Is designed to enable critical systems, including information technology systems, to recover and resume operations no later than two hours following disruptive events;
 - (C) Is designed to enable it to complete settlement by the end of the day of the disruption, even in case of extreme circumstances; and
 - (D) Is tested at least annually.

(18) *Access and participation requirements.* The designated financial market utility has objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access. The designated financial market utility –

- (i) Monitors compliance with its participation requirements on an ongoing basis and has the authority to impose more-stringent restrictions or other risk controls on a participant in situations where the designated financial market utility determines the participant poses heightened risk to the designated financial market utility; and
- (ii) Has clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that fails to meet the participation requirements.

(19) *Tiered participation arrangements.* The designated financial market utility identifies, monitors, and manages the material risks arising from arrangements in which firms that are not direct participants in the designated financial market utility rely on the services provided by direct participants to access the designated financial market utility's payment, clearing, or settlement facilities, whether the risks are borne by the designated financial market utility or by its participants as a result of their participation. The designated financial market utility –

- (i) Conducts an analysis to determine whether material risks arise from tiered participation arrangements;
- (ii) Where material risks are identified, mitigates or manages such risks; and
- (iii) Reviews and updates the analysis conducted under paragraph (a)(19)(i) of this section the earlier of every two years or following material changes to the system design or operations or the environment in which the designated financial market utility operates if those changes could affect the analysis conducted under paragraph (a)(19)(i) of this section.

(20) *Links.* If it operates as a central counterparty, securities settlement system, or central securities depository and establishes a link with one or more of these types of financial market utilities or trade repositories, the designated financial market utility identifies, monitors, and manages risks related to this link. In this regard, each central counterparty in a link arrangement with another central counterparty covers, at least on a daily basis, its current and potential future exposures to the linked central counterparty and its participants, if any, fully with a high degree of confidence without reducing the central counterparty's ability to fulfill its obligations to its own participants.

(21) *Efficiency and effectiveness.* The designated financial market utility –

- (i) Is efficient and effective in meeting the requirements of its participants and the markets it serves, in particular, with regard to its –
 - (A) Clearing and settlement arrangement;
 - (B) Risk-management policies, procedures, and systems;
 - (C) Scope of products cleared and settled; and
 - (D) Use of technology and communication procedures;
- (ii) Has clearly defined goals and objectives that are measurable and achievable, such as minimum service levels, risk-management expectations, and business priorities; and
- (iii) Has policies and procedures for the regular review of its efficiency and effectiveness.

(22) *Communication procedures and standards.* The designated financial market utility uses, or at a minimum accommodates, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, and settlement.

(23) *Disclosure of rules, key procedures, and market data.* The designated financial market utility –

- (i) Has clear and comprehensive rules and procedures;

- (ii) Publicly discloses all rules and key procedures, including key aspects of its default rules and procedures;
- (iii) Provides sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the designated financial market utility;
- (iv) Provides a comprehensive public disclosure of its legal, governance, risk management, and operating framework, that includes –
 - (A) *Executive summary.* An executive summary of the key points from paragraphs (a)(23)(iv)(B) through (D) of this section;
 - (B) *Summary of major changes since the last update of the disclosure.* A summary of the major changes since the last update of paragraph (a)(23)(iv)(C), (D), or (E) of this section;
 - (C) *General background on the designated financial market utility.* A description of –
 - (1) The designated financial market utility’s function and the markets it serves,
 - (2) Basic data and performance statistics on its services and operations, such as basic volume and value statistics by product type, average aggregate intraday exposures to its participants, and statistics on the designated financial market utility’s operational reliability, and

- (3) The designated financial market utility’s general organization, legal and regulatory framework, and system design and operations;
- (D) *Standard-by-standard summary narrative.* A comprehensive narrative disclosure for each applicable standard set forth in this paragraph (a) with sufficient detail and context to enable a reader to understand the designated financial market utility’s approach to controlling the risks and addressing the requirements in each standard; and
- (E) *List of publicly available resources.* A list of publicly available resources, including those referenced in the disclosure, that may help a reader understand how the designated financial market utility controls its risks and addresses the requirements set forth in this paragraph (a); and
- (v) Updates the public disclosure under paragraph (a)(23)(iv) of this section the earlier of every two years or following changes to its system or the environment in which it operates that would significantly change the accuracy of the statements provided under paragraph (a)(23)(iv) of this section.

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§ 234.4 [Removed]

5. Remove § 234.4

§§ 234.5 through 234.7 [Redesignated as §§ 234.4 through 234.6]

6. Redesignate §§ 234.5 through 234.7 as §§ 234.4 through 6, respectively.

§ 234.5 [Amended]

7. In newly redesignated § 234.5, redesignate paragraph (b)(3)(iv) as paragraph (b)(3)(iii).

By order of the Board of Governors of the Federal Reserve System, October 28, 2014.

Robert deV. Frierson,
Secretary of the Board.

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