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Part II

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12 CFR Part 234
Financial Market Utilities; Proposed Rule

FEDERAL RESERVE SYSTEM

12 CFR Part 234

[Regulation HH; Docket No. R–1477]

RIN AD–7100 AE–09

Financial Market Utilities

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Notice of proposed rulemaking.

SUMMARY: Under the Dodd-Frank Wall Street Reform and Consumer Protection Act (''Dodd-Frank Act'' or ''Act''), the Board of Governors of the Federal Reserve System (Board) is required to prescribe risk-management standards governing the operations related to the payment, clearing, and settlement activities of certain financial market utilities that are designated as systemically important (designated FMUs) by the Financial Stability Oversight Council (Council). The Board is proposing to amend the risk-management standards currently in the Board's Regulation HH by replacing the current risk-management standards with a common set of risk-management standards applicable to all types of designated FMUs. These new risk-management standards 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: Comments on this notice of proposed rulemaking must be received by March 31, 2014.

ADDRESSES: You may submit comments, identified by Docket No. R–1477 and RIN No. 7100 AE–09, by any of the following methods:

- *Agency Web site: http://www.federalreserve.gov.* Follow the instructions for submitting comments at *http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm.*
- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Email: regs.comments@federalreserve.gov.* Include the docket number in the subject line of message.
- *Facsimile:* (202) 452–3819 or (202) 452–3102.
- *Mail:* Robert deV. Frierson, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue NW., Washington, DC 20551.

All public comments are available from the Board's Web site at *http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm* as submitted, unless modified for technical reasons. Accordingly, your comments will not be edited to remove any identifying or contact information. Public comments may also be viewed electronically or in paper form in Room MP–500 of the Board's Martin Building (20th and C Streets NW.) between 9 a.m. and 5 p.m. on weekdays.

FOR FURTHER INFORMATION CONTACT: Jennifer A. Lucier, Deputy Associate Director (202) 872–7581, Kathy C. Wang, Senior Financial Services Analyst (202) 872–4991, or Emily A. Caron, Senior Financial Services Analyst (202) 452–5261, Division of Reserve Bank Operations and Payment Systems; Christopher W. Clubb, Special Counsel (202) 452–3904 or Kara L. Handzlik, Counsel (202) 452–3852, Legal Division; for users of Telecommunications Device for the Deaf (TDD) only, contact (202) 263–4869.

SUPPLEMENTARY INFORMATION:

I. Background

A. Title VIII of the Dodd-Frank Act

Title VIII of the Dodd-Frank 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 designated FMUs.[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 804 of the Act, the Council is required to designate those FMUs that the Council determines are, or are likely to become, systemically important.[2] Such a designation by the Council makes an FMU subject to the supervisory framework set out in Title VIII of the Act.

The supervisory framework established under Title VIII includes risk-management standards for designated FMUs that take into consideration relevant international standards and existing prudential requirements. Section 805(a)(1)(A) of the Act requires the Board to prescribe risk-management standards governing the operations related to the payment, clearing, and settlement activities of certain designated FMUs.[3] In addition, section 805(a)(2) of the Act grants the U.S. Commodity Futures Trading Commission (CFTC) and the U.S. Securities and Exchange Commission (SEC) the authority to prescribe regulations containing risk-management standards for a designated FMU that is, respectively, a derivatives clearing organization (DCO) registered under section 5b of the Commodity Exchange Act or a clearing agency registered under section 17A of the Securities Exchange Act of 1934.

As set out in section 805(b) of the Act, the applicable risk-management standards must (1) promote robust risk management, (2) promote safety and soundness, (3) reduce systemic risks, and (4) support the stability of the broader financial system. Further, under section 805(c), the risk-management standards may address areas such as (1) risk-management policies and procedures, (2) margin and collateral requirements, (3) participant or counterparty default policies, (4) the ability to complete timely clearing and settlement of financial transactions, (5) capital and financial resource requirements for designated FMUs, and (6) other areas that are necessary to achieve the objectives and principles for risk-management standards in section 805(b). Designated FMUs are required to conduct their operations in compliance with the applicable risk-management standards. Compliance is examined by the federal agency that has primary jurisdiction over a designated FMU under federal banking, securities, or commodity futures laws (the ''Supervisory Agency'').[4]

B. Risk-Management Standards for Designated Financial Market Utilities

On July 30, 2012, the Board adopted Regulation HH to implement, among other things, the statutory provisions under section 805(a)(1)(A) of the Dodd-Frank Act.[5] Regulation HH established two sets of risk-management standards for certain designated FMUs: One set of

[1] The Dodd-Frank Act, Public Law 111–203, 124 Stat. 1376, was signed into law on July 21, 2010.

[2] For these purposes, section 803(9) of the Dodd-Frank Act defines ''systemically important'' and ''systemic importance'' as a situation in which the failure of or disruption to the functioning of an FMU could create, or increase, the risk of significant liquidity or credit problems spreading among financial institutions or markets and thereby threaten the stability of the financial system of the United States. 12 U.S.C. 5462(9).

[3] Currently, two of the eight FMUs that have been designated by the Council are subject to the risk-management standards promulgated by the Board under section 805(a)(1)(A)—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.

[4] The Act's definition of ''Supervisory Agency'' is codified at 12 U.S.C. 5462(8).

[5] 12 CFR part 234.

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 (§ 234.4(a)).[6] The Regulation HH standards do not apply to designated FMUs for which the CFTC or the SEC is the Supervisory Agency.[7] In adopting Regulation HH, the Board considered relevant international standards as well as the Board's *Federal Reserve Policy on Payment System Risk* (PSR policy).[8]

As noted in the preamble to the final rule for Regulation HH, the CPSS and IOSCO finalized the PFMI in April 2012. The Board also noted in the preamble that it anticipated reviewing the PFMI, consulting with other appropriate agencies and the Council, and seeking public comment on the adoption of revised standards for designated FMUs based on the PFMI.

The PFMI 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 central counterparties.[9] The PFMI addresses areas such as legal risk, governance, credit and liquidity risks, operational risk, and general business risk.[10] It sets forth 24 principles, each with (1) a headline standard that frames the overall risk-management objective of the principle, (2) a list of key considerations that elaborate on the headline standard, and (3) accompanying explanatory notes that discuss the objective and rationale of the principle and provide additional guidance on how the principle may be implemented.

The Board believes that the risk-management standards in Regulation HH should be revised in consideration of the PFMI. The PFMI establishes an important framework for promoting sound risk management in payment, clearing, and settlement systems and financial stability more broadly. The report reflects more than a decade of experience with international risk-management standards for these types of systems, important lessons learned from the financial crisis, and other relevant policy work by the international standard-setting bodies. As described in more detail below, risk-management standards based on the PFMI may improve upon the standards currently in Regulation HH and will further promote the objectives of the risk-management standards for designated FMUs set out in section 805(b) of the Dodd-Frank Act.

In addition, the PFMI is widely recognized as the most relevant set of international risk-management standards for payment, clearing, and settlement systems. The Financial Stability Board (FSB), which includes U.S. authorities, has endorsed the PFMI and has replaced the previous sets of risk-management standards with the PFMI in its Key Standards for Sound Financial Systems.[11] In addition, the Basel Committee on Banking Supervision considers the application of the PFMI as an important factor in determining capital charges for bank exposures to central counterparties related to over-the-counter derivatives, exchange-trade derivatives, and securities financing transactions.[12]

The Board believes that the implementation of risk-management standards based on the PFMI by the relevant payment, clearing, and settlement systems and their regulators, both domestically and internationally, can help promote the safety and efficiency of these systems and financial stability more broadly. Implementation also supports the initiatives of the Group of Twenty Finance Ministers and Central Bank Governors (G20) and the FSB to strengthen core financial infrastructures and markets around the world.[13] Widespread implementation also reduces potential conflicts among domestic and foreign authorities regarding prudential requirements for FMUs, and provides a more consistent framework among relevant domestic and foreign authorities for assessing the risks and risk management of FMUs with cross-market, cross-border, or cross-currency operations. Since April 2012, many central banks and market regulators have taken steps to incorporate the PFMI into their respective legal and regulatory frameworks that apply to systemically important financial market infrastructures.[14]

II. Explanation of Proposed Rules

The Board proposes 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. In developing the proposal, the Board has considered the PFMI as the relevant international standards applicable to payment, clearing, and settlement systems. In implementing the proposed revisions to Regulation HH, the Board anticipates using the PFMI as a reference as it establishes its supervisory planning and analysis tools for each designated FMU for which it is the Supervisory Agency.

The Board requests comment on all aspects of the proposed rules. In addition, the Board requests comment on specific questions set out with respect to certain of the risk-management standards as discussed below. Where possible, commenters should provide both quantitative data and detailed analysis in their comments, particularly with respect to suggested alternatives to the proposed standards. Commenters should also explain the rationale for their suggestions.

[6] At the time of the rulemaking, the Board acknowledged that most designated FMUs that operate as central securities depositories or central counterparties would be subject to the risk-management standards promulgated by the CFTC or SEC. The Board, however, adopted standards for designated FMUs that operate as central securities depositories, central counterparties, 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 derivatives clearing organization or a clearing agency with the CFTC or SEC, respectively.

[7] 12 CFR 234.1.

[8] The relevant international standards were the 2001 Committee on Payment and Settlement Systems (CPSS) report on the *Core Principles for Systemically Important Payment Systems,* the 2001 CPSS and the Technical Committee of the International Organization of Securities Commissions (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.

[9] 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 Dodd-Frank Act excludes trade repositories.

[10] The PFMI reflects broad market input from FMUs, their participants, authorities, and others. A consultative version of the PFMI was published in March 2011. CPSS and IOSCO received 120 comment letters on the consultative version. All designated FMUs, as well as many of their major participants, provided comments on the consultative report.

[11] The FSB is an international forum that was established to develop and promote the implementation of effective regulatory, supervisory, and other financial sector policies. The FSB includes the U.S. Department of the Treasury, the Board, and the SEC. For the FSB's Key Standards for Sound Financial Systems, see *http://www.financialstabilityboard.org/cos/key_standards.htm.*

[12] See Basel Committee on Banking Supervision (BCBS), interim rules on *Capital Requirements for Bank Exposures to Central Counterparties,* July 2012, *http://www.bis.org/publ/bcbs227.pdf* and BCBS, *Capital Treatment of Bank Exposures to Central Counterparties,* consultative document, June 2013 *http://www.bis.org/publ/bcbs253.pdf.*

[13] See, G20 Declaration on Strengthening the Financial System (April 2009), *http://www.treasury.gov/resource-center/international/g7-g20/Documents/London%20April%202009%20Fin_Deps_Fin_Reg_Annex_020409_-_1615_final.pdf.*

[14] For an overview of how the PFMI is being implemented by different authorities around the world, see CPSS–IOSCO, *Implementation Monitoring of PFMIs—Level 1 Assessment Report,* August 2013.

A. Proposed § 234.2—Definitions

The Board proposes to amend Regulation HH § 234.2 by revising three definitions, adding six definitions, and deleting one definition. These proposed amendments constitute conforming changes or provide clarity with respect to the proposed revisions to the risk-management standards.

Central counterparty. The Board proposes to revise the definition of ''central counterparty'' to describe more accurately the nature of the relationship between the central counterparty and the original counterparties with respect to a particular trade. The existing definition, ''an entity that interposes itself between the counterparties to trades, acting as the buyer to every seller and the seller to every buyer,'' is being revised to read, ''an entity that interposes itself between the counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer.''

Designated financial market utility. The Board proposes to revise the definition of ''designated financial market utility'' for clarity regarding designation rescission. The existing definition, ''a financial market utility that the [Council] has designated under section 804 of the Dodd-Frank Act'' is being revised to read, ''a financial market utility that is currently designated by the [Council] under section 804 of the Dodd-Frank Act.'' Under section 804(b) of the Act, a designated FMU may have its designation rescinded if the Council determines the designated FMU no longer meets the standards for systemic importance. The proposed revision is intended to clarify that Regulation HH applies only to FMUs with designations that are currently effective. If the Council rescinds a designation of an FMU, the FMU is no longer subject to the provisions of Title VIII of the Act or any rules or orders prescribed under Title VIII, including the risk-management standards set out in Regulation HH.

Central securities depository. The Board proposes to revise the definition of ''central securities depository.'' The existing definition, ''an entity that holds securities in custody to enable securities transactions to be processed by means of book entries or an entity that enables securities to be transferred and settled by book entry either free of or against payment,'' is being revised to read, ''an entity that provides securities accounts and central safekeeping services.'' This revision reflects a narrower set of functions that a central securities depository can provide and better distinguishes this type of FMU from a ''securities settlement system,'' which will be covered by a new term as described below.

Securities settlement system. The Board proposes to add the term ''securities settlement system,'' which means ''an entity that enables securities to be transferred by book entry and allows transfers of securities free of or against payment.'' The term ''securities settlement system'' was previously embedded in the Regulation HH definition for ''central securities depository'' because a central securities depository typically also performs the securities settlement function. The Board proposes this separation of the two functions—central securities depositories and securities settlement systems—in order to accommodate any systems in which the central securities depository does not also operate a securities settlement system. Nonetheless, the Board recognizes that one entity can perform both functions and satisfy both definitions.

Backtest and stress test. The Board proposes to add the terms ''backtest'' as used in proposed § 234.3(a)(6) (Margin) and ''stress test'' as used in proposed § 234.3(a)(4) (Credit risk) and proposed § 234.3(a)(7) (Liquidity risk). Under the proposal, ''backtest'' is defined as ''the *ex post* comparison of realized outcomes with margin model forecasts to analyze and monitor model performance and overall margin coverage.'' ''Stress test'' is defined as ''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.'' These proposed definitions provide further clarity to designated FMUs with regard to compliance with the above standards.

Recovery and wind-down. The Board proposes to add the terms ''recovery'' and ''wind-down,'' used in proposed § 234.3(a)(3) (Framework for the comprehensive management of risks) and § 234.3(a)(15) (General business risk). Under the proposal, ''recovery'' is defined 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 proposed definition of ''recovery'' is for purposes of proposed § 234.3(a)(3) and (15) only and not in the context of business continuity management under proposed § 234.3(a)(17). The Board proposes to define ''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.''

Links. The Board proposes to add the term ''link'' as used in proposed § 234.3(a)(20) (Links to other financial market utilities). For the purposes of § 234.3(a)(20), ''link'' is defined as ''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.''

Payment system. The Board proposes to remove the definition of ''payment system'' from Regulation HH because the term is neither used in the proposed rule nor used in any other section of Regulation HH. The term ''payment system'' is currently included in Regulation HH because there is list of risk-management standards for payment systems in § 234.3 that is separate from the list of standards for central securities depositories and central counterparties in § 234.4. Under the proposed rule, there would be only one list of standards for all types of designated FMUs, so the separate term is no longer necessary.

The Board specifically requests comment on whether the proposed definitions are clear and sufficiently detailed and whether additional definitions are needed to implement the proposed rules.

B. Proposed § 234.3—Standards for Designated Financial Market Utilities

As noted above, the Board proposes to replace the two current sets of standards under §§ 234.3(a) and 234.4(a) with one set of standards for all types of designated FMUs under revised § 234.3(a). In certain cases where proposed standards would only apply to a particular type of designated FMU, the type of designated FMU is specified in the proposed standard.

The Board believes the proposed revisions, which reflect the new international standards in the PFMI, improve the current risk-management standards under Regulation HH and further the objectives in section 805(b) of the Dodd-Frank Act. Additionally, in considering the PFMI, the proposed

revisions reflect the most recent and relevant views on comprehensive risk management by FMUs. Furthermore, adopting a common set of standards across all types of designated FMUs will help remove any confusion that can be caused by perceived inconsistencies in the wording in two similar sets of requirements set out in the same regulation.

The Board, however, recognizes that certain proposed revisions represent new or heightened requirements relative to the baseline requirements established under the current set of risk-management standards. The Board also understands the need to weigh the risk-reduction benefits of and any burden that may be imposed by a particular rulemaking. Among other things, the Board has compared the proposed standards with the baseline standards under current Regulation HH to identify and analyze potential incremental burden, and is considering establishing different effective dates for certain proposed standards that may require additional time for a designated FMU to implement.

Comparison to baseline requirements under current Regulation HH. Consistent with current Regulation HH and the Board's longstanding approach in its supervision and oversight of FMUs, the proposed standards generally employ a flexible, principles-based approach to permit a designated FMU to employ a cost-effective method for compliance, so long as the method chosen achieves the risk-mitigation goals of the standard. In addition, the standards are intended to permit the risk-management goals to be pursued in light of evolving market conditions, technology, and risk-management techniques and systems. In several cases, however, the Board proposes explicit minimum requirements, including minimum frequencies for testing requirements and methods of calculating a minimum level of financial resources, which are drawn from PFMI key considerations and explanatory notes. The Board selected explicit minimum requirements that the Board believes a designated FMU must be able to meet in order to achieve the overall objective of a particular standard. Although some of these additions constitute new or heightened requirements relative to the current requirements in Regulation HH, many of the additions represent the Board's existing supervisory practice with respect to designated FMUs for which the Board is the Supervisory Agency.

In comparing the proposed revised risk-management standards to the current standards in Regulation HH, the Board has identified three broad types of revisions: (1) Those that essentially carry over a current standard under Regulation HH; (2) those that establish a standard that is new to Regulation HH, but represent an expectation that is a prudential objective of the Board's current supervisory process or a specific Board-imposed requirement for a particular designated FMU; and (3) those that establish a standard that is new or heightened to both Regulation HH as well as either the current supervisory process or a specific Board-imposed requirement for a particular designated FMU.[15] The Board recognizes that the incremental burden associated with each type of proposed revision may vary by designated FMU.

A majority of the proposed revisions to § 234.3(a) are similar in content and application to existing Regulation HH standards. In these cases, differences between the current standard and the proposed standard generally result from conforming edits to harmonize the originally separate standards into one set of standards. These proposed standards include proposed § 234.3(a)(1) on legal basis, proposed § 234.3(a)(4)(i) on credit risk, proposed § 234.3(a)(8) on settlement finality, proposed § 234.3(a)(9) on money settlements, and proposed § 234.3(a)(18) on access and participation requirements. The Board does not anticipate that minor differences in wording of the rule text will impose any significant incremental burden on designated FMUs that are already in compliance with Regulation HH.

With respect to some other proposed revisions to § 234.3(a), although they establish a standard or parts thereof that is new to Regulation HH, the designated FMU may already meet the standard through the Board's current supervisory process or as a part of a specific Board-imposed requirement. These proposed revisions include paragraphs (a)(3)(i) and (ii) on the comprehensive management of risks, (a)(4)(ii) on credit risk, and (a)(7)(i)–(v) on liquidity risk. There may be minimal costs associated with demonstrating compliance with the proposed revision and incorporating it into any formal compliance documentation. The Board, however, does not anticipate this type of revision to impose significant burden.

Other proposed revisions to § 234.3(a) establish a standard or parts thereof that is new or heightened to both Regulation HH and the current supervisory process. These proposed revisions, depending on the designated FMU, may include proposed § 234.3(a)(3)(iii) on plans for recovery or orderly wind-down, proposed § 234.3(a)(15)(i) and (ii) on maintaining sufficient liquid net assets funded by equity and a viable capital plan, and proposed § 234.3(a)(19) on tiered participation arrangements, which the Board recognizes may impose costs on designated FMUs to implement. The costs can be viewed as a designated FMU's incremental expenses in establishing and maintaining the systems and procedures necessary to meet the standards over and above the risk-management measures it has currently in place to comply with the current Regulation HH standards or would have otherwise adopted for business reasons. If these costs are passed on to a designated FMU's participants, they can take the form of higher transaction costs and margin or collateral costs. These costs should be weighed against the societal benefit of stability in the financial system and the economy more broadly.

These new standards are meant to help achieve the financial stability and systemic risk-reduction objectives of Title VIII of the Act. As such, the key benefits of these proposed standards are in minimizing the probability of recurrent financial crises and avoiding events in which firm-level distress leads to a market-wide disruption or even an economic recession. Such benefits are difficult to quantify, because it would require the computation of the probability of a crisis with and without regulatory change. Such computations generally cannot produce credible figures. To the extent possible, the Board provides instead its qualitative reasons for proposing requirements that may impose an incremental cost, including its explanation of the importance of these requirements to risk management and systemic-risk reduction. The Board provides this explanation in the discussion for each standard below.

Effective and compliance dates. The Board recognizes that certain new or heightened requirements may require more time for designated FMUs to implement and achieve compliance. Any delay in implementation, however, must be balanced against the risks presented to the financial system during the period that a designated FMU is not required to comply with an applicable risk-management standard. As discussed below, the Board therefore is

[15] The Board may have additional statutory authority over a particular designated FMU that is subject to Regulation HH, which would allow the Board to apply other requirements or conditions on the FMU in those contexts. For example, the Board may set conditions on an FMU's membership in the Federal Reserve System under the Federal Reserve Act.

considering different compliance dates to provide sufficient lead time for certain new or heightened requirements.

The Board is proposing that the requirements proposed in § 234.3(a) become effective and require compliance 30 days from the date the final rule is published in the **Federal Register,** with the exception of establishing plans for recovery or 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 is proposing that compliance with these proposed requirements be required six months from publication of the final rule.

The Board believes the revised risk-management standards as proposed, including any that may impose incremental burden to designated FMUs, achieve an appropriate balance between reducing systemic risk through enhanced risk management of designated FMUs and minimizing incremental burden associated with implementing any new or heightened requirements. With respect to the set of the risk-management standards set out in the proposed rule, the Board is specifically requesting comment on the following questions:

Q.0.1. Are the proposed standards reasonable risk-mitigation tools?

Q.0.2. Is six months from publication of the final rules appropriate for designated FMUs to comply with the proposed requirements identified above (that is, proposed §§ 234.3(a)(3)(iii), (a)(4)(vi), (a)(7)(viii), (a)(15)(i) and (ii), (a)(19), and (a)(23)(iv))? Should the Board propose alternative compliance dates for these or any other proposed requirements?

Q.0.3. What are the costs that are imposed by the proposed standards? Are there ways to meet the proposed standards other than those identified as examples in the discussion on each standard below?

Q.0.4. What are other benefits that are achieved by the proposed standards?

1. Legal Basis

Proposed § 234.3(a)(1) requires the designated FMU to have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.[16] A designated FMU's legal basis consists of its rules, procedures, and contracts as well as the legal framework (that is, applicable laws and regulations) under which it operates. The legal basis defines, or provides the foundation for relevant parties to define, the rights and obligations of the designated FMU, its participants, and other relevant stakeholders (such as customers of participants, custodian banks, settlement banks, and service providers). Most risk-management tools rely on assumptions regarding the manner and time at which these rights and obligations arise through the designated FMU's operations. Sound and effective risk management, therefore, is dependent on the enforceability of these rights and obligations. If the legal basis for a designated FMU's activities and operations is inadequate or uncertain, the designated FMU, its participants, and their customers may face unexpected or unmanageable credit or liquidity risks, which may also create or amplify systemic risks.

While the Board acknowledges that an FMU cannot control or dictate its governing laws or regulations, a designated FMU must take steps to manage its legal risk within this environment, such as by conducting legal due diligence to ensure that its rules, procedures, and contractual provisions are consistent with and enforceable under the legal framework in each applicable jurisdiction. In particular, these rules, procedures, and contracts should be clear regarding material aspects of the designated FMU's activities, such as settlement finality, netting arrangements, and default procedures. If a designated FMU operates across multiple jurisdictions, it must confirm the legal basis for all material aspects of its activities in all relevant jurisdictions to mitigate legal risks.

A designated FMU must be able to articulate, in a clear and understandable manner, its compliance with applicable laws and regulations and the enforceability of its rules, procedures, or contracts under those law and regulations. When appropriate, a designated FMU may need to obtain well-reasoned and independent legal opinions or analyses on the material aspects of its activities. Further, when evaluating the enforceability of its rules and procedures, a designated FMU may need to consider different scenarios, such as implementation of its plans for recovery or orderly wind-down, the insolvency or resolution of a participant, and the potential for conflict-of-laws issues, and must take steps to mitigate any identified legal risks.

2. Governance

Proposed § 234.3(a)(2) sets out the requirements that apply to a designated FMU's governance arrangements.[17] Governance is the set of relationships among the designated FMU's stakeholders, including its owners, board of directors (or an equivalent body), management, participants, and other relevant parties (such as customers of participants, other interdependent FMUs, and the broader market). Governance arrangements define the structure under which the designated FMU's board of directors and management operate.

Sound governance is essential to achieving comprehensive and effective risk management at a designated FMU. The way in which a designated FMU's governance arrangements are structured, including the definition of its lines of authority, responsibility, and accountability, affects the fundamental decisionmaking within the designated FMU, including decisionmaking involving risk management. Furthermore, governance arrangements that promote sound risk-management decisions and practices, in turn, help provide a basis for compliance with the other risk-management standards in Regulation HH. For these reasons, effective, accountable, and transparent governance arrangements are critical to the effective risk management of a designated FMU.

Under proposed § 234.3(a)(2)(i), a designated FMU must establish and document clear and transparent governance arrangements. Clarity and transparency in a designated FMU's governance arrangements promote accountability by providing relevant stakeholders with the information necessary to understand how decisions are made and what the chosen course of action is intended to accomplish. Key components of an FMU's governance arrangements that must be clear and transparent include the (a) role and composition of the board and any board committees, (b) senior management structure, (c) reporting lines between management and the board, (d)

[16] For similar corresponding standards under current Regulation HH, see § 234.3(a)(1) for payment systems and § 234.4(a)(1) for central securities depositories and central counterparties.

[17] For similar corresponding standards under current Regulation HH, see § 234.3(a)(10) for payment systems and § 234.4(a)(8) for central securities depositories and central counterparties.

ownership structure, (e) internal governance policy, (f) design of risk-management and internal controls, (g) procedures for the appointment of board members and senior management, and (h) processes for ensuring performance accountability.

Under proposed § 234.3(a)(2)(ii) and (iii), a designated FMU must develop governance arrangements that promote the safety and efficiency of its operations and support the stability of the broader financial system and other relevant public interest considerations. The stability of the financial system is an important public interest consideration for all designated FMUs. Certain designated FMUs may have other relevant public interest considerations, such as fostering fair and efficient markets, market transparency, and investor protection. The Board can provide guidance as needed, through ongoing dialogue during the supervisory process, to assist a designated FMU in identifying other public interests that are relevant to its operations.

Further, proposed § 234.3(a)(2)(iii) requires a designated FMU to develop governance arrangements that support the legitimate interests of relevant stakeholders. These stakeholders include the owners of the FMU, participants of the FMU, and participants' customers. Although the mechanisms for involving stakeholders may depend on the type of stakeholder and the particular designated FMU, in general, the involvement of relevant stakeholders in the designated FMU's governance processes, particularly in the determination of the FMU's risk tolerance, the formal objective-setting process, the design of its risk-management framework, and the strategic decisionmaking process may enhance the effectiveness of the FMU's overall risk management.

In addition, proposed § 234.3(a)(2)(iv)(A) and (B) require the designated FMU to define the structure under which its board and management operate by setting out their responsibilities and defining how they will interact. Proposed § 234.3(a)(2)(iv)(A) requires a designated FMU to ensure that its governance arrangements provide clear and direct lines of responsibility and accountability, and proposed § 234.3(a)(2)(iv)(B) requires that the board of directors and senior management have roles and responsibilities that are clearly specified. These elements must be clear, because the board of directors and senior management are ultimately responsible for managing a designated FMU's business and operations.

Proposed § 234.3(a)(2)(iv)(C) and (D) address the composition of the board of directors. Proposed § 234.3(a)(2)(iv)(C) requires that the designated FMU's governance arrangements be designed to ensure its board consists of suitable individuals with appropriate skills to fulfill its multiple roles identified under proposed § 234.3(a)(2)(iv)(B). For example, such arrangements may include a process to identify and regularly review the desired set of skills and experience for the board as a whole and for individual board members. Such arrangements may also include processes and procedures for recruiting board members. Proposed § 234.3(a)(2)(iv)(D) requires that the board include a majority of individuals who are not executives, officers, or employees of the designated FMU or an affiliate of the designated FMU; such individuals may offer different perspectives and can help strengthen the board's decisionmaking process.[18] [19]

Proposed § 234.3(a)(2)(iv)(E) requires the board to establish policies and procedures to identify, address, and manage board member conflicts of interest and to review the performance of the board as a whole and of the individual members on a regular basis. Proposed § 234.3(a)(2)(iv)(F) requires the board to establish a clear, documented risk-management framework that includes the designated FMU's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decisionmaking in crises and emergencies.

Under proposed § 234.3(a)(2)(iv)(G), governance arrangements must be designed to ensure that the designated FMU's senior management has the appropriate experience, skills, and integrity necessary to discharge operational and risk-management responsibilities. For example, the arrangements may include a process to identify and regularly review the desired set of skills and experience for the individual senior management positions. With respect to ensuring the integrity of senior management, a designated FMU may establish rules of conduct, provide ethics guides and training, and conduct background checks.

Proposed § 234.3(a)(2)(iv)(H) and (I) address the important role that the risk-management and internal audit functions serve in a designated FMU. A designated FMU must have governance arrangements designed to ensure that its risk-management and internal audit functions have sufficient authority, resources, independence, and access to the board of directors to achieve risk-management objectives. In addition, the reporting lines for risk management must be clear and separate from those for other operations of the designated FMU and there must be an additional direct reporting line to a non-executive director on the board via a chief risk officer (or equivalent). Further, the risk-management and internal audit functions must each be overseen by a committee, although not necessarily the same committee, of the board of directors. The committee responsible for advising the board with respect to the designated FMU's risk management or for overseeing the audit function must be chaired by a sufficiently knowledgeable individual who is independent of the designated FMU's senior management and be composed of a majority of members who are non-executive members.

Finally, proposed § 234.3(a)(2)(iv)(J) requires that the designated FMU's governance arrangements be designed to ensure that major decisions of the board of directors are clearly disclosed to relevant stakeholders, including the designated FMU's owners, participants, and participants' customers, and, where there is a broad market impact, the public. Major decisions include those that would affect the nature or overall level of risk that the designated FMU presents to the relevant stakeholders. Information should be disclosed to the extent that it would not risk prejudicing the security and integrity of the FMU or its participants or divulge commercially sensitive information, such as trade secrets or other intellectual property.

With respect to proposed § 234.3(a)(2), the Board requests comment on the following specific questions:

Q.2.1 Should the Board specify in the rule text ''other relevant public interest considerations'' for a specific type of or even for a particular designated FMU?

[18] For these purposes, ''affiliate'' means a company that controls, or is controlled by, or is under common control with the designated FMU. Control of a company means (a) ownership, control, or holding with power to vote 20 percent or more of a class of voting securities of the company; or (b) consolidation of the company for financial report purposes.

[19] The Board recognizes that the language on the composition of the board of directors under Principle 2 of the PFMI is phrased differently. Principle 2 states that the board of directors typically requires the inclusion of non-executive board member(s). The Board believes the intended effect of having non-executive board members (that is, the ability to make objective decisions), is better achieved when they represent the majority on the board of directors.

Q.2.2 Should the Board set a specific minimum percentage of individuals on the board of directors that may not be executives, officers, or employees of the designated FMU or an affiliate of the designated FMU? Alternatively, should the standard set any requirements for the participation of outside directors (that is, directors who are not participants in or management of the designated FMU)?

Q.2.3 Should the Board require specifically that the chairman 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?

Q.2.4 Should there be a requirement for the regular reviews of the performance of the board of directors and its individual board members to include periodic independent assessments?

Q.2.5 Should the designated FMU's board of directors be required to have a committee of the board of directors that only has audit responsibilities to which the audit function reports and a risk committee of the board of directors that only has risk-management responsibilities to which the risk-management function reports? Alternatively, should the designated FMU's audit and risk-management functions be required to report directly to the entire board of directors?

Q.2.6 What additional guidance should the Board provide to a designated FMU's board of directors in order to identify a ''major decision'' that must be disclosed to relevant stakeholders under the rule?

3. Framework for the Comprehensive Management of Risks

Proposed § 234.3(a)(3) requires the 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. A comprehensive risk-management framework is a set of objectives, policies, procedures, and systems that supports the designated FMU in identifying risks, determining a risk-tolerance level, and managing risks. The framework provides an overall mechanism for the designated FMU to address the manner in which the risks, addressed individually by the other proposed standards, relate to and interact with each other. For example, attempts to reduce or limit one type of risk could lead to the concentration or creation of different risks, and, although some risks do not appear to be significant in isolation, they can become material when combined with others. Therefore, robust risk management involves taking an integrated and comprehensive approach to risk in order to understand and manage effectively this interplay among individual risks.

Proposed § 234.3(a)(3)(i) requires a designated FMU to have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage risk. These policies, procedures, and systems must address the full range of risks and, in particular, interactions among these risks that can arise in or are borne by the designated FMU, including those posed by other entities as a result of interdependencies. Proposed § 234.3(a)(3)(ii) requires a designated FMU to have risk-management policies, procedures, and systems that enable the designated FMU to identify, measure, monitor, and manage the material risks that it poses to other entities as the result of interdependencies. Such entities include other FMUs, settlement banks, liquidity providers, and services providers. Policies, procedures, and systems must also be designed for a dynamic environment, which includes taking into account the possibility of various economic and financial shocks that may affect the risks presented to or arising in the designated FMU. The entire risk-management framework, including the assumptions used and the component frameworks established for individual risks, must be reviewed and updated periodically to reflect changes in market conditions or the designated FMU's operations.

Even with comprehensive risk management, however, a designated FMU may face extreme scenarios that require extraordinary actions by the FMU so that it can continue to provide its critical operations and services as a going concern. The designated FMU's management of these extreme events requires comprehensive, thoughtful planning to avoid disrupting the markets it serves. Therefore, proposed § 234.3(a)(3)(iii) requires a designated FMU to develop and maintain recovery or orderly wind-down plans that identify the designated FMU's critical operations and services related to payment, clearing, or settlement; scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern, including scenarios involving uncovered credit losses (as described in proposed § 234.3(a)(4)(vi)(A)), uncovered liquidity shortfalls (as described in proposed § 234.3(a)(7)(viii)), and general business losses (as described in proposed § 234.3(a)(15)); and criteria that could trigger the implementation of the recovery or orderly wind-down plans. Proposed § 234.3(a)(3)(iii) further requires the recovery or orderly wind-down plans to include rules, procedures, policies, and any other tools the designated FMU would use in a recovery or wind-down to address the scenarios identified by the designated FMU; procedures to ensure timely implementation of the plans in the scenarios identified by the designated FMU; and procedures for informing the Board, as soon as practicable, if the designated FMU is considering initiating the recovery or orderly wind-down plan.

Effective plans not only address the specific actions or measures a designated FMU would take during a recovery or orderly wind-down, but also the *ex ante* determination of key individuals who are responsible for the plan (including responsibilities for overseeing the development, maintenance, and implementation of the plans), the incentives that the plan creates for the designated FMU's participants and the participants' customers, and identification of key areas of the designated FMU that may affect (for example, organization structure, interconnectedness and interdependencies of existing processes or resources) or be affected by (for example, funding, liquidity, or capital needs and resources available) the strategies planned.[20] As mentioned in the discussion on legal basis in proposed § 234.3(a)(1), one way for the designated FMU to ensure the soundness of its recovery and orderly wind-down strategies is to include in its plans an analysis of the legal implications and risks involved. The plans should be reviewed and tested, for example by carrying out periodic simulation and scenario exercises, at least annually or following material changes to the designated FMU's operations or risk profile, and the designated FMU should update these

[20] See CPSS–IOSCO *Recovery of Financial Market Infrastructures* consultative report at *http://www.bis.org/publ/cpss109.pdf.* See also Financial Stability Board, *Key Attributes of Effective Resolution Regimes for Financial Institutions* report at *http://www.financialstabilityboard.org/publications/r_111104cc.pdf,* and the Board's Regulation QQ (joint rule with the FDIC) for a similar requirement for resolution plans with respect to nonbank financial companies supervised by the Board and bank holding companies with consolidated assets of $50 billion or more. *http://www.federalreserve.gov/bankinforeg/reglisting.htm#QQ.*

plans as needed following the completion of each test and review.

Proposed § 234.3(a)(3)(iii) is a new requirement and may impose a cost on a designated FMU with respect to the analysis, development, and maintenance of plans for recovery or orderly wind-down. The proposed rule, however, is intended to help a designated FMU respond to extreme scenarios on a timely basis and may help the designated FMU develop early indicators for these types of scenarios so they can be avoided. *Ex ante* identification of, and planning for, scenarios that could lead to failure, as well as dissemination of such information to participants, also can increase market certainty. Ultimately, this requirement is intended to prevent a disorderly wind-down of a designated FMU and the resulting liquidity or credit problems to other financial institutions or markets.

With respect to proposed § 234.3(a)(3), the Board requests comment on the following specific questions:

Q.3.1 Should an annual or longer minimum frequency be established for the proposed ''periodic review'' of the designated FMU's comprehensive risk-management framework? Commenters should discuss the anticipated costs or benefits of any suggested minimum frequency. Alternatively, should individual minimum frequencies be established for each particular designated FMU, given the design or type of designated FMU?

4. Credit Risk

Proposed § 234.3(a)(4) requires a designated FMU to measure, monitor, and manage effectively its credit risk to its participants and those arising from its payment, clearing, and settlement processes. Credit risk arises when a counterparty such as a participant, settlement bank, custodian, or other FMU, is unable to meet fully its financial obligations when due or at any time in the future.[21] A default by one or more of a designated FMU's participants could prevent the designated FMU from meeting financial obligations to its other participants, consequently causing the other participants to fail to meet their other financial obligations when due. The failure of a designated FMU to manage appropriately its credit risks, therefore, has the potential to increase systemic risk throughout the broader financial system and thus threaten financial stability. To mitigate the risk of such a systemic impact, a designated FMU must manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes.

Under proposed § 234.3(a)(4), a designated FMU must establish a comprehensive framework to manage its credit exposures to its participants and any other exposures arising from its payment, clearing, and settlement processes. This framework should allow the designated FMU to identify sources of credit risk, measure and monitor its credit exposures, and use appropriate risk-management tools to control the risks generated by such exposures. Credit exposure can be separated into two measurable components: Current exposure and potential future exposure.[22] Current exposure is relatively straightforward to measure and monitor, while potential future exposure typically requires modeling and estimation. For example, a designated FMU that operates a payment system would face current exposure when it extends intraday credit to its participants and potential future exposure if the value of any collateral that participants provide to secure the intraday credit falls below the amount of the credit extended.[23]

Under proposed § 234.3(a)(4), a designated FMU also must maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.[24] The Board acknowledges that a designated FMU cannot be completely certain that it is covering its credit exposure to each participant fully, because measuring potential future exposure likely requires modeling and estimation. Therefore, although the designated FMU's current exposures must be covered fully, its potential future exposures must be covered fully with a high degree of confidence. In the case of a designated FMU that operates as a central counterparty, ''high degree of confidence'' means establishing initial margin requirements that, at a minimum, meet a single-tailed confidence level of at least 99 percent of the estimated distribution of future exposure.

Additional prefunded financial resources. Proposed § 234.3(a)(4)(i) and (ii) require a designated FMU that operates as a central counterparty to maintain additional prefunded financial resources to cover a portion of the residual risk (or tail risk) of disruptions that could occur in extreme but plausible market conditions, which could cause a central counterparty's losses to exceed the margin posted if a participant defaulted.[25] Specifically, proposed § 234.3(a)(4)(i) requires a designated FMU that operates as a central counterparty to maintain additional prefunded resources sufficient to cover its credit exposure under a wide range of significantly different stress scenarios, including the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure net of any applicable margin to the central counterparty in extreme but plausible market conditions (a ''Cover One'' requirement).

Alternatively, under proposed § 234.3(a)(4)(ii), the central counterparty may instead 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, including the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure net of any applicable margin to the central counterparty in extreme but plausible market conditions (a ''Cover Two'' requirement). Under the proposal, the Board may require a central counterparty to meet the Cover Two requirement when that central counterparty is involved in activities with a more-complex risk profile (such as clearing products with discrete jump-to-default risks or that are highly correlated with potential participant defaults) or is determined by another

[21] For similar corresponding standards under current Regulation HH, see § 234.3(a)(3) and (5) for payment systems, § 234.4(a)(15) for central securities depositories, and § 234.4(a)(16) and (18) for central counterparties. The current standards bundle the management of credit and liquidity risks. Separating credit risk and liquidity risk recognizes that there are different tools that could be used to identify, monitor, and manage these two distinct risks.

[22] Current exposure is the larger of zero or the market value (replacement cost) of a transaction or portfolio of transactions within a netting set with a counterparty that would be lost upon the default of the counterparty. Potential future exposure is the maximum exposure estimated to occur at a future point in time at a high level of statistical confidence.

[23] Proposed § 234.3(a)(5) provides additional requirements relating to collateral.

[24] In a case in which a designated FMU operates a payment system or a securities settlement system, financial resources would include collateral and other equivalent financial resources, as described in proposed § 234.3(a)(5) on collateral. In the case where a designated FMU operates as a central counterparty, financial resources would include margin and other prefunded financial resources, as described in proposed § 234.3(a)(5) and (6) on collateral and margin, respectively.

[25] Proposed § 234.3(a)(4)(iv) prohibits a designated FMU that is a central counterparty from counting assessment powers for additional default or guaranty fund contributions (i.e., default or guaranty fund contributions that are not prefunded) in its calculation of financial resources available to meet the total financial resource requirement to cover its credit exposures.

jurisdiction to be systemically important in that jurisdiction.

Stress testing. Stress testing is a critical component of a designated FMU's financial risk-management framework. Under proposed § 234.3(a)(4)(iii), a designated FMU that is a central counterparty must determine the amount and regularly test the sufficiency of its total financial resources in the event of a participant default or multiple participant defaults in extreme but plausible market conditions through stress testing. Under the proposal, a designated FMU must, (A) on a daily basis, conduct 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, conduct a comprehensive and thorough analysis of the existing stress scenarios, models, and underlying parameters and assumptions such that the designated FMU meets its required level of default protection in light of current and evolving market conditions; and (C) have clear procedures to report the results of its stress tests to decisionmakers at the central counterparty and use these results to evaluate the adequacy of and adjust, if necessary, its total financial resources.

Stress testing helps ensure that the designated FMU has sufficient total financial resources under current and evolving market conditions. When conducting stress tests, a designated FMU should use a wide range of significantly different stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods, including, at a minimum, relevant peak historic price volatilities, shifts in other market factors, such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a range of forward-looking stress scenarios in a variety of extreme but plausible market conditions. The results of these stress tests inform the decisionmakers such as the board of directors or the appropriate committee of the board within the organization, who must use the results to evaluate the adequacy of and adjust its total financial resources. Clearly established and documented procedures allow for these results to be reported to the appropriate parties for prompt action and contribute to the overall effectiveness of using stress testing as a risk-management tool.

Model validation. Under proposed § 234.3(a)(4)(v), a designated FMU must validate its risk-management models used to determine the sufficiency of its total financial resources at least annually.[26] A validation should be comprehensive, addressing the justification of the approach and assumptions underlying the model, the calibration of critical parameters and other model settings, and the reliability of the model and programming. Model validation can either be undertaken by outside experts or by internal staff with the necessary expertise. In either case, the validator must be 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.

Proposed § 234.3(a)(4)(iii) through (v) contain two new requirements to Regulation HH related to the frequency of stress testing conducted by designated FMUs that are central counterparties and to model validation by all designated FMUs that face credit risk. Broadly, stress testing and validation of credit risk management models are consistent with past Board supervisory practice. The proposed rule, however, establishes minimum frequencies for such stress testing and model validation. The daily and monthly stress testing requirements help to promote robust management of credit risk by increasing the availability of stress testing data available to a central counterparty to assess its financial resources and the performance of its models. The annual model validation requirement also promotes robust credit risk management by ensuring the designated FMU's risk-management models continue to reflect current economic and financial conditions, in part by allowing the FMU to both uncover and track any limitations to its models.

Rules and procedures to address uncovered credit losses. In certain extreme circumstances, the post-liquidation value of the collateral and other financial resources held by a designated FMU to fulfill its credit-risk requirement may not be sufficient to cover fully realized credit losses. A designated FMU must make plans for responding to such a shortfall. Proposed § 234.3(a)(4)(vi) requires the designated FMU to establish rules and procedures that explicitly address how potentially uncovered credit losses would be allocated, including how the designated FMU would repay any funds it may borrow from liquidity providers. This proposed provision represents an enhancement of existing expectations. The proposed rule also requires the designated FMU to establish rules and procedures that explicitly describe how the designated FMU plans to replenish any financial resources it may use during a stress event, including a participant default, so that it may continue to operate in a safe and sound manner. This proposed provision represents a new requirement.

Proposed § 234.3(a)(4)(vi) contains an enhanced requirement that designated FMUs have rules and procedures that explicitly address how potentially uncovered credit losses would be allocated, including repayment of any funds a designated FMU might borrow from liquidity providers, and a new requirement that designated FMUs have rules and procedures that address the FMU's process to replenish any financial resources that the FMU might employ in a stress event. This requires a designated FMU to plan for and be transparent with respect to its procedures for extreme credit events. It is also a critical step in the designated FMU's process for developing its recovery or orderly wind-down plans, as described in proposed § 234.3(a)(3)(iii).

The process of planning for extreme events such as uncovered credit losses helps prepare the designated FMU for managing these events, thereby reducing the likelihood that the designated FMU will fail to settle its obligations. Planning for replenishment of financial resources increases the likelihood that the designated FMU will be able to continue to operate after an extreme credit event occurs. The transparency of the designated FMU's rules and procedures will also help participants plan and prepare for such an event.

With respect to proposed § 234.3(a)(4), the Board requests comment on the following specific question:

Q.4.1 In considering whether to apply a Cover Two requirement for a central counterparty, should the Board consider factors other than whether the central counterparty is involved in activities with a more-complex risk profile and whether the central counterparty is determined by another jurisdiction to be systemically important

[26] This validation must include validation of models the designated FMU uses to comply with the collateral provisions under proposed § 234.3(a)(5) and to determine initial margin under proposed § 234.3(a)(6). It should also include validation of models the designated FMU uses to size its total financial resources and to conduct any other material risk-management functions.

in that jurisdiction? Should the approach used to make the determination by another jurisdiction that a designated FMU is systemically important in that jurisdiction be similar to the approach used by the Council in order for the determination to be a factor in the Board's consideration of whether to impose a Cover Two requirement?

5. Collateral

Proposed § 234.3(a)(5) requires 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 set and enforce appropriately conservative haircuts and concentration limits, in order to achieve a high degree of confidence in the adequacy of the value of the collateral in the event of liquidation and that the collateral can be used in a timely manner.[27] Collateralizing credit exposures protects an FMU against potential losses in the event of a participant default because the FMU can liquidate the defaulting participant's collateral to cover the losses. A designated FMU requiring its participants to post collateral may also encourage these participants to manage the risks that they may pose to the FMU and other participants to avoid losing their collateral.

Collateral with low credit, liquidity, and market risks protects the FMU during stressed market conditions, when both a default may become more likely and collateral quality may deteriorate. A designated FMU must generally limit the assets it routinely accepts as collateral to those with low credit, liquidity, and market risks, such as currency and government securities issued by the United States, or other highly marketable collateral, including high quality, liquid, general obligations of another sovereign nation, in order to be confident of the collateral's value and the FMU's ability to access and use that collateral in the event of a participant default, especially during stressed market conditions.

A designated FMU applies haircuts to collateral it collects in order to protect itself from losses resulting from declines in the market value of the asset posted in the event that the collateral taker needs to liquidate that collateral. Haircuts represent a risk control measure and are estimated to be the possible percentage decrease in liquidation value from the current market value until the designated FMU can liquidate the collateral. A precursor to ensuring the haircuts applied are appropriate, therefore, includes assigning an accurate current value to the collateral accepted, which depends on prudent practices for valuation, including marking collateral to market on a daily basis.

Proposed § 234.3(a)(5)(i) through (iii) establish requirements related to a designated FMU's collateral practices and specifically, on haircut procedures. Proposed § 234.3(a)(5)(i) requires a designated FMU that accepts collateral to establish prudent valuation practices and develop haircuts that are tested regularly and take into account stressed market conditions. Further, proposed § 234.3(a)(5)(ii) requires the designated FMU to establish stable and conservative haircuts that reflect relevant periods of stressed market conditions to reduce the need for procyclical adjustments. In a stressed market, a designated FMU may require the posting of additional collateral both because of the decline of asset prices and because of an increase in haircut levels. Such actions could exacerbate market stress and contribute to driving asset prices down further and result in additional collateral requirements. This cycle could exert further downward pressure on asset prices. Calibrating haircuts to incorporate stressed market conditions is, therefore, essential to help mitigate the need for a designated FMU either to require large amounts of additional collateral, or to significantly increase the size of the haircut to address declining asset prices. Proposed § 234.3(a)(5)(iii) requires a designated FMU to validate annually its haircut procedures, as part of its risk-management model validation under proposed § 234.3(a)(4)(v).

Proposed § 234.3(a)(5)(iv) requires a designated FMU to avoid concentrated holdings of certain assets where it could significantly impair the ability to liquidate such assets quickly without significant adverse price effects. One way of avoiding concentrated holdings is through the establishment of concentration limits that restrict participants' ability to provide more than a specified amount or percentage of a specific asset as collateral. Imposing concentration charges on participants that maintain holdings beyond this limit may help the designated FMU create disincentives for such concentrations. Whether concentration limits are needed will depend, in part, on the assets accepted as collateral.

Proposed § 234.3(a)(5)(v) requires that a designated FMU use a collateral management system that is well-designed and operationally flexible. Among other things, the collateral management system must accommodate changes in the ongoing monitoring and management of collateral. It should also allow for the timely valuation of collateral and execution of any collateral or margin calls. The designated FMU should allocate sufficient resources to its collateral management system to ensure an appropriate level of operational performance, efficiency, and effectiveness.

6. Margin

Proposed § 234.3(a)(6) requires a designated FMU that operates as a central counterparty to cover its credit exposures to its participants for all products by establishing a risk-based margin system.[28] Margin is the collateral that a central counterparty collects in order to help manage and mitigate the credit exposures posed by its participants' open positions. It is one of the core tools a central counterparty uses to manage its credit exposures. Margin systems typically differentiate between initial margin, which covers potential future exposure over the appropriate close-out period in the event of a default, and variation margin, which a central counterparty collects and pays out to reflect changes in current exposures resulting from realized changes in market prices.

Collecting sufficient margin protects the central counterparty and its non-defaulting participants against potential losses in the event of a participant default because the central counterparty can apply the defaulting participant's margin to cover the defaulter's obligations and any resulting losses. To promote robust risk management, therefore, a designated FMU that operates as a central counterparty must establish a margin system that is risk-based and reviewed regularly to ensure sufficient margin is collected. When designing and establishing an effective margin system, a designated FMU should consider the underlying concept and methodology; the attributes of each product, portfolio, and market the designated FMU serves; the availability and use of price data; the calculation of variation and initial margin; the operational capacity to make margin calls; and appropriate parameters and assumptions. The Board proposes the following provisions to address these aspects of margin systems.

Under proposed § 234.3(a)(6)(i), a designated FMU that operates as a central counterparty is required to

[27] For similar corresponding standards under current Regulation HH, see § 234.3(a)(5) for payment systems, § 234.4(a)(15) for central securities depositories, and § 234.4(a)(17) for central counterparties.

[28] The proposed standard replaces and builds on § 234.4(a)(17) under current Regulation HH.

establish a risk-based margin system that 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 the margin model's design choices, methods used, variables selected, theoretical bases, key assumptions, and limitations. These elements are important for demonstrating the quality of the model, including showing whether judgment exercised in its design and construction is well-informed and carefully considered. Under proposed § 234.3(a)(6)(ii), the margin levels applied by the central counterparty must be commensurate with the risks and particular attributes of each product, portfolio, and markets it serves, including taking into account the complexity of the underlying instruments.

Proposed § 234.3(a)(6)(iii) and (iv) establish requirements related to a central counterparty's price data for purposes of its margin system. First, a central counterparty's margin system must be based on a reliable source of timely price data for the central counterparty to cover sufficiently its credit exposures to its participants. A central counterparty must use high-quality price data from continuous, transparent, and liquid markets where available. When such high-quality price data is unavailable, a central counterparty must acquire pricing data from other sources. A central counterparty should evaluate developing its own pricing process and obtaining third-party pricing services. In either case, the designated FMU must continually evaluate the data's reliability and accuracy.

Under proposed § 234.3(a)(6)(v), a central counterparty's margin system must mark participant positions to market and collect variation margin at least daily and have the operational capacity to make intraday margin calls and payouts, both scheduled and unscheduled, to participants. A central counterparty must collect variation margin at least daily (and, when appropriate, intraday) to prevent the accumulation of current exposures and mitigate potential future exposures.

Proposed § 234.3(a)(6)(vi), a central counterparty's system must also be able to generate initial margin requirements sufficient to cover potential changes in the value of future exposure to each participant's position during the interval between the last variation margin collection and the close out of positions following a participant default. In particular, the margin system must (A) ensure 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) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the central counterparty, including in stressed market conditions.

A key assumption of effective margin models is the close-out period, which is an estimate of how long it would take the designated FMU to liquidate or completely hedge the market risk of one or more participants' portfolios. For purposes of the proposed rule, an appropriate close-out period conservatively reflects market liquidity under stressed market conditions for each product that the central counterparty clears. A central counterparty must document the close-out periods and related analysis for each product type that it clears.

A designated FMU's margin model is also dependent on a number of other model parameters and assumptions, which may include the selection of an appropriate sample period of historical data to use in establishing its initial margin model for each product that it clears. For these purposes, an appropriate sample period is long enough to provide an accurate representation of historical price movements, while also being sensitive to recent price and volatility levels. Additionally, an effective margin system eliminates the potential for specific wrong-way risk, which occurs when the default of a participant is highly correlated with a decrease in value of the participant's cleared portfolio. An example of specific wrong-way risk is when a participant sells single-name credit-default swap protection on debt issued in its own name or on the names of any affiliates.

A central counterparty must also seek to avoid application of its margin arrangement in a manner that could exacerbate or cause financial instability. For example, in a period of rising credit risk, if the central counterparty requires initial margin in excess of the amount determined by the margin model, it may add to the market stress and volatility. In general, margin requirements should be, to the extent possible, designed to be forward-looking, stable, and conservative that are specifically designed to limit the need for destabilizing, procyclical changes. To support this objective, a central counterparty could consider increasing the size of its prefunded default arrangements to limit the need and likelihood of large or unexpected margin calls in times of market stress.

Under proposed § 234.3(a)(6)(vii), the designated FMU must monitor on an ongoing basis and regularly review, test, and verify its margin system. Specifically, the designated FMU must conduct daily backtests and monthly sensitivity analyses, performed more frequently during stressed market conditions or significant fluctuations in participant positions. Further, the central counterparty must also provide for annual validation of its margin models and related parameters and assumptions, as part of its risk-management model validation under proposed § 234.3(a)(4)(v).

The Board expects backtests to incorporate only the portions of the margin model that are reflected in the available historical data. For example, a central counterparty might add an additional concentration charge to reflect the difficulty in unwinding a large position, but because historical price data may not incorporate large concentrated positions, the charge should not be included in the backtesting analysis. Separate analyses would need to be conducted to determine the adequacy of concentration charges. For systems whose initial margin covers multiple days, the worst observed price move within the period should be used in backtesting. Backtesting, however, only evaluates the performance of the margin model on the historical sample chosen, it does not guarantee that a model will perform well going forward.

Sensitivity analyses study how variability in the output of the margin model can be influenced by the variability and other aspects of its inputs. It tests the robustness of the margin model and potentially uncovers errors or limits of the model. Sensitivity analysis should incorporate a wide range of input parameters and, where feasible, vary assumptions to reflect various possible market conditions, including the most-volatile periods that have been experienced by the markets served and extreme changes in the correlations between prices and other factors.

Effective backtesting and sensitivity analysis may use both historical data from realized stressed market conditions and hypothetical data for unrealized stressed market conditions. Further, the Board expects the sensitivity analysis to be performed on both actual and simulated positions and portfolios. The analysis would help a central counterparty understand how the level of margin coverage might be affected by highly stressed market conditions.

Sensitivity analysis can also be used to determine the impact of varying important model parameters, such as the sample period, the close-out period, and a confidence interval.

Proposed § 234.3(a)(6) includes three enhanced requirements relative to the current corresponding standard under Regulation HH. First, the proposal increases frequency of backtesting from quarterly to daily. Second, the proposed provision includes an express requirement to perform sensitivity analysis. Third, the proposal increases the frequency of the analysis from quarterly to at least monthly. The Board believes these enhanced requirements will help to ensure that the designated FMU has sufficient financial resources to cover its credit exposures to its participants with a high degree of confidence in current and stressed market conditions. Effective management of credit risk will allow the designated FMU to continue operating normally during periods of market stress and prevent the spread of credit losses to its participants, the market it serves, and the financial system more broadly.

7. Liquidity Risk

Proposed § 234.3(a)(7) requires a designated FMU to effectively measure, monitor, and manage the liquidity risk that arises in or is borne by the designated FMU.[29] Liquidity risk is intended to be a broad concept covering different designs for payment and settlement arrangements. Liquidity risk arises in a designated FMU when it, its participants, or other entities (such as settlement banks, nostro agents, and liquidity providers) cannot settle their payment obligations when due as part of the clearing or settlement process. It is important for a designated FMU to manage carefully its liquidity risk so that it can meet its payment obligations and complete settlement when due. If the designated FMU has insufficient liquid resources to meet its payment obligations and complete settlement when due, the other participants may not receive funds they are relying upon to meet their own obligations. As a consequence, the liquidity shortfalls and pressure could be transmitted to these participants and quickly give rise to broad liquidity dislocations and systemic risk.

Under proposed § 234.3(a)(7)(i), a designated FMU must have 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. Effective measuring and monitoring of liquidity risk involves understanding and assessing the value and concentration of a designated FMU's daily settlement and funding flows through its settlement banks, nostro agents, and other intermediaries. Further, a designated FMU must be able to monitor on a daily basis the level of any liquid assets that it holds and determine the value of liquid assets that is available for use. If a designated FMU maintains committed funding arrangements, it must similarly identify, measure, and monitor its liquidity risk from the liquidity providers of the arrangements.

Sufficient liquid resources. Under proposed § 234.3(a)(7)(ii), a designated FMU must 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. These scenarios must include 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. A designated FMU that operates as a central counterparty and that is subject to proposed § 234.3(a)(4)(ii) should consider scenarios that include the default of the two participants and their affiliates that would generate the largest aggregate liquidity obligation for the designated FMU in extreme but plausible market conditions.

For purposes of meeting this liquid resource requirement, proposed § 234.3(a)(7)(iii) requires 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 include, but are not limited to, collateralized lines of credit, foreign exchange swaps, and repurchase agreements. Proposed § 234.3(a)(7)(iii) requires these arrangements to be committed in order to ensure that the resources are highly reliable even in extreme but plausible market conditions.[30]

Proposed § 234.3(a)(7)(iv) and (v) require a designated FMU to evaluate and confirm, at least annually, whether each provider of the committed arrangements as described in proposed § 234.3(a)(7)(iii) has sufficient information to understand and manage that provider's associated liquidity risks, and that the provider has the capacity to perform as required under this commitment. Effective liquidity risk management involves ensuring that the designated FMU is operationally ready to handle liquidity pressures caused by participants' or other entities' financial or operational problems. For example, the designated FMU should have the operational capacity to reroute payments on a timely basis in case problems arise with a correspondent bank. A designated FMU therefore must conduct rigorous due diligence to ensure that each of its liquidity providers has the understanding and capacity to perform as expected. As part of rigorous due diligence, a designated FMU also must test at least annually its procedures and operational capacity for accessing each type of liquid resource required under this standard. A designated FMU may also employ other risk-management tools to manage its or its participants' liquidity risk, which can vary depending on the source of liquidity risk (such as a participant default, the late-day submission of payments or other transactions, or the use of a service provider or a linked FMU).

Stress testing of liquid resources. Under proposed § 234.3(a)(7)(vi), a designated FMU must determine the amount and regularly test the sufficiency of its potential liquidity needs and the value of its liquid resources by, (A) on a daily basis, conducting a stress test of its liquid resources using standard and predetermined stress scenarios,

[29] For similar corresponding standards under current Regulation HH, see § 234.3(a)(3) and (5) for payment systems, § 234.4(a)(15) for central securities depositories, and § 234.4(a)(18) for central counterparties. The current standards bundle the management of credit and liquidity risks. Separating credit risk and liquidity risk recognizes that there are different tools that could be used to identify, monitor, and manage these two distinct risks.

[30] The Board recognizes that the language on qualifying liquid resources under Principle 7 of 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. For many years, the Board has expected FMUs under its authority to maintain cash or committed arrangements for converting non-cash 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 are fulfilled even in extreme but plausible market conditions. Supplemental resources beyond amounts needed to meet proposed the minimum liquid source requirement in § 234.3(a)(7) may not need to be obtained on a committed basis.

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 FMU's participants increases significantly, conducting a comprehensive and thorough analysis of the existing stress-testing scenarios, models, and underlying parameters and assumptions such that the designated FMU meets its identified level of 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 FMU and using these results to evaluate the sufficiency of and to adjust its liquidity risk-management framework.

In conducting stress testing, the designated FMU must consider a wide range of significantly different potential scenarios. These scenarios include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios also include disruptions to the design and operation of the designated FMU, including disruptions caused by all entities that might present material liquidity risks to the FMU, and where appropriate, cover a multiday period. A designated FMU also must consider any strong inter-linkages or similar exposures among its participants, as well as the multiple roles that participants may play with respect to risk management of the designated FMU. Also, liquidity stress test scenarios must consider the probability of multiple failures and the contagion effect among its participants that such failures may cause.

Model validation. Under proposed § 234.3(a)(7)(vii), a designated FMU must validate any models used in its liquidity risk-management at least annually. The validation should be comprehensive, addressing the justification of the approach and assumptions underlying the model, the calibration of critical parameters and other model settings, and the reliability of the model and programming. Model validation can either be undertaken by outside experts or by using internal staff with the necessary expertise. In either case, the validator must be a qualified person who does not perform functions associated with the model (except as part of the annual model valuation), does not report to such a person, and does not have a financial interest in whether the model is determined to be valid. An annual validation of the model is important to provide a high degree of confidence that the designated FMU is using an appropriate liquidity risk-management framework to determine the amount and test the sufficiency of the designated FMU's liquid resources.

Rules and procedures to address shortfalls. In certain extreme circumstances, a designated FMU may not have sufficient liquid resources to cover its obligations. A designated FMU must analyze the possibility of these circumstances and plan for steps it would take in response to such a liquidity shortfall. Under proposed § 234.3(a)(7)(viii), a designated FMU must establish explicit rules and procedures that address potential liquidity shortfalls that would not be covered by the designated FMU's liquid resources and avoid unwinding, revoking, or delaying the same-day settlement of payment obligations, including in the event of one or more participant defaults. Proposed § 234.3(a)(7)(viii) also requires a designated FMU to describe in its rules and procedures its process to replenish any liquid resources that the designated FMU may employ during a stress event, including a participant default, so that it can continue to operate in a safe and sound manner.

The proposed standard contains two new requirements for designated FMUs. First, proposed § 234.3(a)(7)(vi) and (vii) with respect to liquidity stress testing and model validation are new. These requirements are necessary to ensure that the appropriate data regarding liquidity flows and potential liquidity pressures is available to the designated FMU. Increased availability of data will allow an FMU to identify and respond more quickly to liquidity pressures and prevent them from disrupting the operations of the FMU and possibly spreading to the FMU's participants and the financial markets more broadly.

Second, proposed § 234.3(a)(7)(viii) includes a new requirement above the existing standards that requires rules and procedures that explicitly address unforeseen and potentially uncovered liquidity shortfalls and that describe the designated FMU's process to replenish any liquid resources it may employ during a stress event. The process of planning for uncovered liquidity shortfalls helps prepare the FMU to manage such an event, thereby reducing the likelihood that the FMU and its participants will fail to meet payment and settlement obligations as expected. The process of preparing for replenishment of resources increases the likelihood that an FMU will be able to continue to operate after an extreme liquidity event occurs and continue to provide its critical operations and services to the markets it serves. The transparency of the FMU's rules and procedures will also help the FMU's participants plan and prepare for such an event.

With respect to proposed § 234.3(a)(7), the Board requests comment on the following specific question:

Q.7.1 Should the Board establish a requirement for designated FMUs that are subject to the Cover Two credit exposure requirement under proposed § 234.3(a)(4)(ii) to also undertake an analysis at least once a year to evaluate the feasibility of maintaining sufficient liquid resources for the default of the two participants and their affiliates that would generate the largest aggregate liquidity obligation for the designated FMUs in extreme but plausible market conditions?

8. Settlement Finality

Proposed § 234.3(a)(8) requires a 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.[31] The proposed rule addresses settlement risk, which is the risk that settlement will not take place as expected. For these purposes, final settlement is the moment when the transfer of an asset or financial instrument or discharge of an obligation by a designated FMU or its participants becomes legally irrevocable and unconditional. Final settlement by the end of the value date (that is, the day on which the payment, transfer instruction, or other obligation is due and the associated funds and securities are typically available to the receiving participant) is important because deferring settlement can create credit and liquidity risks for the FMU and its participants. The potential for these additional risks to arise increases the likelihood that a deferred or revocable settlement at a single designated FMU can cause systemic risk and threaten the stability of the broader financial system. Clear and certain final settlement by the end of the value date is therefore necessary for robust risk management and helps to promote the safety and

[31] For similar corresponding standards under current Regulation HH, see § 234.3(a)(4) for payment systems, § 234.4(a)(11) for central securities depositories and central counterparties.

soundness of the designated FMU, reduce systemic risk, and support the stability of the broader financial system.

Under the proposed rule, a designated FMU's payment, clearing, and settlement processes must provide final settlement no later than the end of the value date. Where appropriate, a designated FMU must provide intraday or real-time settlement to reduce settlement risk. Intraday or real-time finality may be appropriate, for example, for payments operations, settlement of back-to-back transactions, intraday margin calls by central counterparties, or safe and efficient cross-border links between central securities depositories that perform settlement functions. The proposed rule also requires a designated FMU to clearly define in its rules and procedures a cutoff point, after which settled payments, transfer instructions, or other settlement instructions may not be revoked by a participant. A clearly defined cutoff point contributes to the overall certainty that a payment will be settled and helps participants manage their liquidity risks.[32]

9. Money Settlements

Proposed § 234.3(a)(9) requires a designated FMU to address the settlement risk that arises when it conducts its money settlements.[33] A designated FMU conducts money settlements for a variety of purposes, such as the settlement of various financial instruments or contracts, funding and defunding activities, and the distribution and collection of margin payments. Money settlements may be conducted in one or more currencies. In general, a designated FMU can conduct settlements in central bank money or in commercial bank money. Central bank money is a liability of a central bank, in the form of deposits held at the central bank that can be used for money settlement purposes. Commercial bank money is a liability of a commercial bank in the form of deposits held at the commercial bank.

A designated FMU and its participants may face credit and liquidity risks from money settlements. Credit risk may arise when a settlement bank has the potential to default on its obligations. Liquidity risk may arise if, after a payment obligation has been settled, participants or the designated FMU are unable to transfer readily their assets at the settlement bank to obtain other liquid assets, such as claims on a central bank. These potential credit and liquidity risks that arise from the money settlement process increase the chances that a single designated FMU would create systemic risk, which may threaten the stability of the broader financial system. To promote risk management, therefore, a designated FMU should manage and mitigate, to the greatest extent practicable, the risks that arise in conducting money settlements.

Under the proposed rule, a designated FMU must conduct its money settlements in central bank money, where available and practical, in order to mitigate the credit and liquidity risks that arise from money settlements. Central bank money, however, may not always be available for use. For example, a designated FMU or its participants may not have direct access to relevant central bank accounts and payment services. In addition, in some cases, settlement in central bank money may not always be practical. For example, an FMU that has access to the relevant central bank accounts and services may find that a central bank's payment services may not operate or provide the necessary finality at the times when it needs to conduct money settlements. In such cases, a designated FMU may conduct money settlements at a commercial bank or on its own books and would need to minimize and strictly control the credit and liquidity risks arising from the money settlement arrangement used.

Proposed § 234.3(a)(9)(i) through (iii) apply specifically to designated FMUs that conduct money settlements at a commercial bank. Under proposed § 234.3(a)(9)(i), such a designated FMU must establish and monitor adherence to criteria based on high standards for its settlement banks that take account of, among other things, the commercial bank's applicable regulatory and supervisory frameworks, creditworthiness, capitalization, access to liquidity, and operational reliability. Further steps to limit credit and liquidity exposures include using multiple commercial settlement banks to diversify the risk of a commercial settlement bank failure. Under proposed § 234.3(a)(9)(ii), a designated FMU using multiple commercial settlement banks must monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks and assess its potential losses and liquidity exposures as well as those of its participants in the event that the commercial settlement bank with the largest share of activity were to fail. Finally, under proposed § 234.3(a)(9)(iii), a designated FMU must ensure that its legal agreements with its settlement banks state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are final when funds are credited to the recipient's account, and that funds credited to the recipient are available immediately for withdrawal.

10. Physical Deliveries

Proposed § 234.3(a)(10) requires a designated FMU that operates as a central counterparty, securities settlement system, or central securities depository to clearly state its obligations with respect to the delivery of physical instruments or commodities and identify, monitor, and manage the risks associated with such physical deliveries.[34] A designated FMU may settle transactions using physical delivery, which is the delivery of an asset, such as a financial instrument or a commodity, in physical form. Physical instruments include securities, commercial paper, and other debt instruments that are issued in paper form. Commodities include tangible assets. Settlement risk arises in both the storage and delivery of the underlying instrument or commodity because of, for example, risk of theft, loss, counterfeiting, or deterioration. Settlement risk associated with credit, liquidity, or other risks involving money settlements in U.S. or foreign currencies are addressed broadly in the other proposed standards.

Under the proposed rule, a designated FMU that provides physical settlement must have rules that clearly state its obligations with respect to physical deliveries. Clear rules on physical deliveries enable the designated FMU and its participants to take the appropriate steps to mitigate the risks posed by such physical deliveries. For example, clear rules would include definitions for acceptable physical instruments or commodities, permissible alternative delivery locations or assets (if any), rules for warehouse operations, and the timing of delivery, where relevant. The designated FMU must also identify, monitor, and manage the risks associated with the storage and delivery of physical instruments and commodities. The designated FMU must ensure that its record of physical assets

[32] Ensuring the consistency and enforceability of a designated FMU's settlement finality rules consistent with relevant laws and regulations is a component of the broader requirement to have a well-founded and enforceable legal basis for each material aspect of the designated FMU's activities under proposed § 234.3(a)(1).

[33] For similar corresponding standards under current Regulation HH, see § 234.3(a)(6) for payment systems, § 234.4(a)(5) for central securities depositories and central counterparties.

[34] The proposed standard replaces § 234.4(a)(13) under current Regulation HH.

reflects accurately the assets in its possession. It would be prudent for a designated FMU to have appropriate employment policies and procedures for personnel that handle physical assets, including proper background checks and training. Additional risk-management methods a designated FMU may consider include insurance coverage and random storage facility audits.

11. Central Securities Depositories

Proposed § 234.3(a)(11) requires a designated FMU that operates as a central securities depository to minimize and manage the unique risks associated with its function and design.[35] A central securities depository provides securities accounts, central safekeeping, and asset services; helps to ensure the integrity of securities issues; and usually operates a securities settlement system to transfer securities. As a result, a central securities depository may present custody risk to their participants. Custody risk is the risk of loss on assets held in custody in the event of the central securities depository's insolvency, negligence, fraud, poor administration, or inadequate recordkeeping. For example, safekeeping and transferring securities in physical form can pose risk of loss or destruction of the securities due to such causes as fire, flood, or theft of the security.

Under the proposed rule, a central securities depository must have appropriate rules and procedures to help ensure the integrity of securities issues. The preservation of the rights of issuers and holders of securities is essential for the orderly functioning of a securities market. Failure by the central securities depository to protect customers' assets from loss or destruction, to safeguard the rights of securities issuers or holders, or to keep accurate records of a securities issuance can have severe effects on the confidence of the participants in the safety and soundness of the central securities depository and on the safety and stability of the markets for these securities. To protect the integrity of the securities issue, the rules and procedures must provide for reconciliation of the securities issues that it maintains at least daily, and ensure that the total number of securities recorded in the central securities depository for a particular issue is equal to the amount of securities of that issue held on the central securities depository's books. One important way for a designated FMU to avoid credit risk and reduce the potential for the unauthorized creation of securities is to have the rules and procedures that prohibit overdrafts and debit balances in securities accounts.

Further, the central securities depository must minimize and manage the risks associated with the safekeeping and transfer of securities. With respect to safekeeping, the central securities depository must employ a system that ensures the segregation of assets belonging to the central securities depository from those belonging to its participants. In addition, the central securities depository must segregate participants' securities from those of other participants. With respect to the transfer of securities, although a central securities depository may transfer securities held in physical form via physical delivery, it can reduce the risks associated with such form of delivery by immobilizing the securities and providing electronic transfer via a book-entry system. It can further eliminate the risks associated with holding securities in physical form through dematerialization. Therefore, a central securities depository must maintain securities in immobilized or dematerialized form so that they can be transferred via book entry to the greatest extent possible.

12. Exchange-of-Value Settlement Systems

The settlement of a financial transaction by a designated FMU may involve the settlement of two linked transactions, such as the delivery of securities against payment of cash (i.e., DvP), delivery of securities against delivery of other securities (i.e., DvD), or the delivery of a payment in one currency against delivery of a payment in another currency (i.e., PvP). Substantial credit losses and liquidity pressures may result from the failure to complete the settlement of both sides of the linked obligations. Accordingly, under proposed § 234.3(a)(12), a designated FMU that 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, must condition the final settlement of one obligation upon the final settlement of the other.[36] In this context, the designated FMU eliminates principal risk, which is the risk that a counterparty will lose the full value involved in a transaction when one leg of the obligation is settled, but the other is not (for example, the securities are delivered but no cash payment is received). The appropriate mechanisms to achieve such final settlement to eliminate principal risk are DvP, DvD, or PvP settlement. These mechanisms can settle obligations on either a gross basis or on a net basis and the obligations need not be settled simultaneously. However, the mechanism must ensure that the settlement of one obligation is final *if and only if* the settlement of the corresponding obligation is final.

13. Participant-Default Rules and Procedures

Proposed § 234.3(a)(13) requires 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.[37] If participant defaults are handled ineffectively, losses and liquidity pressures can lead to the failure of the designated FMU and can spread to the designated FMU's other participants and to the markets it serves.

Participant-default rules and procedures must describe the circumstances, both financial and operational, that constitute a participant default and that would trigger the established default procedures. Other key aspects to be considered in designing the rules and procedures include the actions that a designated FMU can take when a default is declared; the extent to which such actions are automatic or discretionary; potential changes to the normal settlement practices to ensure timely settlement should these changes be necessary in extreme circumstances; the management of transactions at different stages of processing; the expected treatment of proprietary and customer transactions and accounts; the probable sequencing of actions; the roles, obligations, and responsibilities of the various parties, including non-defaulting participants; and the existence of other mechanisms that may be activated to contain the impact of a default.

The proposed rule requires that a designated FMU's rules and procedures regarding participant defaults enable it to take timely action to contain losses and liquidity pressures resulting from a

[35] The proposed standard replaces and builds on § 234.4(a)(14) under current Regulation HH.

[36] The proposed standard replaces § 234.4(a)(12) under current Regulation HH for central securities depositories and central counterparties and extends the requirement explicitly by regulation to payment systems.

[37] For similar corresponding standards under current Regulation HH, see § 234.3(a)(2) and (5) for payment systems and § 234.4(a)(10) for central securities depositories and central counterparties.

default. Its rules must clearly describe the use and sequence of use of the financial resources at its disposal and the obligations of the non-defaulting participants to replenish the financial resources used during a default. Further, the public disclosure of key aspects of the designated FMU's participant default rules and procedures will help to provide predictability regarding the measures that the designated FMU will take during a default (see also proposed § 234.3(a)(23)).

The proposed rule also requires a designated FMU to test and review its default procedures, including any close-out procedures, at least annually or following any material changes to the rules and procedures. These tests and reviews are most effective when they involve the designated FMU's participants and other stakeholders because the objective of the testing is to ensure that the parties affected by a default understand and are able to carry out their responsibilities as expected during a default event.

14. Segregation and Portability

Proposed § 234.3(a)(14) requires a designated FMU that operates as a central counterparty 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. Segregation refers to a method of holding or accounting for a participant's customer collateral and contractual positions separately from those of the participant in order to protect the customer's collateral from becoming part of the participant's estate in insolvency. Portability refers to the operational aspects of the transfer of contractual positions, funds, or securities from one party to another.

It is important for a central counterparty to have segregation and portability arrangements, or alternate means, that protect the assets of a participant's customers in the event of that participant's default or insolvency. Effective segregation arrangements also provide for clear and reliable identification of the participant's customers' positions and related collateral. Effective portability arrangements lessen the need for closing out positions, even during times of market stress. Portability thus reduces the costs and potential market disruption associated with closing out positions and reduces the possible impact on customers' ability to continue to obtain access to central clearing.

Effective segregation and portability not only depends on the operational capabilities of the designated FMU, but also on the applicable legal framework. A cash-market central counterparty, 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). In such cases, the Board will take into consideration a central counterparty'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 central counterparty level described in the proposed standard. The Board believes segregation and portability arrangements may differ depending on the design of a central counterparty and would work with any applicable designated FMU through the supervisory process to determine how best to set specific requirements.

Proposed § 234.3(a)(14) is a new standard with respect to Regulation HH. These arrangements help to minimize credit and liquidity risks to participants' customers, reduce the potential for systemic risk that could result from credit and liquidity exposures on a defaulting participant's customers, and thereby support the stability of the broader financial system.

15. General Business Risk

Proposed § 234.3(a)(15) requires the designated FMU to identify, monitor, and manage its general business risk, which is the risk of losses that may arise from its administration and operation as a business enterprise that are neither related to participant default nor separately covered by financial resources maintained for credit or liquidity risk under proposed § 234.3(a)(4) and (7). General business risk includes any potential impairment of the designated FMU's financial position as a consequence of a decline in its revenues or an increase in its expenses, where such expenses exceed revenues and result in a loss that must be charged against capital. Such impairment can be caused by a variety of business factors, including a poor business strategy, ineffective operations, negative cash flows, and unexpected and excessively large operating expenses. General business risks may also arise from other risks, such as legal risk (in the case of legal actions challenging the designated FMU's custody arrangements or other business activities), investment risk affecting the designated FMU's resources, and operational risk (in the case of fraud, theft, or loss). Losses associated with general business risk may result in an extraordinary one-time loss or recurring losses.

General business risk may threaten the designated FMU's ability to continue to operate as a going concern. The abrupt or disorderly failure of a designated FMU would cause significant uncertainty and confusion in the markets it serves. In such a scenario, the designated FMU's participants may be unable to clear or settle their financial transactions as expected.

Under the proposed rule, a designated FMU must identify, monitor, and manage its general business risk, in part by identifying and assessing its sources of general business risk and their potential impact on its operations and services. For example, a designated FMU must conduct scenario analysis to examine how specific adverse business scenarios would affect it. The designated FMU must also conduct sensitivity analysis to test how a particular source of business risk, such as the loss of a key customer, may affect its financial standing (for example, its cash flows, liquidity, and capital positions). A designated FMU also must have internal processes, controls, and information systems to measure and monitor on an ongoing basis the general business risks that it identifies.

Proposed § 234.3(a)(15)(i) requires a designated FMU to maintain, at a minimum, sufficient liquid net assets funded by equity to cover the greater of: (1) The cost to implement its recovery or orderly wind-down plan to address general business losses and (2) six months of current operating expenses. This requirement is intended to ensure that the designated FMU has both the liquidity and the capital to absorb unexpected losses, permitting it to weather adverse conditions, and promote public confidence in the designated FMU's ability to continue operations and services as a going concern. Should it become necessary for a designated FMU to wind down its operations and services to its participants, the liquid resources and capital it holds may also help to fund the wind-down so that it can be conducted in an orderly manner.

Under proposed § 234.3(a)(15)(i), liquid net assets funded by equity are composed of two components, unencumbered liquid financial assets and equity, both of which must be sufficient to cover the greater of (1) the cost to implement the recovery or orderly wind-down plan and (2) six months of operating expenses, as described above. Proposed § 234.3(a)(15)(i)(A) requires the designated FMU to hold liquid financial

assets, such as cash and highly liquid securities, sufficient to cover the greater of the two calculated costs described above.[38] The liquid financial assets must also be unencumbered by creditor claims or liens. In addition, proposed § 234.3(a)(15)(i)(B) requires the designated FMU to hold equity in the form of 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 held under paragraph (A).

For cases in which a designated FMU is subject to international risk-based capital standards or other relevant Board-imposed capital requirements, the Board, at its discretion, may allow a designated FMU to use the equity held for this purpose towards the designated FMU's equity requirement in proposed § 234.3(a)(15)(i)(B) to avoid duplicate capital requirements. Further, the Board, at its discretion, may allow a designated FMU that is part of a larger legal entity with multiple business lines that do not each have a separate balance sheet to meet the requirement by using unencumbered liquid financial assets and equity held at the legal entity level.

Calculating recovery or orderly wind-down costs. Costs to implement the recovery or orderly wind-down plan are those direct, support, and overhead costs that the designated FMU would incur in a recovery or wind-down scenario. In determining these costs, the designated FMU should first consider reasonable scenarios where general business losses could cause it to need to recover or wind down. The appropriate scenarios will depend on the designated FMU's organizational structure and market environment. The designated FMU should then determine the appropriate time period for a recovery or orderly wind-down when faced with these scenarios and calculate the costs that would be incurred. A designated FMU should also include in its analysis the possibility that the designated FMU may have to wind-down after an initial attempt to recover. In calculating its recovery or orderly wind-down costs, the designated FMU should consider additional, extraordinary costs related to a recovery or wind-down, such as additional legal expenses and costs associated with retaining staff (such as retention bonuses). The designated FMU may also remove from its calculation those normal business operating expenses that would not be incurred in a recovery or wind-down scenario, such as certain marketing costs.

Calculating six months of current operating expenses. At a minimum, a designated FMU must hold six months of current operating expenses. This is a minimum requirement for all designated FMUs, irrespective of their organizational and ownership structure, as well as charter type, that creates a level playing field among different types of FMUs. When calculating its current operating expenses, the designated FMU is expected to consider its normal business operating expenses. These expenses are those that are typically categorized as either ''cost of sales'' or ''selling, general, and administrative expenses'' on the designated FMU's income statement. Therefore, these costs may exclude, among other items, depreciation and amortization expenses, taxes, and interest on debt.

Further, proposed § 234.3(a)(15)(ii) requires a designated FMU to develop and maintain a viable capital plan for raising additional equity before its equity falls below the amount required. In developing this plan, the designated FMU should consider its ownership structure and any insured business risks. Given the contingent nature of insurance, a designated FMU should use conservative assumptions when taking insurance into account for its capital plan, and these resources may not be taken into account when assessing the designated FMU's capital adequacy. A designated FMU's capital plan must be approved by the board of directors and updated at least annually.

Proposed § 234.3(a)(15) is a new standard in Regulation HH. The proposed standard reflects existing Board supervisory expectations for a financial institution to manage appropriately its general business risk, including through the use of financial and internal controls. The proposed capital requirement to maintain liquid net assets funded by equity equal to at least six months of current operating expenses is also generally consistent with past and current Board supervisory practice. Before the passage of the Dodd-Frank Act, the Board required certain FMUs under its jurisdiction to hold sufficient resources to ensure a recovery or orderly wind-down of critical operations and services. In determining the appropriate level of capital for an FMU, the Board considered three factors: (1) Initial capital should be sufficient to absorb any projected start-up operating losses and limited business losses in its early operation; (2) capital should be sufficient to cover costs of continued operations during an orderly wind-down; and (3) capital should be sufficient at all times to meet any minimum regulatory requirements. Therefore, although the proposed standard is new to Regulation HH, its objectives are consistent with the prudential objectives of the Board's supervisory process that existed prior to the Act. The Board recognizes that the incremental burden may vary by designated FMU.

With respect to proposed § 234.3(a)(15), the Board requests comment on the following specific questions:

Q.15.1 Should the Board set a minimum amount of liquid net assets funded by equity that is different from the six-month minimum international standard, such as *three* or *nine* months of current operating expenses? Should the Board set the requirement based on the risk profile of the designated FMU? If so, what factors should the Board consider and what would be the effects of such an approach?

Q.15.2 Should the Board require a designated FMU that is part of a larger legal entity to take into account, when calculating the cost to implement its recovery or orderly wind-down plans, recovery or wind-down scenarios in which other business lines in the legal entity or the legal entity itself may also face an adverse business environment? To prepare for such scenarios, should the designated FMU include in its calculation of recovery or wind-down costs more than its normal business share of any shared support and overhead costs?

Q.15.3 For designated FMUs that are part of a larger legal entity, the Board considered the alternative of requiring the designated FMU to hold liquid net assets funded by equity that are specific to the FMU itself to meet the requirement, but believes that it would likely be difficult to implement in practice. Are there 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?

16. Custody and Investment Risks

Proposed § 234.3(a)(16) requires the designated FMU to minimize and manage the custody and investment risks associated with its own and its participants' assets.[39] Custody risk is the risk of loss on assets held in custody in the event of a custodian's (or subcustodian's) insolvency, negligence, fraud, poor administration, or

[38] If the designated FMU does not hold cash or cash equivalents, the assets held should be sufficiently liquid so that they can be liquidated to match the cash outflows projected under the recovery or wind-down plans.

[39] The proposed standard replaces § 234.4(a)(3) under current Regulation HH for central securities depositories and central counterparties and extends the requirement explicitly by regulation to payment systems.

inadequate recordkeeping. Investment risk is the risk of loss faced by an FMU when it invests its own or its participants' assets. Situations that create custody and investment risks may prevent a designated FMU from having prompt access to its own assets or its participants' assets at the expected value when needed. Problems with access could result in financial losses incurred by the FMU, participants, and other parties and damage the designated FMU's reputation or perceived reliability.

Proposed § 234.3(a)(16)(i) requires a designated FMU to safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets by holding its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect the assets. A designated FMU must also evaluate and consider the full scope of its relationship with and exposures to its custodian banks. For example, a custodian bank may also be a participant in the designated FMU, as well as the designated FMU's settlement bank or liquidity provider. Understanding these different relationships is necessary to avoid excessive concentration or exposure to an individual financial institution.

Under proposed § 234.3(a)(16)(ii), if a designated FMU invests its own and its participants' assets, it is required to invest the assets 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 quick liquidation with little, if any, adverse price effect. A designated FMU must use an investment strategy that is consistent with its overall risk-management strategy and fully disclosed to its participants. The alignment of investment and risk-management strategies and the disclosure of the investment strategies can help ensure that investment choices do not allow the pursuit of profit to compromise the designated FMU's financial soundness and liquidity management. A designated FMU must also consider its overall credit risk exposures to individual obligors, including relationships with the obligor that create additional exposures, such as when the obligor is also a participant or an affiliate of a participant in the designated FMU.

17. Operational Risk

Proposed § 234.3(a)(17) requires the designated FMU to manage its operational risk by establishing a robust operational risk-management framework that is approved by the board of directors.[40] Operational risk is the risk that deficiencies in information systems, internal processes, and personnel or disruptions from external events will result in the deterioration or breakdown of services provided by an FMU. Vulnerabilities to and threats against the designated FMU's physical security or information security, including cyber security, also present operational risk.

Under the proposed rule, a designated FMU must establish a framework to manage its operational risk. Proposed § 234.3(a)(17)(i) requires the designated FMU to identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls that are reviewed, audited, and tested periodically, as well as after major changes that could affect the source or level of operational risk that is present in the designated FMU. In addition, proposed § 234.3(a)(17)(ii) requires the designated FMU to identify, monitor, and manage the risks its operations might pose to other FMUs.

Proposed 234.3(a)(17)(iii) requires the designated FMU to have policies and systems that are designed to achieve clearly defined objectives to ensure a high degree of security and operational reliability. Proposed 234.3(a)(17)(iv) requires the designated FMU to have systems that have adequate, scalable capacity to handle increasing stress volumes and achieve the designated FMU's service-level objectives. Proposed 234.3(a)(17)(v) requires the designated FMU to have comprehensive physical, information, and cyber security policies, procedures, and controls that address potential and evolving vulnerabilities and threats.

Proposed § 234.3(a)(17)(vi) and (vii) address the designated FMU's business continuity management. The designated FMU must have business continuity management that aims for rapid recovery and timely resumption of critical operations and fulfillment of the designated FMU's obligations, under a range of scenarios, including a wide-scale or major disruption. Specifically, a designated FMU must have a business continuity plan that incorporates the use of a secondary site located at a sufficient geographical distance from the primary site to have a distinct risk profile, such that, for example the sites are not located in the same hurricane zone or on the same fault line. Further, the business continuity plan must be designed to ensure that critical information technology systems can recover and resume operations within two hours after the disruptive events and to enable the designated FMU to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. Further, the business continuity plan must be tested at least annually and more frequently where appropriate.

Sources of operational risk change over time and with advancements in technology. Although the operational risk standard has historically been applied through the lens of a disruption that causes physical damage to infrastructure or equipment (that is, physical threats or attacks), the Board believes, in general, that a designated FMU should take into account cyberattacks and threats when establishing its business continuity plans. The PFMI also makes explicit references to cyberattacks, which suggests that the traditional view on operational risk has evolved internationally. Cyberattacks can reach far beyond the geographical distance that any physical attack can reach. While cyberattacks may present different challenges than physical attacks, the need for rapid recovery and timely resumption in response to cyberattacks is equally necessary.

The Board recognizes, however, that there is ongoing work and discussion domestically and internationally on developing operational risk-management standards and planning for business continuity with respect to cyber security and responses to cyberattacks. Further, certain standards or responses originally intended to address physical attacks may not be appropriate for certain types of cyberattacks. For example, the proposed two-hour recovery time objective (a longstanding industry objective and Board requirement) may present challenges in the near term for extreme cyberattacks that could corrupt data or software from not just the designated FMU's primary site but also its geographically distance backup site(s). The Board anticipates addressing with designated FMUs through the supervisory process reasonable

[40] For similar corresponding standards under current Regulation HH, see § 234.3(a)(7) for payment systems and § 234.4(a)(4) for central securities depositories and central counterparties. The proposed standard is also consistent with the requirements in the Federal Financial Institutions Examination Council (FFIEC) IT Handbook, Board Supervision and Regulation (SR) Letter 03–9 on the Interagency Paper on Sound Practices for the Resilience of the U.S. Financial System, SR Letter 07–18 on Pandemic Planning, and SR Letter 05–23 on Interagency Guidance on Response Programs for Unauthorized Access to Customer Information and Customer Notice.

approaches to cyberattacks in the context of the evolving risk and technological environment.

The requirement to consider cyberattack scenarios in a designated FMU's business continuity planning may, in some respects, constitute a heightened requirement. In an environment where cyberattacks have become increasingly sophisticated and far-reaching, a designated FMU must plan for recovery and resumption of operations in these scenarios. The inability of a designated FMU to respond in a timely manner to cyberattacks could compromise the integrity of the financial markets. In addition, planning for such scenarios also would be in accordance with national policies aimed at improving the cybersecurity posture of U.S. critical infrastructures. The Board recognizes that there may be additional costs associated with development of business continuity plans and establishment of any systems and controls to accommodate different scenarios of cyberattacks.

With respect to proposed § 234.3(a)(17), the Board requests comment on the following specific questions related to cyberattacks:

Q.17.1 What types of changes to a designated FMU's current systems, policies, procedures, and controls will be necessary to reasonably ensure that its critical information technology systems can recover and resume operations no later than two hours following disruptive events caused by cyberattacks?

Q.17.2 What are reasonable estimates of the costs and other challenges associated with these changes?

18. Access and Participation Requirements

Proposed § 234.3(a)(18) requires the designated FMU to have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.[41] Access refers to the ability to use a designated FMU's services by direct participants and, where relevant, indirect participants and service providers. These participation requirements should not be subjective or overly restrictive because fair and open access to a designated FMU helps support the stability of the financial system. Fair and open access may help avoid the concentration of financial activity (and therefore risk) into a few large participants. Broad participation in a designated FMU can also increase the effectiveness of multilateral netting arrangements, facilitate crisis management by applying a consistent set of rules and procedures (for example, default management and loss mutualization), encourage competition among participants, promote efficiency, and improve overall market transparency.

Unlimited access to an FMU, however, can pose a wide variety of risks to the FMU. A designated FMU can control these risks by setting reasonable risk-based participation requirements to ensure that participants have the requisite operational capacity, financial resources, legal powers, and risk-management expertise to prevent unacceptable risk exposure for the designated FMU and its other participants. Therefore, balancing fair and open access with reasonable risk-based participation requirements can promote robust risk management, promote the safety and soundness of the designated FMU, reduce systemic risk, and support the stability of the broader financial system.

Under proposed § 234.3(a)(18), a designated FMU is required to control the risks to which it is exposed from its participants by setting objective, risk-based, and publicly disclosed requirements for participants in its services, including designing the criteria to ensure that participants meet appropriate operational, financial, and legal requirements that allow them to meet their obligations to the FMU or other participants on a timely basis. Although a designated FMU may use risk-based measures in determining access, the requirements should be objective and should not unnecessarily discriminate against particular classes of participants or introduce competitive distortions. Participation requirements must be justified in terms of the safety and efficiency of the designated FMU and the markets it serves, and tailored to and commensurate with the designated FMU's specific risks. Overall, risk-based, as well as other participation requirements, should aim to have the least restrictive impact on access needed to achieve their objectives.

Under proposed § 234.3(a)(18)(i), a designated FMU must monitor compliance with its access and participation criteria on an ongoing basis. Further, it must have the authority to impose more-stringent requirements and other risk controls on a participant in situations where the designated FMU determines that the participant poses heightened risk to the FMU. The proposed rule allows the designated FMU to require participants to report any developments that may affect their ability to comply with the designated FMU's requirements. If a participant's creditworthiness declines, the designated FMU can then require the participant to provide additional collateral or reduce the participant's credit limit. Under proposed § 234.3(a)(18)(ii), the designated FMU must clearly define and publicly disclose its procedures for facilitating the suspension and orderly exit of a participant that fails to meet the designated FMU's access and participation criteria.

19. Tiered Participation Arrangements

Proposed § 234.3(a)(19) requires the designated FMU to identify, monitor, and manage the material risks to the designated FMU arising from tiered participation arrangements. Tiered participation arrangements occur when other firms (indirect participants) rely on the services provided by direct participants to use the designated FMU's central payment, clearing, or settlement facilities. Indirect participants are not bound by the rules of the designated FMU, but their transactions are cleared or settled through the FMU by way of a direct participant that has a contractual relationship with the FMU. As a result, the transactions of indirect participants may pose credit, liquidity, operational, and other risks to the FMU. If these risks are not managed effectively by the direct participants of the FMU or the FMU itself, these risks can affect the safety and soundness of the FMU and pose systemic risk to other market participants and FMUs.

Under the proposed rule, a designated FMU is required to identify the types of risk that could arise from tiered participation arrangements and monitor concentrations of such risk. If a designated FMU is exposed to material financial or operational risk from tiered participation arrangements, the FMU should seek to manage and limit the risk. The Board recognizes that there are limits to the extent to which a designated FMU can influence direct participants' commercial relationships with their customers. Nonetheless, the FMU should not ignore risks that can significantly affect its operations. A designated FMU may have access to information on transactions undertaken on behalf of indirect participants that would allow it to evaluate and take steps to manage any risks posed by the indirect participants. For example, a designated FMU can set expectations in

[41] For similar corresponding standards under current Regulation HH, see § 234.3(a)(7) for payment systems and § 234.4(a)(2) for central securities depositories and central counterparties.

its membership agreements with its direct participants regarding information on transactions undertaken on behalf of their customers in order to evaluate the proportion of customer business relative to the direct participant's proprietary business. A regular review of the risks to which the designated FMU may be exposed as a result of tiered participation arrangements may also be beneficial to determining whether any mitigating actions are necessary.

In order to determine whether it faces material risks arising from tiered participation, a designated FMU could gather basic information on indirect participants in order to identify (a) the proportion of activity that direct participants conduct on behalf of indirect participants, (b) direct participants that act on behalf of a material number of indirect participants, (c) indirect participants with significant volumes or values of transactions in the system, and (d) indirect participants whose transaction volumes or values are large relative to those of the direct participants through which they access the FMU. A designated FMU's analysis would also benefit from identifying material dependencies between direct and indirect participants that might affect the FMU. For example, the FMU could determine whether a large proportion of the transactions processed by the designated FMU originates from indirect participants and, as a result, creates a material dependency on the operational or financial performance of a few direct participants.

Proposed § 234.3(a)(19) is a new rule and may impose an additional cost or burden on designated FMUs. The Board believes this requirement is necessary because the dependencies and risk exposures inherent in tiered participation arrangements can present risks to the designated FMU and its smooth functioning and the broader financial markets. If a designated FMU has few direct participants, but many indirect participants, the disruption to the services of one or more of these few direct participants could present risk to the smooth functioning of the market the designated FMU serves. In addition, if the value of an indirect participant's transactions is large relative to the direct participant's ability to manage risks, the direct participant's default risk may be greater.

With respect to proposed § 234.3(a)(19), the Board requests comment on the following specific questions:

Q.19.1 What, if any, risks do tiered participation arrangements pose to a payment system? How would a payment system assess these risks?

Q.19.2 What types of information would be helpful to assess the risks posed by indirect participants to a designated FMU? Is it feasible for a payment system to collect this information?

Q.19.3 How, if at all, should the Board define the threshold for identifying indirect participants responsible for a significant proportion of transactions processed by the designated FMU?

Q.19.4 How, if at all, should the Board define the threshold for identifying indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which the indirect participants access the designated FMU?

Q.19.5 How often should a designated FMU review the potential risks from tiered participation arrangements?

20. Links to Other Financial Market Utilities

Proposed § 234.3(a)(20) requires a designated FMU that operates as a central counterparty, securities settlement system, or central securities depository and that establishes a link with one or more of these types of FMU to identify, monitor, and manage link-related risks.[42] FMU links, as defined in proposed § 234.2(f), can reduce transaction costs and increase market efficiency, but they may also serve as an avenue for contagion of market stress between FMUs and markets. Links can expose a designated FMU to legal risk, where the laws and rules governing the linked FMUs differ; operational risk, where operational failures in one FMU may have implications for other linked FMUs; and financial risk, where the failure or default of a participant in one FMU may impact a linked FMU. Any of these risks individually or in combination could pose systemic risk and threaten the stability of the broader financial system. Therefore, a designated FMU should manage and mitigate to the greatest extent practicable the risks that arise from its link arrangements.

Under the proposed rule, a designated FMU that establishes a link is required to identify, monitor, and manage the risks related to the link, which may include legal, operational, credit, and liquidity risks. The identification, monitoring, and management of link-related risks begin before the designated FMU enters into the arrangement in order to identify, monitor, and manage all potential sources of risk arising from the link arrangement. A link must have a well-founded legal basis in all relevant jurisdictions. Further, a designated FMU must measure, monitor, and manage the credit and liquidity risks arising from a link to another FMU. Credit extensions between linked FMUs must be covered fully with a high degree of confidence with high-quality collateral. In particular, a designated FMU that operates as a central counterparty in a link arrangement with another central counterparty must cover, 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 designated FMU's ability to fulfill its obligations to its own participants. A designated FMU that establishes a link with another FMU must also ensure that the arrangement provides a high level of protection for the rights of its participants. Furthermore, a designated FMU that establishes multiple links must ensure that the risks generated in one link do not affect the soundness of the other links and linked FMUs. Links must be designed so that the designated FMU can comply with the other standards proposed in this regulation.

21. Efficiency and Effectiveness

Proposed § 234.3(a)(21) requires a designated FMU to be efficient and effective in meeting the requirements of its participants and the markets it serves.[43] Efficiency generally encompasses what an 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. A designated FMU that is designed or managed inefficiently or ineffectively may ultimately distort financial activity and market structure, increasing not only the credit, liquidity, and other risks of the FMU's participants, but also the risks of their customers and other end users.

There is an inherent tradeoff between safety (that is, risk management) and efficiency (that is, direct and indirect costs) in the design and management of

[42] The proposed standard replaces § 234.4(a)(7) under current Regulation HH for central securities depositories and central counterparties. Links to payment systems are addressed in proposed § 234.3(a)(9) and are not covered under this standard.

[43] For similar corresponding standards under current Regulation HH, see § 234.3(a)(8) for payment systems and § 234.4(a)(6) for central securities depositories and central counterparties.

a designated FMU. A designated FMU's design; operating structure; scope of payment, clearing, and settlement activities; and use of technology can influence its efficiency and can ultimately provide incentives for market participants to use, or not use, the designated FMU's services. In certain cases, inefficiently designed systems may increase operational costs to the point at which it would be cost prohibitive for participants to use the designated FMU. As a result, the inefficiency could drive market participants toward less-safe alternatives, such as bilateral clearing or settlement on the books of the participants. In such cases, risks to the market participants increase as they seek less-safe opportunities to lower direct costs; this behavior may reintroduce risk into the market that the designated FMU was intended to mitigate. Therefore, designated FMUs should be efficient and effective in their design and operations.

Under proposed § 234.3(a)(21)(i), a designated FMU must be efficient and effective with regard to (A) its clearing and settlement arrangement (for example, gross, net, or hybrid settlement; real time or batch processing; and novation or guarantee scheme); (B) risk-management policies, procedures, and systems; (C) scope of products cleared or settled; and (D) the use of technology and communication procedures. To help maintain system efficiency, the designated FMU's system design must be sufficiently flexible to respond to changing demand and new technologies.

Under proposed § 234.3(a)(21)(ii), a designated FMU must have clearly defined goals and objectives that are measureable and achievable, such as minimum service levels (for example, the time it takes to process a transaction), risk-management expectations (for example, the level of financial resources it should hold), and business priorities (for example, the development of new services). Under proposed § 234.3(a)(21)(iii), a designated FMU must have policies and procedures for the regular review of its efficiency and effectiveness. To be ''effective,'' a designated FMU must reliably meet its obligations in a timely manner, including service and security requirements, and achieve the public policy goals of safety and efficiency for participants and the markets it serves.

22. Communication Procedures and Standards

Proposed § 234.3(a)(22) requires the designated FMU to use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, and settlement. The use of internationally accepted communication procedures and standards can reduce the number of errors, avoid information losses, and reduce transaction and processing costs, which helps reduce operational risk faced by a designated FMU, its participants, and the broader markets. Further, lower transaction costs associated with the use or accommodation of internationally accepted communication procedures and standards can promote participation in the designated FMU by a broad set of financial institutions in various locations. Therefore, the use or accommodation of internationally accepted communication procedures and standards supports robust risk management, promotes the safety and soundness of designated FMUs, and supports the stability of the broader financial system.

Under the proposed rule, a designated FMU must use or accommodate internationally accepted communication procedures, messaging standards, and reference data standards that provide a common set of rules across systems for exchanging messages and allow a broad set of systems and institutions in various locations to communicate efficiently and effectively. A designated FMU, alternatively or additionally, may communicate with other systems by supporting systems that translate or convert internationally accepted procedures and standards into those used by the designated FMU.

Proposed § 234.3(a)(22), although new to Regulation HH as an explicit requirement, codifies the Board's existing supervisory requirements for the payment, clearing, or settlement systems under its authority.[44] Designated FMUs subject to the Board's authority already use, or at minimum accommodate, the relevant internationally accepted communications procedures.

23. Disclosure of Rules, Key Procedures, and Market Data

Proposed § 234.3(a)(23) requires the designated FMU to disclose relevant information about its operations and risk management to its participants and to the public.[45] Such transparency allows a designated FMU's participants, relevant authorities, and the broader public to understand better the activities and structure of the designated FMU, its risk profile, and its risk-management practices and to compare such characteristics across similar types of FMUs. Disclosure of relevant information by a designated FMU can thus support sound decisionmaking by these stakeholders. Participants can use this information to assess and manage more effectively any risks posed to them by the designated FMU. Relevant authorities can use this information to better assess the designated FMU's observance of the risk-management standards, help identify possible risks, and inform their cooperative or coordination efforts with the Board. Relevant authorities can include those supervising the participants of the designated FMU. These authorities can use the information disclosed by the FMU to better assess the risks posed to the financial institutions they supervise. Disclosure to the public helps potential participants make informed decisions on whether to become members of the designated FMU and promotes confidence in the markets served by the FMU. Thus, transparency by a designated FMU promotes robust risk management, reduces systemic risk, and supports the stability of the broader financial system.

Under proposed § 234.3(a)(23)(i) and (ii), a designated FMU must have clear and comprehensive rules and procedures and disclose publicly all rules and key procedures, including key aspects of its default rules and procedures. An FMU's rules and procedures are typically the foundation of the FMU and provide the basis for participants' and potential participants' understanding of the risks they incur by participating in the FMU. Rules and procedures should include clear descriptions of the system's design and operations as well as the participants' and the FMU's rights and obligations. In addition to disclosing all relevant rules and key procedures, the FMU should have a clear and fully disclosed process for proposing and implementing changes to its rules and procedures and for informing participants and relevant authorities of these changes.

Under proposed § 234.3(a)(23)(iii), the designated FMU must 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. An FMU should provide all

[44] For example, this standard is consistent with the existing supervisory expectations for systemically important central securities depositories and central counterparties in section C.2.a.xvi of part I of the PSR policy.

[45] For similar corresponding standards under current Regulation HH, see § 234.3(a)(2) for payment systems and § 234.4(a)(9) for central securities depositories and central counterparties.

documentation, training, and information necessary to facilitate participants' understanding of the rules and procedures and the risk they face from participating in the FMU. For example, an FMU should disclose to each individual participant the stress test scenarios used, the individual participant's stress-test results, aggregate stress-test results, and other data to help each participant understand and manage the potential financial risks stemming from its participation in the FMU. An FMU should also disclose to its participants the key highlights of its business continuity arrangements, without revealing information that can create vulnerabilities for the FMU or undermine its safety and soundness.

Under proposed § 234.3(a)(23)(iv), the designated FMU must provide a comprehensive public disclosure on its legal, governance, risk management, and operating framework. The public disclosure must include (A) an executive summary, (B) a summary of major changes since the last update of the disclosure, (C) general background information on the designated FMU, (D) a narrative for each standard that summarizes the designated FMU's approach to complying with the standard, and (E) a list of publicly available resources that provide further information on the designated FMU. The general background information required under proposed § 234.3(a)(23)(iv)(C) must include (I) the designated FMU's function and the markets it serves, (II) 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 FMU's operational reliability, and (III) a description of the designated FMU's general organization, legal and regulatory framework, and system design and operations. Data provided should be accompanied by robust explanatory documentation that enables readers to understand and interpret the data correctly.

Under proposed § 234.3(a)(23)(iv)(D), the designated FMU's disclosure framework must include a standard-by-standard summary narrative. This section must provide a narrative for each applicable principle with sufficient detail and context to enable a reader to understand the FMU's approach to observing the principle. A designated FMU may look to the guiding questions in the CPSS–IOSCO *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology* as background to understand the level and type of detail that the Board expects to be included in the disclosure. Further, cross-references to publicly available documents should be included, where relevant, to supplement the narrative.

Under proposed § 234.3(a)(23)(v), a designated FMU must update the public disclosure under (iv) of this part every two years, or more frequently following changes to its system or the environment in which it operates, which would significantly change the accuracy of the statements provided the public disclosure.

The proposed standard contains two requirements that may be new for at least one designated FMU subject to Regulation HH. The proposed standard makes more explicit that a designated FMU should disclose relevant rules and key procedures and provide a comprehensive disclosure to the public. The Board does not expect that disclosure of rules and key procedures will impose a significant burden on designated FMUs because they already have these rules available; the cost of posting them on their Web sites should be minimal. An FMU's initial comprehensive disclosure may be more costly to produce, but the Board expects that a designated FMU will leverage, where possible, the narratives from the self-assessment against the previous sets of international standards that it currently prepares under the PSR policy. Further, future updates to the comprehensive disclosure should impose a minimal burden unless there are significant changes to the designated FMU's governance, operations, or risk-management framework.

The Board believes that such transparency is essential to promoting robust risk management, reducing systemic risk, and enhancing financial stability because it allows the public, including market participants, to understand an FMU's operations and better predict its actions in a crisis. This, in turn, allows participants to manage any risks posed to them from the FMU's actions and thereby limit systemic risk and enhance financial stability.

With respect to proposed § 234.3(a)(23), the Board requests comment on the following specific question:

Q.23.1 Should the Board require information about fees and discount policies to be part of the designated FMU's public disclosure framework? Why should the Board not require disclosure of fees and discount policies?

III. Administrative Law Matters

A. Regulatory Flexibility Act Analysis

Congress enacted the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 et seq.) to address concerns related to the effects of agency rules on small entities, and the Board is sensitive to the impact its rules may impose on small entities. The RFA requires agencies either to provide an initial regulatory flexibility analysis with a proposed rule or to certify that the proposed rule will not have a significant economic impact on a substantial number of small entities. In accordance with section 3(a) of the RFA, the Board has reviewed the proposed regulation. In this case, the proposed rule would apply to FMUs that are designated by the Council under Title VIII of the Dodd-Frank Act as systemically important to the U.S. financial system. In July 2012, the Council designated eight FMUs as systemically important. Based on current information, none of the designated FMUs are ''small entities'' for purposes of the RFA, and so, the proposed rule likely would not have a significant economic impact on a substantial number of small entities (5 U.S.C. 605(b)). The following Initial Regulatory Flexibility Analysis, however, has been prepared in accordance with 5 U.S.C. 603, based on current information. The Board will, if necessary, conduct a final regulatory flexibility analysis after consideration of comments received during the public comment period. The Board requests public comment on all aspects of this analysis.

1. *Statement of the need for, objectives of, and legal basis for, the proposed rule.* The Board is proposing these revisions to Regulation HH to implement certain provisions of Title VIII of the Dodd-Frank Act. Section 805(a)(1)(A) of the Dodd-Frank Act requires the Board to prescribe risk-management standards governing the operations related to the payment, clearing, and settlement activities of certain designated FMUs. In prescribing the risk-management standards, section 805(a)(1) of the Act requires the Board to take into consideration, among other things, the relevant international standards. As noted above, the CPSS and IOSCO finalized the PFMI in April 2012. The Board believes that the PFMI is now widely recognized as the most relevant set of international risk-management standards for payment, clearing, and settlement systems and the risk-management standards in Regulation HH should be updated in consideration of the PFMI. As described above, risk-management standards

based on the PFMI may improve upon the standards currently in Regulation HH and will further promote the objectives of the risk-management standards for designated FMUs set out in section 805(b) of the Dodd-Frank Act. The Board believes that the implementation of risk-management standards based on the PFMI by the relevant payment, clearing, and settlement systems and their regulators, both domestically and internationally, can help promote the safety and efficiency of these systems and financial stability more broadly. Widespread implementation also reduces potential conflicts among domestic and foreign authorities regarding prudential requirements for FMUs, and provides a more consistent framework among relevant domestic and foreign authorities for assessing the risks and risk management of FMUs with cross-market, cross-border, or cross-currency operations.

2. *Small entities affected by the proposed rule.* Pursuant to regulations issued by the Small Business Administration (SBA) (13 CFR 121.201), a ''small entity'' includes an establishment engaged in (i) financial transaction processing, reserve and liquidity services, and/or clearinghouse services with an average annual revenue of $35.5 million or less (NAICS code 522320); (ii) securities and/or commodity exchange activities with an average annual revenue of $35.5 million or less (NAICS code 523210); and (iii) trust, fiduciary, and/or custody activities with an average annual revenue of $35.5 million or less (NAICS code 523991). 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.

3. *Projected reporting, recordkeeping, and other compliance requirements.* The proposed rule imposes certain reporting and recordkeeping requirements for a designated FMU, such as proposed § 234.3(a)(3) that requires a designated FMU to have policies and procedures to identify, measure, monitor, and manage relevant risk and to develop recovery or orderly wind-down plans. The proposed rule also contains a number of compliance requirements that the designated FMU must meet, such as the designated FMU having a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions (proposed § 234.3(a)(1)). In addition, the proposed rule contains requirements for the maintenance of sufficient financial resources to address its credit risk (proposed § 234.3(a)(4)), liquidity risk (proposed § 234.3(a)(7)), and general business risk (proposed § 234.3(a)(15)). Professionals that the designated FMU needs to employ to comply with these standards may include experts skilled in the legal, risk management, finance, payments operations, and accounting areas.

4. *Identification of duplicative, overlapping, or conflicting Federal rules.* The Board does not believe that any Federal rules conflict with these proposed revisions to Regulation HH.

5. *Significant alternatives to the proposed rule.* The Board is not aware of any significant alternatives to the proposed rule that accomplish the stated objectives of the Dodd-Frank Act and that minimize any significant economic impact of the proposed rule on small entities. As noted above, the PFMI is now widely recognized as the most relevant set of international risk-management standards for payment, clearing, and settlement systems. The Board is proposing to revise the risk-management standards in Regulation HH in consideration of the current international standards. FMUs that are designated as systemically important by the Council and present similar risk profiles should be held to consistent standards, including compliance and reporting requirements, regardless of size, because they can present similar risk to the U.S. financial system. In addition, except as noted above, the proposed standards generally employ a flexible, principles-based approach to permit a designated FMU to employ a cost-effective method for compliance, so long as the method chosen achieves the risk-mitigation goals of the standard. Where necessary or appropriate, the proposed rule includes specific testing frequencies or other requirements. The Board included such detail in each proposed standard as it deemed necessary to provide the designated FMUs with sufficient guidance for compliance with the standard.

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. 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.

Designated FMUs are subject to the supervisory framework established under Title VIII of the Dodd-Frank Act. This proposed rule promulgates revised Regulation HH risk-management standards for certain designated FMUs as required by Title VIII. At least one currently designated FMU that is subject to Regulation HH competes with a similar service provided by the Reserve Banks. Under the Federal Reserve Act, the Board has general supervisory authority over the Reserve Banks, including the Reserve Banks' provision of payment and settlement services (''Federal Reserve priced services''). This general supervisory authority is much more extensive in scope than the authority provided under Title VIII over designated FMUs. In practice, Board oversight of the Reserve Banks goes well beyond the typical supervisory framework for private-sector entities, including the framework provided by Title VIII.

The Board is committed to applying risk-management standards to the Reserve Banks' Fedwire Funds Service and Fedwire Securities Service that are at least as stringent as the applicable Regulation HH standards applied to designated FMUs that provide similar services. In a separate, related **Federal Register** notice, the Board proposes to revise concurrently part I of its PSR policy, which applies to the Federal Reserve priced services, in consideration of the PFMI. The proposed revisions to the risk-management and transparency expectations in part I of the PSR policy are consistent with those proposed for Regulation HH. Therefore, the Board does not believe the proposed 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 proposed rule under the authority delegated to the Board by the Office of Management and Budget. 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), 1320.3(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 proposed rule.

IV. Text of Proposed 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 proposes to amend 12 CFR, Chapter II as set forth below.

PART 234—DESIGNATED FINANCIAL MARKET UTILITIES (REGULATION HH)

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

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

■ 2. Revise § 234.2 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 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) *Recovery* means, for purposes of § 234.3(a)(3) and § 234.3(a)(15), 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.

(h) *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.

(i) *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.

(j) *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)).

(k) *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.

■ 3. 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) Plans for the designated financial market utility's recovery or 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 plans;

(D) Include rules, procedures, policies, and any other tools the designated financial market utility would use in a recovery or wind-down to address the scenarios identified under paragraph (a)(3)(ii)(B) of this section;

(E) Include procedures to ensure timely implementation of recovery or orderly wind-down plans in the scenarios identified under paragraph (a)(3)(ii)(B) of this section; and

(F) Include procedures for informing the Board, as soon as practicable, if the designated financial market utility is considering initiating the recovery or orderly wind-down plan.

(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, if it—

(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 (i.e., 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 fully cover 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)(vi) 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 markets 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 close out 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 close out 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, cash in each relevant currency at the central bank of issue or creditworthy commercial banks or assets that are readily available and convertible into cash, through committed arrangements without material adverse change conditions such as—

(A) collateralized lines of credit;

(B) foreign exchange swaps; and

(C) repurchase agreements;

(iv) Evaluates and confirms, at least annually, whether each provider of the committed arrangements as described in paragraph (a)(7)(iii) of this section has sufficient information to understand and manage that provider's associated liquidity risks, and that the provider has the capacity to perform as required under this commitment;

(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 close-out 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 recovery or wind down plan to address general business losses as required under § 234.3(a)(3)(iii) 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 and updated at least annually, for raising additional equity before the designated financial market utility's equity falls below the amount required under paragraph (a)(15)(i) of this section.

(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;

(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 ensure that critical information technology systems can 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 FMU determines the participant poses heightened risk to the designated FMU; 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 to the designated financial market utility arising from arrangements in which firms that are not members 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.

(20) *Links to other financial market utilities.* 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, 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 every two years, or more frequently 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]

■ 4. Remove § 234.4.

§ 234.5 [Redesignated as § 234.4]

■ 5. Redesignate § 234.5 as § 234.4.

§ 234.5 [Added and Reserved]

■ 6. A new § 234.5 is added and reserved.

§ 234.6 [Removed and Reserved]

■ 7. Remove and reserve § 234.6.

By order of the Board of Governors of the Federal Reserve System, January 10, 2014.

Robert deV. Frierson,

Secretary of the Board.

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