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FEDERAL RESERVE SYSTEM

12 CFR Chapter II

[Docket No. OP-1478]

Policy on Payment System Risk

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Policy statement.

SUMMARY: The Board of Governors of the Federal Reserve System (Board) has adopted revisions to part I of its *Federal Reserve Policy on Payment System Risk* (PSR policy) to reflect the prevailing international standards, 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, and the supervisory framework for designated financial market utilities (FMUs) established in Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act or Act). The Board also made conforming and technical changes to part I of the PSR policy.

DATES: The Board will be guided by the PSR policy revisions when exercising the authorities discussed therein as of December 31, 2014, with the exception of the following measures, which the Board would expect to be met on or before December 31, 2015: transparency, set forth in section I.B.2; establishing plans for recovery and orderly wind-down as necessary to meet the expectations of principle 3; establishing rules and procedures that explicitly address uncovered credit losses and liquidity shortfalls as

necessary to meet the expectations of principles 4 and 7, respectively; maintaining sufficient liquid net assets funded by equity and a viable plan for raising additional equity as necessary to meet the expectations of principle 15; and managing risks arising in tiered participation arrangements as necessary to meet the expectations of principle 19.

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SUPPLEMENTARY INFORMATION:

I. Background

In adopting the PSR policy, the Board's objectives have been to foster the safety and efficiency of payment, clearing, and settlement systems. Part I of the policy sets forth the Board's views, and related principles and minimum standards, regarding the management of risks in and transparency of payment, clearing, and settlement systems, including those operated by the Federal Reserve Banks (Reserve Banks).[1] Part I of the policy incorporates relevant international risk-management standards developed by central banks and market regulators as the baseline for its expectations for payment, clearing, and settlement systems.[2] Part I is not intended to exert or create supervisory or

[1] Part II governs the provision of intraday credit in accounts at the Reserve Banks and sets out the general methods used by the Reserve Banks to control their intraday credit exposures.

[2] Prior to this notice, part I of the PSR policy incorporated the international standards for payment, clearing, and settlement systems set out in the CPSS *Core Principles for Systemically*

regulatory authority over any particular class of institutions or arrangements where the Board does not have such authority.

In January 2014, the Board requested comment on proposed revisions to part I of the PSR policy.[3] The key aspects of the proposal were (1) revising the Board's existing minimum risk-management standards in the PSR policy to reflect the PFMI, which now represents the relevant set of international standards;[4] (2) including all central securities depositories, securities settlement systems, and central counterparties (CCPs) in the scope of part I of the PSR policy; (3) expanding the scope of part I of the PSR policy to include trade repositories; (4) establishing six mutually exclusive categories of financial market infrastructures (FMIs) and clarifying the Board's risk-management expectations for FMIs in each category; (5) replacing the existing self-assessment framework with a broader disclosure expectation; and (6) recognizing responsibility E from the PFMI, in addition to other relevant international guidance, as the basis for cooperation with other authorities in overseeing FMIs. The proposed changes did not affect part II of the PSR policy.

The Board proposed revisions to the policy to incorporate the new international risk-management standards for financial market infrastructures in the PFMI, including the expectation for FMIs to complete the disclosure framework set out in the December 2012 CPSS-IOSCO report on the *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology* ("disclosure framework" and

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Important Payment Systems, the CPSS-IOSCO *Recommendations for Securities Settlement Systems*, and the CPSS-IOSCO *Recommendations for Central Counterparties*, which are available at http://www.bis.org/cpmi/publ/d43.pdf, http://www.bis.org/cpmi/publ/d46.pdf, and http://www.bis.org/cpmi/publ/d64.pdf, respectively. (Effective September 2014, the CPSS changed its name to the Committee on Payments and Market Infrastructures.)

[3] 79 FR 2838 (January 16, 2014).

[4] The PFMI is available at http://www.bis.org/cpmi/publ/d101a.pdf.

"assessment methodology").[5] The Board also proposed revisions to the policy to reflect the enhanced supervisory framework for designated FMUs as set forth in Title VIII of the Dodd-Frank Act.[6] In particular, the Board proposed certain revisions that were necessary to clarify that designated FMUs for which the Board is the Supervisory Agency under Title VIII of the Act are required to comply with Regulation HH and not the risk-management or transparency expectations set out in the policy.[7, 8] The public comment period for the proposed revisions closed on March 31, 2014.

II. Summary of Comments and Analysis

The Board received three comment letters that were responsive to the January proposal, all from entities that operate designated FMUs.[9] The Board considered each of

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[5] The CPSS-IOSCO report on the *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology* is available at http://www.bis.org/cpmi/publ/d106.pdf.

[6] The term "financial market utility" is defined in Title VIII as "any person that manages or operates a multilateral system for the purpose of transferring, clearing, or settling payments, securities, or other financial transactions among financial institutions or between financial institutions and the person" (12 U.S.C. 5462(6)). FMUs are a subset of FMIs; for example, trade repositories are excluded from the definition of a FMU. Pursuant to section 804 of the Dodd-Frank Act, the Financial Stability Oversight Council (Council) is required to designate those FMUs that the Council determines are, or are likely to become, systemically important. Such a designation by the Council makes an FMU subject to the supervisory framework set out in Title VIII of the Dodd-Frank Act.

[7] Concurrent with this final policy statement, the Board is adopting final revisions to Regulation HH that take into consideration the PFMI.

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

[9] Concurrent with the proposal, the Board issued in a separate *Federal Register* notice a proposal to amend Regulation HH by replacing the existing risk-management standards with a set of

the comments on the proposed revisions to the PSR policy in developing its final policy as discussed in more detail below. Except as noted herein, the Board is adopting the policy as proposed.[10]

A. Overall approach to incorporating the new standards

The Board proposed to revise part I of the PSR policy by replacing the existing risk-management standards with the 24 headline standards from the PFMI verbatim. Commenters were generally supportive of the Board's overall approach. One commenter, however, raised two general concerns with respect to the Board's overall approach. The commenter expressed concern that one uniform set of standards that applies to all FMIs and all designs of the same type of FMI does not sufficiently take into account material differences that can be found among the different systems. The commenter also expressed concern that differences in language between the risk-management standards in Regulation HH and in part I of the PSR policy may result in two different sets of risk-management standards for FMIs.

With respect to differences among types of systems, the Board believes that a uniform set of standards is appropriate because, in many instances, FMIs face and must manage certain common risks. Although the design of systems may vary, the flexibility in the standards allows individual FMIs to implement, and supervisors to enforce, the standards appropriately based on the design of and risks that arise in a particular FMI.

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standards based on the PFMI and making conforming changes to the definitions (79 FR 3666 (January 22, 2014)). All three commenters addressed the proposed revisions to both part I of the PSR policy and Regulation HH in one letter. Where the commenters addressed specific provisions of Regulation HH that did not appear in the revisions to the PSR policy, the Board addressed those comments only in the notice of final rulemaking for Regulation HH.

[10] In addition, the Board is making several technical edits to the proposed policy. These edits are minor and are not discussed in this notice.

The Board also believes that a uniform set of standards promotes financial stability because it facilitates effective and consistent risk management across different types of FMIs and markets. For specific risk-management standards in the PSR policy that are applicable only to certain types of FMI, however, those standards are made expressly applicable only to those FMI types (for example, only CCPs are expected to have a risk-based margin system to cover credit risk). For these reasons, the Board continues to believe the overall approach is appropriate.

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

inconsistent policy results.

B. Overall approach to applying the policy

The proposed revised policy stated that the Board sets out its views regarding management of risks in FMIs in part I of the PSR policy in order to encourage these systems and their primary regulators to take the standards in the policy into consideration in the design, operation, monitoring, and assessment of these systems. One commenter stated that the Board should acknowledge in the final PSR policy that if a regulatory agency other than the Board is the Supervisory Agency for a designated FMU, then the Board would consider compliance by the designated FMU with the corresponding PFMI-based regulations of such Supervisory Agency as sufficient.

In carrying out its Title VIII responsibilities, the Board participates in examinations of designated FMUs by other Supervisory Agencies and provides input to those Agencies with respect to the designated FMU's risk-management practices. Although the Supervisory Agency would apply its own rules in assessing the sufficiency of the designated FMU's compliance, the Board's input will be informed by the principles in the PSR policy as well as the Agency's rules and the general framework of Title VIII of the Dodd-Frank Act. Therefore, the Board will maintain the overall approach of the policy as proposed.

C. Governance

Proposed principle 2 stated that an FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders. One commenter noted that public interest

considerations is a vague concept, and that private-sector systems should not be required to consider public interest considerations and should focus exclusively on the needs of participants.

The Board believes that taking public interest considerations into account is consistent with the objectives of Title VIII of the Act to promote robust risk management, promote the safety and soundness of the designated FMU, and reduce systemic risks. For example, public interests may include supporting fair and efficient markets because an FMI that creates inefficiencies in the market may drive market participants toward less-safe alternatives that could increase systemic risks. Market transparency is another public interest consideration that may be relevant because, for example, an FMI that provides information to relevant authorities and the public about payment flows may help to identify and reduce sources of systemic risk. For certain FMIs, stability of the broader financial system may be the only relevant public interest consideration. The final policy retains the text of the principle as proposed.

D. Credit risk

Proposed principle 4 stated that an FMI should measure, monitor, and manage effectively its credit exposures to its participants and the credit exposures arising from its payment, clearing, and settlement processes. The principle also stated that an FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of

the two participants and their affiliates that would potentially cause the largest credit exposure to the CCP in extreme but plausible market conditions (a "cover 2" expectation).

One commenter stated that, in setting a "cover 2" expectation for a particular FMI, the Board should also consider "the *proportion* of the CCP's clearing activities involving products with complex risk profiles as well as the manner in which the CCP manages those risks." The commenter asked the Board to confirm that the "cover 2" expectation would not be triggered if a CCP has a small amount of activity with a complex risk profile relative to overall activity or if the CCP addresses the added risk incurred, such as through enhanced margin systems. The Board's "cover 2" expectation for a particular FMI would depend on all relevant facts and circumstances, including the mix of activities with varying risk profiles. The Board believes that the proposed policy language provides sufficient flexibility and has adopted the text of the principle as proposed.

E. Collateral

Proposed principle 5 stated that an FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks and should set and enforce appropriately conservative haircuts and concentration limits. One commenter supported the flexibility in the wording of the principle and urged that it not be interpreted to exclude the use of equity securities as collateral for equity options. The Board believes that the principle would permit, where appropriate, an FMI to integrate the management of risk from participant positions with the risk from fluctuations in the value of collateral provided by participants. One

example would be for a CCP to hold equity securities as collateral for options on those same securities. The final policy retains the text of the principle as proposed.

F. Liquidity risk

In the proposed policy, the Board defined liquidity risk as "the risk that a counterparty, whether a participant or other entity, will be unable to meet fully its financial obligations when due, although it may be able to do so in the future." The definition went on to explain that an FMI, through its design or operation, may bear or generate liquidity risk in one or more currencies in its payment or settlement process. In this context, liquidity risk may arise between or among the system operator and the participants in the FMI, the system operator and other entities (such as settlement banks, nostro agents, or liquidity providers), the participants in the FMI and other entities, or two or more participants in the FMI.

After further consideration, the Board has added a footnote to the definition of liquidity risk to clarify that the Board believes that deliveries of currency are payments, and FMIs that conduct such activity should consider these deliveries to be payments in the management of liquidity risk. The Board added this footnote to clarify that it does not believe that such deliveries of currency should be treated as physical deliveries under principle 10 in the revised risk-management standards, but rather it would expect an FMI subject to its authority to manage effectively the liquidity risk related to these payments.

G. Settlement finality

Proposed principle 8 stated that an FMI should provide clear and certain final settlement, at a minimum by the end of the value date. One commenter requested confirmation that the proposed provision would not require an FMI that is a CCP to

accelerate its novation of certain noncompetitive transactions, such as backloaded over-the-counter options. The principle applies to an FMI's obligations to deliver funds and other financial instruments, at a minimum, by the end of the value date in accordance with the terms of the underlying contract and does not address the timing of novation. The Board believes that the proposed policy language provides sufficient flexibility, and the final policy retains the text of the principle as proposed.

H. Segregation and portability

Proposed principle 14 stated that a CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions. The Board received two comment letters on this principle that addressed portability and alternative segregation regimes.

Portability. One commenter noted that, while porting positions is a highly desirable result where feasible, there may be scenarios where liquidating positions is preferred. The commenter suggested that the Board allow an FMI to retain broad discretion to liquidate positions promptly where it has determined that timely transfer would not be feasible. The Board interprets the principle, which states that a central counterparty should have rules and procedures that enable the segregation and portability of positions, not to exclude the possibility that liquidation of positions may take place if a timely transfer would not be feasible. The Board believes that the proposed policy language provides sufficient flexibility, and the final policy retains the text of the principle as proposed.

Alternative segregation regimes. One commenter encouraged the Board to state in the policy that different segregation regimes are appropriate for different markets and different classes of market participant. Another commenter requested that the final text of the policy acknowledge the different legal frameworks for cash markets. The Board acknowledges that effective segregation and portability arrangements depend not only on the operational capabilities of the CCP but also on the applicable legal framework. The Board notes that a CCP serving certain cash markets, for example, may operate in a legal regime that offers the same degree of protection for a participant's customers as the segregation and portability approaches addressed in principle 14 of the PFMI. Where an alternative regime exists, the Board will consider the CCP's assessment of whether the applicable legal or regulatory framework achieves the same degree of protection and efficiency for customers that would otherwise be achieved by segregation and portability arrangements at the CCP level. Additionally, the Board will consider whether the CCP's own rules enable the operation of the relevant legal and regulatory framework.

Where alternative segregation and portability arrangements offer the same degree of protection, proposed principle 14 would not prohibit the use of such arrangements. As noted above, the expectation is that an FMI's rules and procedures enable segregation and portability of positions, and the policy does not prescribe a single means by which this could be achieved. The final policy retains the text of the principle as proposed.

I. General business risk

Proposed principle 15 stated that an FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going

concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services. Commenters generally supported the principle, but made two specific points that are addressed below.

Treatment of Reserve Bank services under the principle. One commenter stated that the Board should ensure that the requirements with respect to principle 15 in Regulation HH for designated FMUs are the same as those imposed on the equivalent Reserve Bank service. The Board expects that the Fedwire Services will meet or exceed the applicable standards set forth in this policy. The Board will be guided by the key considerations and explanatory notes in the PFMI, including the guidance on central bank-operated systems, as well as its interpretation of the corresponding provisions of Regulation HH, in supervising the Fedwire Services. This expectation is consistent with past practice.

Consistent with the previous international standards, the PFMI recognizes that flexibility in implementation is warranted for central bank-operated systems to meet the objectives of the standards because of central banks' roles as monetary authorities and liquidity providers. As noted in the proposal, the Board will allow flexibility in application of principle 15 on general business risk for the Fedwire Services. A key consideration in principle 15 of the PFMI requires FMIs to maintain viable recovery or orderly wind-down plans that consider general business risk and to hold sufficient liquidity and capital reserves to implement the plans. The Fedwire Services do not face the risk that a business shock would cause the service to wind down in a disorderly manner and disrupt the stability of the financial system. Given the fundamental role of

the Fedwire Services in the U.S. financial system, the Federal Reserve would need to consider the impact of sudden or disorderly changes and would need to pursue policies consistent with financial stability and established principles of entering and exiting priced services. Therefore, the Board will not require the Fedwire Services to develop recovery or orderly wind-down plans under principle 3.

In order to foster competition with private-sector FMIs, however, the Board will require the Federal Reserve priced services to hold six months of the Fedwire Funds Service's current operating expenses as liquid financial assets and equity on the pro forma balance sheet used in determining Reserve Bank fees for priced services.[11, 12] This balance sheet is used for imputing costs in the private-sector adjustment factor used to establish Fedwire Funds Service fees.[13] If it is necessary to impute additional assets or equity, the incremental cost will be incorporated into the pricing of Fedwire Funds Service fees. In applying the PSR policy, the Board will monitor the implementation of

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[11] As required by the Monetary Control Act of 1980, the Board has historically required and will continue to require that the Fedwire Services be operated and priced in a manner that fosters competition, improves the efficiency of the payment mechanism, and lowers costs of these services to society. The Board established a set of pricing principles that governs the schedule of fees for the Federal Reserve priced services, including the Fedwire Services, that is consistent with these objectives. (12 U.S.C. 248a(c)(3); http://www.federalreserve.gov/paymentsystems/pfs_principles.htm).

[12] Consistent with the PFMI, the calculation of these current operating expenses would exclude depreciation and amortization expenses.

[13] Federal Reserve priced services fees are set to recover, over the long run, all direct and indirect costs and imputed costs, including financing costs, taxes, and certain other expenses, as well as the return on equity (profit) that would have been earned if a private business provided the services. The imputed costs and imputed profit are collectively referred to as the private-sector adjustment factor. The Board's current method for calculating the private-sector adjustment factor involves developing an estimated Federal Reserve priced services pro forma balance sheet using actual priced services assets and liabilities. The remaining components on the balance sheet, such as equity, are imputed as if these services were provided by a publicly traded firm. The capital structure of imputed equity is derived from the market for publicly traded firms, subject to minimum equity constraints consistent with those required by the Federal Deposit Insurance Corporation for a well-capitalized institution.

Regulation HH and the final policy for issues of consistency and competitive equity between private-sector systems and the Fedwire Funds Service.

Expectations for certain FMIs that are part of a larger legal entity. An FMI may be one of several business lines of a larger legal entity. As a single legal entity, the firm's equity supports all of the business lines, but the Board's expectations under principle 15 may only apply to one of those business lines. In the proposal, the Board asked whether there are any reasonable methodologies for determining which of the liquid financial assets and equity held at the legal entity level belong to a particular business line. One commenter suggested that separate pro forma balance sheets could be created for a particular business line. After consideration of the comment, the Board believes it may not be useful for certain FMIs to attribute assets and equity to a business line on separate pro forma statements because it may not be possible to ring-fence assets within a legal entity in insolvency. Therefore, consistent with the approach described above for the Fedwire Funds Service and the approach in the final rule for Regulation HH, the Board would allow an FMI to use the assets and equity held at the legal entity level to meet the relevant requirements in principle 15.

J. Tiered participation arrangements

Proposed principle 19 stated that an FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements. These arrangements are those in which firms that are not members in the FMI (indirect participants) rely on the services provided by members of the FMI (direct participants) to access the FMI's payment, clearing, and settlement facilities. The Board received two comment letters that addressed this proposed principle.

Applicability of the proposed principle. A commenter stated that the Board did not adequately articulate the risk that tiered participation arrangements pose and opposed the principle because it does not believe that it or its participants bear any significant risk from its participants' relationships with their customers. After consideration of the comment and analysis, the Board continues to believe that for certain FMIs, based on the design of their settlement arrangements, material risks could arise from tiered participation arrangements that are borne by the FMI, including by its participants. For example, in an FMI in which a direct participant processes large transaction values on behalf of a large customer such as a large correspondent bank, the failure of the customer could jeopardize the direct participant's ability to meet its obligations to the FMI or to the other participants in the FMI, potentially resulting in liquidity dislocations.

Tiered participation arrangements could also pose other risks to the FMI, including operational risk. For example, an FMI may need to understand how its direct participants manage any spikes in volume submitted to the FMI on behalf of indirect participants. Understanding the potential for spikes in volume will allow the FMI to prepare to have the scalable operational capacity necessary to process those volumes effectively, such that it is able to achieve its service-level objectives.

Therefore, the Board believes that material risks to an FMI, including to its participants, may arise from tiered participation arrangements. The Board expects FMIs to seek to understand the risks associated with the relationships between direct participants and their customers in order to be able to assess whether any material risk to the FMI, including to its other participants, exists. The Board recognizes, however, that certain FMIs, including their participants, may not bear any material risks from these

arrangements due to the design of their settlement arrangements or due to the characteristics of the markets they serve. These FMIs should conduct an analysis to support their conclusion.

Expectations for an FMI with respect to tiered participation arrangements. One commenter stated that it is unclear what would actually be expected of an FMI under the proposed principle. The commenter stated that the Board should make clear that it does not expect an FMI that does not bear any risk from its participants or their customers to take any action with respect to principle 19.

The Board expects that an FMI will conduct an analysis to determine whether any material risks arise from tiered participation arrangements that are borne by the FMI, including by its participants as a result of their participation in the FMI. Depending on the nature of their payment, clearing, settlement, or recording activities, FMIs' methodologies for conducting the analysis may differ. For example, some FMIs may choose to gather information about the volume and value of activity processed by direct participants on behalf of indirect participants in the FMI or other relevant information. Where such information would be useful, an FMI may consider defining reasonable thresholds and other factors for gathering the information in order to minimize burden. If the FMI determines that no material risks exist to the FMI, including to its participants, from tiered participation arrangements, the Board would not expect the FMI to take any further action. If material risks are identified, the Board would expect the FMI to take steps to mitigate or manage these risks. The Board does not expect, however, an FMI to manage risks that arise between a direct participant and its customers, but rather only to manage the material risks to the FMI, including to its other participants.

The Board expects that an FMI will review and update its analysis of risks arising from tiered participation arrangements at the earlier of every two years or following material changes to the system design or operations or the environment in which the FMI operates if those changes could affect its analysis. If an FMI's review of its analysis indicates that the FMI faces no material risks from tiered participation arrangements, then no further action would be required.

Duplicative monitoring. One commenter stated that an expectation that an FMI will monitor the risks posed by indirect participants would be costly and duplicative of monitoring activities of regulators and the direct participants in the FMI. After consideration of the comment, the Board continues to believe that monitoring by direct participants or by their supervisors may not fully address all risks that may arise from tiered participation arrangements. Direct participants would likely monitor risks posed to them by their customers but may not consider how their actions to mitigate or manage those risks could affect the FMI, including its other participants. In addition, the supervisory focus for certain direct participants is typically different from that for FMIs, and supervisory monitoring of direct participants also might not take into account the effects of tiered participation arrangements on the FMI, including its other participants. Direct participants in an FMI may also be subject to varying degrees of supervision. Therefore, the onus should be on the FMI to understand the tiered participation arrangements in the system and the impact of these relationships on the FMI, including on its participants.

Scope of the principle. One commenter stated that the Board should expect FMIs to consider material risks arising from tiered participation arrangements only where the

indirect participants are known by the FMI, have an agreement binding them to the FMI's rules, or may have a direct connection to the FMI. The Board believes that material risks can originate from arrangements with a range of indirect participants having a range of relationships or arrangements with the FMI. If such arrangements may pose material risks, the FMI should seek to gather information from its direct participants on those arrangements and assess the risks from those arrangements. Therefore, the Board will expect an FMI to understand generally the arrangements between its direct participants and firms that access the services of the FMI through the direct participants, whether or not these firms are bound by some part of the rules or have a direct connection to the FMI.[14] The FMI, however, should focus its analysis on the direct customers of the direct participants and need not extend its analysis to other tiers of customers, such as the customers of the customers of the direct participants.

Conflicts of interest and antitrust issues. One commenter stated that proposed principle 19 raises conflicts of interest and antitrust issues. The commenter stated that collecting data on indirect participation would give the board of directors of the FMI a complete picture of each participant's relationships with its most important customers, which could create a conflict of interest if the FMI's board of directors is made up of representatives of the member banks. The commenter also stated that the proposed principle appeared to require FMIs to encourage indirect participants that are large relative to their direct participants to move to a larger direct participant or become direct

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

participants themselves, which could create antitrust issues if the FMI's actions to meet the principle appear to third parties as an effort by the FMI to favor its owner banks.

The Board believes that conflicts of interest or antitrust issues that may arise from expectations with respect to principle 19 can be avoided through the careful design of the information-gathering and risk-management processes developed by the FMI. First, the FMI's board of directors does not have to see a complete picture of each participant's relationships with its customers. The FMI can put controls in place that would minimize potential conflicts to ensure that information is shared in an appropriate manner that would allow the board of directors to carry out its responsibility for the comprehensive management of risks. Second, the Board does not necessarily expect an FMI to encourage indirect participants that are large relative to their direct participants to move to a larger direct participant or become direct participants themselves. The FMI may choose other methods for mitigating or managing risks arising from tiered participation arrangements. For example, if the FMI is concerned that a direct participant's exposures to its indirect participants could cause it to default to the FMI, the FMI may require the direct participant to provide additional collateral to mitigate the relevant financial risks posed by its relationships with its customers.

The Board has adopted the text of this principle as proposed.

K. Efficiency and effectiveness

Proposed principle 21 stated that an FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves. One commenter stated that an FMI that does not meet the requirements of its participants and the market it serves or that does not meet its objectives efficiently will not survive in the market. The

commenter suggested that the Board remove the principle or redefine efficiency and effectiveness in terms of market judgments.[15]

The Board continues to believe that the expectation for an FMI to be efficient and effective should be included in the policy and that the terms efficiency and effectiveness should not be defined solely in terms of market judgments. The Board agrees with the comment that market forces may encourage an FMI to be efficient and effective, particularly in cases where it has a direct competitor. Many markets for payment, clearing, and settlement services, however, are monopolies or oligopolies. Furthermore, it may be difficult for market participants to determine if a particular FMI is efficient and effective due to imperfect information about the FMI. Therefore, market judgments alone may be insufficient to encourage the FMI to operate efficiently and effectively. The Board has adopted the text of this principle as proposed.

L. Transparency

Proposed principle 23 stated that an FMI should publicly disclose all relevant rules and key procedures. Consistent with the principle, section I.B.2 of the proposed policy sets forth the Board's expectation that FMIs subject to its supervisory authority complete the CPSS-IOSCO disclosure framework and make their disclosure readily available to the public.[16] A commenter stated that certain procedures should not be publicly disclosed because they would help unauthorized persons gain access to the

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[15] In the NPRM for Regulation HH, the Board explained that efficiency generally encompasses what a designated FMU chooses to do, how it does it, and the resources required by the designated FMU to perform its functions. Effectiveness refers to whether the designated FMU is meeting its goals and objectives, which include the requirements of its participants and the markets it serves.

[16] Designated FMUs are subject to Regulation HH (§ 234.3(a)(23)(iv)) rather than this policy.

system.

The Board agrees that certain procedures should not be publicly disclosed in detail if such detail would undermine the FMI's safety and soundness. The Board stated in the proposed policy that, although disclosures should be robust, the Board does not expect FMIs to disclose to the public sensitive information that could expose system vulnerabilities or otherwise put the FMI at risk. For example, disclosing the detail included in the FMI's business continuity plan could expose the vulnerabilities of the system, and in this case it would be sufficient to disclose publicly only key highlights of the plan. The Board has adopted the text of the policy as proposed.

M. Compliance dates

The Board proposed that the revised policy become effective upon publication of the final version in the *Federal Register*. The Board also noted that several of the expectations in the proposed policy were new or heightened and may require additional time to implement, such as up to six months after adoption of the policy. The Board noted that these expectations may include the revised expectations in section I.B.2 on transparency and the expectation to manage risks arising in tiered participation arrangements under principle 19. New or heightened expectations also included the establishment of plans for recovery and orderly wind-down as necessary to meet the expectations under principle 3; the establishment of rules and procedures that explicitly address uncovered credit losses and liquidity shortfalls as necessary to meet the expectations under principles 4 and 7, respectively; and the maintenance of sufficient liquid net assets funded by equity and a viable plan for raising additional equity as necessary to meet the expectations under principle 15. In the proposal, the Board asked

whether there are any other expectations that may require additional time to implement and whether six months is sufficient to implement the changes necessary to meet the expectations.

The Board received three comment letters that addressed the compliance date for the new or heightened expectations proposed in the revised policy. One commenter agreed with the six-month extension. Two commenters stated that a longer extension may be necessary, and one of these suggested that a minimum of 18 months be allowed to meet the expectations in the proposed policy, especially if the expectations under principle 19 on tiered participation arrangements are finalized as proposed.

After consideration of the comments and analysis, the Board is adopting an overall effective date for the PSR policy revisions of December 31, 2014. However, the Board will begin to apply the new or heightened risk-management and transparency expectations as of December 31, 2015. The Board believes that this additional time may be necessary to allow FMIs time to complete their processes and procedures for changes to their rulebooks and to minimize burden on FMIs and the markets they serve. FMIs, however, are encouraged to meet the expectations in the PSR policy as soon as possible.

One commenter also stated that the expectations under proposed principle 20 on links may require additional time to implement because implementation will require extensive cooperation and coordination between FMIs. These expectations, however, are included in the existing PSR policy and are not new or heightened.[17] Therefore, the Board will retain its expectation that FMIs subject to the policy meet principle 20 on the effective date of the final revised PSR policy.

[17] See sections I.C.2.a.xix and I.C.2.b.xi of the existing policy.

III. Administrative Law Matters

A. Competitive Impact Analysis

The Board has established procedures for assessing the competitive impact of rule or policy changes that have a substantial impact on payment system participants.[18] Under these procedures, the Board will assess whether a change 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 due to differing legal powers or constraints, or due to a dominant market position of the Federal Reserve deriving from such differences. If no reasonable modifications would mitigate the adverse competitive effects, the Board will determine whether the anticipated benefits are significant enough to proceed with the change despite the adverse effects.

This final policy sets forth revised risk-management standards, which are based on the PFMI, for certain FMIs, including the Federal Reserve Bank-operated Fedwire Services. In a separate, related *Federal Register* notice, the Board amended its Regulation HH risk-management standards, which apply to certain designated FMUs as required by Title VIII of the Dodd-Frank Act, based on the PFMI. At least one currently designated FMU that is subject to Regulation HH (The Clearing House Payments Company, L.L.C., with respect to its operation of the Clearing House Interbank Payments System (CHIPS)) competes with the Fedwire Funds Service. One commenter expressed concern that differences in language between the risk-management standards in Regulation HH and in part I of the PSR policy may result in two different sets of risk-

[18] These procedures are described in the Board's policy statement "The Federal Reserve in the Payments System," as revised in March 1990 (55 FR 11648 (Mar. 29, 1990)).

management standards for FMUs. The commenter also stated that the Board should ensure that the requirements for designated FMUs in Regulation HH with respect to general business risk in § 234.3(a)(15) should also be imposed on the equivalent Reserve Bank service.

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

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

There are, however, several risk-management standards for which flexibility in implementation will be necessary for the Fedwire Services given the Federal Reserve's legal framework and structure and its roles as monetary authority and liquidity provider.[19] The Board does not expect that the difference in approach to implementing these standards for the Fedwire Funds Service as compared to the requirements for CHIPS would create a significant difference in operating costs for the two entities, with the possible exception of the expectation to hold unencumbered liquid financial assets and equity under principle 15. In order to foster competition with private-sector systems, the Board will incorporate the cost of this requirement into the pricing of the Fedwire Funds Service. As discussed above, although the Fedwire Funds Service does not face the risk that a business shock would cause the service to wind down in a disorderly manner and disrupt the stability of the financial system, in order to foster competition with private-sector systems, the Board will require the Fedwire Funds Service to impute the cost of

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

maintaining liquid assets and equity to cover general business losses, similar to the requirement for designated FMUs in § 234.3(a)(15)(i). The Board will also monitor the implementation of the final policy for issues of consistency and competitive equity between private-sector systems and the Fedwire Funds Service. Therefore, the Board believes the policy will have no material adverse effect on the ability of other service providers to compete effectively with the Reserve Banks.

B. Paperwork Reduction Act Analysis

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3506; 5 CFR part 1320, Appendix A.1), the Board reviewed the final policy 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 payment, clearing, and settlement systems. Therefore, no collections of information pursuant to the Paperwork Reduction Act are contained in the final policy.

IV. Federal Reserve Policy On Payment System Risk

Introduction

Risks In Payment, Clearing, Settlement, And Recording Systems

Part I. Risk Management For Financial Market Infrastructures

A. Scope
B. Policy expectations for certain financial market infrastructures
    1. Risk management
        a. Fedwire Services
        b. Designated financial market utilities for which the Board is the Supervisory Agency under Title VIII of the Dodd-Frank Act
        c. Other financial market infrastructures that are subject to the Board's supervisory authority under the Federal Reserve Act
        d. All other central securities depositories, securities settlement systems, central counterparties, and trade repositories
        e. Other systemically important offshore and cross-border payment systems
    2. Transparency
C. General policy expectations for other payment systems within the scope of the policy
    1. Establishment of a risk-management framework
        a. Identify risks clearly and set sound risk-management objectives
        b. Establish sound governance arrangements to oversee the risk-management framework
        c. Establish clear and appropriate rules and procedures to carry out the risk-management objectives
        d. Employ the resources necessary to achieve the system's risk-management objectives and implement effectively its rules and procedures
    2. Other considerations for a risk-management framework
D. Cooperation with other authorities in regulating, supervising, and overseeing financial market infrastructures

Part II. Federal Reserve Intraday Credit Policies

Appendix – CPSS-IOSCO Principles For Financial Market Infrastructures

Introduction

Financial market infrastructures (FMIs) are critical components of the nation's financial system. FMIs are multilateral systems among participating financial institutions, including the system operator, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions.[1, 2] FMIs include payment systems, central securities depositories, securities settlement systems, central counterparties, and trade repositories. The safety and efficiency of these systems may affect the safety and soundness of U.S. financial institutions and, in many cases, are vital to the financial stability of the United States. Given the importance of FMIs, the Board of Governors of the Federal Reserve System (Board) has developed this policy to set out the Board's views, and related standards, regarding the management of risks that FMIs present to the financial system and to the Federal Reserve Banks (Reserve Banks). In adopting this policy, the Board's objective is to foster the safety and efficiency of payment, clearing, settlement, and recording systems and to promote financial stability, more broadly.

Part I of this policy sets out the Board's views, and related standards, regarding the management of risks in FMIs, including those operated by the Reserve Banks. In setting out

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[1] This definition is based on the definition provided in the Committee on Payment and Settlement Systems (CPSS) and Technical Committee of the International Organization of Securities Commissions (IOSCO) report on *Principles for Financial Market Infrastructures* (PFMI), April 2012, available at http://www.bis.org/cpmi/publ/d101a.pdf. (Effective September 2014, the CPSS changed its name to the Committee on Payments and Market Infrastructures.) Further, an FMI generally embodies one or more of the following characteristics: (1) a multilateral arrangement with three or more participants; (2) a set of rules and procedures, common to all participants, that govern the clearing (comparison and/or netting), settlement, or recording of payments, securities, derivatives, or other financial transactions; (3) a common technical infrastructure for conducting the clearing, settlement, or recording process; and (4) a risk-management or capital structure that takes into account the multilateral dependencies inherent in the system.

[2] The term "financial institution," as used in this policy, refers to a broad array of organizations that engage in financial activity, including depository institutions, securities dealers, and futures commission merchants.

its views, the Board seeks to encourage FMIs and their primary regulators to take the standards in this policy into consideration in the design, operation, monitoring, and assessment of these systems. The Board will be guided by this part, in conjunction with relevant laws, regulations, and other Federal Reserve policies, when exercising its supervisory and regulatory authority over FMIs or their participants, providing accounts and services to FMIs, participating in cooperative oversight and similar arrangements for FMIs with other authorities, or providing intraday credit to eligible Federal Reserve account holders. Designated financial market utilities subject to the Board's Regulation HH are not subject to the risk-management or transparency expectations set out in this policy.[3]

Part II of this policy governs the provision of intraday credit or "daylight overdrafts" in accounts at the Reserve Banks and sets out the general methods used by the Reserve Banks to control their intraday credit exposures.[4] Under this part, the Board recognizes that the Federal Reserve has an important role in providing intraday balances and credit to foster the smooth operation of the payment system. The Reserve Banks provide intraday balances by

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[3] The term "financial market utility" is defined in Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) as "any person that manages or operates a multilateral system for the purpose of transferring, clearing, or settling payments, securities, or other financial transactions among financial institutions or between financial institutions and the person." Trade repositories, which the Dodd-Frank Act defines as providing "facilities for comparison of data respecting the terms of settlement of securities or futures transactions," are not included in the term "financial market utility" (12 U.S.C. 5462). Financial market utilities are, therefore, a subset of the broader set of entities defined as FMIs. Under Title VIII, the Financial Stability Oversight Council designates certain financial market utilities as systemically important. The Board's Regulation HH is discussed in section I.B.1.b below.

[4] To assist depository institutions in implementing part II of this policy, the Board has prepared two documents, the *Overview of the Federal Reserve's Payment System Risk Policy* (Overview) and the *Guide to the Federal Reserve's Payment System Risk Policy* (Guide), which are available at http://www.federalreserve.gov/paymentsystems/psr_relpolicies.htm. The Overview summarizes the Board's policy on the provision of intraday credit, including net debit caps and daylight overdraft fees, and is intended for use by institutions that incur only small amounts of daylight overdrafts. The Guide explains in detail how these policies apply to different institutions and includes procedures for completing a self-assessment and filing a cap resolution, as well as information on other aspects of the policy.

way of supplying temporary, intraday credit to healthy depository institutions, predominantly through collateralized intraday overdrafts.[5] The Board believes that such a strategy enhances intraday liquidity while controlling risk to the Reserve Banks by providing incentives to collateralize daylight overdrafts. The Board also aims to limit the burden of the policy on healthy depository institutions that use small amounts of intraday credit.

Through this policy, the Board expects financial system participants, including private-sector FMIs and the Reserve Banks, to reduce and control settlement and other systemic risks arising in FMIs, consistent with the smooth operation of the financial system. This policy is also designed to govern the provision of intraday balances and credit while controlling the Reserve Banks' risk by (1) making financial system participants and FMIs aware of the types of basic risks that may arise in the payment, clearing, settlement, or recording process; (2) setting explicit risk-management expectations; (3) promoting appropriate transparency by FMIs to help inform participants and the public; and (4) establishing the policy conditions governing the provision of Federal Reserve intraday credit to eligible account holders. The Board's adoption of this policy in no way diminishes the primary responsibilities of financial system participants to address the risks that may arise through their operation of or participation in FMIs.

[5] The term "depository institution," as used in this policy, refers not only to institutions defined as depository institutions in 12 U.S.C. 461(b)(1)(A), but also to U.S. branches and agencies of foreign banking organizations, Edge and agreement corporations, trust companies, and bankers' banks, unless the context indicates a different reading.

Risks in Payment, Clearing, Settlement, and Recording Systems

The basic risks in payment, clearing, settlement, and recording systems may include credit risk, liquidity risk, operational risk, and legal risk. In the context of this policy, these risks are defined as follows:[6]

- Credit risk: the risk that a counterparty, whether a participant or other entity, will be unable to meet fully its financial obligations when due, or at any time in the future.
- Liquidity risk: the risk that a counterparty, whether a participant or other entity, will be unable to meet fully its financial obligations when due, although it may be able to do so in the future. An FMI, through its design or operation, may bear or generate liquidity risk in one or more currencies in its payment or settlement process.[7] In this context, liquidity risk may arise between or among the system operator and the participants in the FMI, the system operator and other entities (such as settlement banks, nostro agents, or liquidity providers), the participants in the FMI and other entities, or two or more participants in the FMI.
- Operational risk: the risk that deficiencies in information systems or internal processes, human errors, management failures, or disruptions from external events will result in the reduction, deterioration, or breakdown of services provided by the FMI.[8]

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[6] The definitions of credit risk, liquidity risk, operational risk, and legal risk are consistent with those presented in the PFMI.

[7] Deliveries of currency are payments, and FMIs that conduct such activity should consider these deliveries to be payments in the management of liquidity risk.

[8] Operational risk also includes physical threats, such as natural disasters and terrorist attacks, and information security threats, such as cyberattacks. Further, deficiencies in information systems or internal processes include errors or delays in processing, system outages, insufficient capacity, fraud, data loss, and leakage.

- Legal risk: the risk of loss from the unexpected or uncertain application of a law or regulation.

These risks also arise between financial institutions as they clear, settle, and record payments and other financial transactions and must be managed by institutions, both individually and collectively.[9]

Further, FMIs may increase, shift, concentrate, or otherwise transform risks in unanticipated ways. FMIs, for example, may pose systemic risk to the financial system because the inability of one or more of its participants to perform as expected may cause other participants to be unable to meet their obligations when due. The failure of one or more of an FMI's participants to settle their payments or other financial transactions as expected, in turn, could create credit or liquidity problems for participants and their customers, the system operator, other financial institutions, and the financial markets the FMI serves. Thus, such a failure might lead ultimately to a disruption in the financial markets more broadly and undermine public confidence in the nation's financial system.

Mitigating the risks that arise in FMIs is especially important because of the interdependencies such systems inherently create among financial institutions. In many cases, interdependencies are a normal part of an FMI's structure or operations. Although they can facilitate the safety and efficiency of the FMI's payment, clearing, settlement, or recording processes, interdependencies can also present an important source or transmission channel of systemic risk. Disruptions can originate from any of the interdependent entities,

[9] Several existing regulatory and bank supervision guidelines and policies also are directed at financial institutions' management of the risks posed by interbank payment and settlement activity. For example, the Board's Regulation F (12 CFR part 206) directs insured depository institutions to establish policies and procedures to avoid excessive exposures to any other depository institution, including exposures that may be generated through the clearing and settlement of payments.

including the system operator, the participants in the FMI, and other systems, and can spread quickly and widely across markets if the risks that arise among these parties are not adequately measured, monitored, and managed. For example, interdependencies often create complex and time-sensitive transaction and payment flows that, in combination with an FMI's design, can lead to significant demands for intraday credit or liquidity, on either a regular or an extraordinary basis.

The Board recognizes that the Reserve Banks, as settlement institutions, have an important role in providing intraday balances and credit to foster the smooth operation and timely completion of money settlement processes among financial institutions and between financial institutions and FMIs. To the extent that the Reserve Banks are the source of intraday credit, they may face a risk of loss if such intraday credit is not repaid as planned. In addition, measures taken by Reserve Banks to limit their intraday credit exposures may shift some or all of the associated risks to financial institutions and FMIs.

In addition, mitigating the risks that arise in certain FMIs is critical to the areas of monetary policy and banking supervision. The effective implementation of monetary policy, for example, depends on both the orderly settlement of open market operations and the efficient movement of funds throughout the financial system via the financial markets and the FMIs that support those markets. Likewise, supervisory objectives regarding the safety and soundness of financial institutions must take into account the risks FMIs, both in the United States and abroad, pose to financial institutions that participate directly or indirectly in, or provide settlement, custody, or credit services to, such systems.

Part I. Risk Management for Financial Market Infrastructures

This part sets out the Board's views, and related standards, regarding the management of risks in FMIs, including those operated by the Reserve Banks. The Board will be guided by this part, in conjunction with relevant laws, regulations, and other Federal Reserve policies, when exercising its authority in (1) supervising the Reserve Banks under the Federal Reserve Act; (2) supervising state member banks, Edge and agreement corporations, and bank holding companies, including the exercise of authority under the Bank Service Company Act, where applicable; (3) carrying out certain of its responsibilities under Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act); (4) setting or reviewing the terms and conditions for the use of Reserve Bank accounts and services; and (5) developing and applying policies for the provision of intraday liquidity to eligible Reserve Bank account holders. This part will also guide the Board, as appropriate, in its interactions and cooperative efforts with other domestic and foreign authorities that have responsibilities for regulating, supervising, or overseeing FMIs within the scope of this part. The Board's adoption of this policy is not intended to exert or create supervisory or regulatory authority over any particular class of institutions or arrangements where the Board does not have such authority.

A. Scope

FMIs within the scope of part I include public- and private-sector payment systems that expect to settle a daily aggregate gross value of U.S. dollar-denominated transactions exceeding $5 billion on any day during the next 12 months.[10, 11] FMIs within the scope of

[10] A "payment system" is a set of instruments, procedures, and rules for the transfer of funds between or among participants. Payment systems include, but are not limited to, large-value funds transfer

this part also include central securities depositories, securities settlement systems, central counterparties, and trade repositories irrespective of the value or nature of the transactions processed by the system.[12] These FMIs may be organized, located, or operated within the United States (domestic systems), outside the United States (offshore systems), or both (cross-border systems) and may involve currencies other than the U.S. dollar (non-U.S. dollar systems and multi-currency systems).[13] The scope of the policy also includes any payment system based or operated in the United States that engages in the settlement of non-U.S. dollar transactions if that payment system would be otherwise subject to the policy.[14]

Part I does not apply to market infrastructures such as trading exchanges, trade-execution facilities, or multilateral trade-compression systems. This part is also not intended to apply to bilateral payment, clearing, or settlement relationships, where an FMI is not involved, between financial institutions and their customers, such as traditional correspondent banking and government securities clearing services. The Board believes that

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systems, automated clearinghouse systems, check clearinghouses, and credit and debit card settlement systems. The scope of this policy also includes payment-versus-payment settlement systems for foreign exchange transactions.

[11] In determining whether it is included in the scope of this policy, a payment system should look at its projected "next" twelve-month period. "Aggregate gross value of U.S. dollar-denominated transactions" refers to the total dollar value of individual U.S. dollar transactions settled in the payment system, which also represents the sum of total U.S. dollar debits (or credits) to all participants before or in absence of any netting of transactions.

[12] A "central securities depository" is an entity that provides securities accounts and central safekeeping services. A "securities settlement system" is an entity that enables securities to be transferred and settled by book entry and allows transfers of securities free of or against payment. A "central counterparty" is 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. A "trade repository" is an entity that maintains a centralized electronic record of transaction data. These definitions are based on those in the PFMI.

[13] Non-U.S. dollar systems may be of interest to the Board if they are used by U.S. financial institutions or may have the ability to affect financial stability, more broadly.

[14] The daily gross value threshold will be calculated on a U.S. dollar equivalent basis.

these market infrastructures and relationships do not constitute FMIs for purposes of this policy and that risk-management issues associated with these market infrastructures and relationships are more appropriately addressed through other relevant supervisory and regulatory processes.

B. Policy expectations for certain financial market infrastructures

This section sets out the Board's views, and related standards, with respect to risk-management and transparency for the subset of FMIs described below in section B.1, including the Reserve Banks' Fedwire Funds Service and Fedwire Securities Service (collectively, Fedwire Services). The Board believes these FMIs should have comprehensive risk management as well as a high degree of transparency.

1. Risk management

Authorities, including central banks, have promoted sound risk-management practices by developing internationally accepted minimum standards that promote the safety and efficiency of FMIs. Specifically, the Committee on Payment and Settlement Systems (CPSS) and Technical Committee of the International Organization of Securities Commissions (IOSCO) report on *Principles for Financial Market Infrastructures* (PFMI) establishes minimum standards for payment systems that are systemically important, central securities depositories, securities settlement systems, central counterparties, and trade repositories for addressing areas such as legal risk, governance, credit and liquidity risks, general business risk, operational risk, and other types of risk.[15] The PFMI reflects broad market input and

[15] In addition to these risk-management standards, the PFMI sets out responsibilities for authorities for FMIs, including central banks, in order to provide for effective regulation, supervision, and oversight of FMIs.

has been widely recognized, supported, and endorsed by U.S. authorities, including the Federal Reserve, U.S. Securities and Exchange Commission (SEC), and U.S. Commodity Futures Trading Commission (CFTC). These standards are also part of the Financial Stability Board's (FSB's) Key Standards for Sound Financial Systems.[16]

The Board believes that the implementation of the PFMI by the FMIs within the scope of this section will help promote their safety and efficiency in the financial system and foster greater financial stability in the domestic and global economy. Accordingly, the Board has incorporated into the PSR policy principles 1 through 24 from the PFMI, as set forth in the appendix.[17] In applying part I of this policy, the Board will be guided by the key considerations and explanatory notes from the PFMI as well as its interpretation of the corresponding provisions of Regulation HH.[18]

a. Fedwire Services

The Board recognizes the critical role the Reserve Banks' Fedwire Services play in the financial system and requires them to meet or exceed the standards set forth in the appendix to this policy, consistent with the guidance on central bank-operated systems provided in the PFMI and with the requirements in the Monetary Control Act.[19]

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[16] The FSB's Key Standards for Sound Financial Systems are available at http://www.financialstabilityboard.org/cos/key_standards.htm. 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.

[17] The Board's Regulation HH contains risk-management standards that are based on the PFMI for certain designated financial market utilities. Regulation HH (12 CFR part 234) is available at http://www.federalreserve.gov/bankinforeg/reglisting.htm#HH.

[18] The Board will also look to the CPSS-IOSCO *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology,* which is available at http://www.bis.org/cpmi/publ/d106.pdf, and other related documents.

[19] Certain standards may require flexibility in the way they are applied to central bank-operated systems because of central banks' unique role in the financial markets and their public

b. Designated financial market utilities for which the Board is the Supervisory Agency under Title VIII of the Dodd-Frank Act

The Board's Regulation HH imposes risk-management standards applicable to a designated financial market utility for which the Board is the Supervisory Agency.[20] The risk-management standards in Regulation HH are based on the PFMI. As required under Title VIII of the Dodd-Frank Act, the risk-management standards seek to promote robust risk management, promote safety and soundness, reduce systemic risks, and support the stability of the broader financial system. Designated financial market utilities for which the Board is the Supervisory Agency are required to comply with the risk-management standards in Regulation HH and are not subject to the standards in the appendix.

c. Other financial market infrastructures that are subject to the Board's supervisory authority under the Federal Reserve Act

The Board expects all other FMIs that are subject to its supervisory authority under the Federal Reserve Act, including FMIs that are members of the Federal Reserve System, to meet or exceed the risk-management standards in the appendix.

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responsibilities. These principles include principle 2 on governance, principle 3 on the framework for the comprehensive management of risks, principle 4 on credit risk, principle 5 on collateral, principle 7 on liquidity risk, principle 13 on participant-default rules and procedures, principle 15 on general business risk, and principle 18 on access and participation requirements. For instance, the Reserve Banks should refer to part II of this policy for managing their credit risk arising from the provision of intraday credit to users of the Fedwire Services.

[20] The term "Supervisory Agency" is defined in Title VIII as the "Federal agency that has primary jurisdiction over a designated financial market utility under Federal banking, securities, or commodity futures laws" (12 U.S.C. 5462(8)). Under Title VIII, the Board must prescribe risk-management standards for designated financial market utilities for which the Board or another Federal banking agency is the appropriate Supervisory Agency (12 U.S.C. 5464(a)). There are currently no designated financial market utilities for which another federal banking agency is the Supervisory Agency.

d. All other central securities depositories, securities settlement systems, central counterparties, and trade repositories

The Board encourages all other central securities depositories, securities settlement systems, central counterparties, and trade repositories, whether they are located within or outside the United States, to meet or exceed the risk-management standards in the appendix to this policy. Where the Board does not have authority over a central securities depository, securities settlement system, central counterparty, or trade repository, the Board will be guided by this policy in its cooperative efforts with other FMI authorities.

e. Other systemically important offshore and cross-border payment systems

The Board encourages systemically important offshore and cross-border payment systems that are not included in any of the categories above to meet or exceed the risk-management standards in the appendix to this policy.[21] The Board will be guided by this policy in its cooperative efforts with other payment system authorities.

2. Transparency

Transparency helps ensure that relevant information is provided to an FMI's participants, authorities, and the public to inform sound decisionmaking, improve risk management, enable market discipline, and foster confidence in markets more broadly. In particular, public disclosures play a critical role in allowing current and prospective participants, as well as other stakeholders, to understand an FMI's operations and the risks associated with using its services and to manage more effectively their risks with respect to the FMI. The Board believes that FMIs are well-positioned to provide the information necessary to support greater market transparency and to maintain financial stability.

[21] These systems may be used by U.S. financial institutions, clear or settle U.S. dollars, or have the ability to affect financial stability, more broadly.

The Board expects an FMI that is subject to its supervisory authority, but not subject to Regulation HH, to disclose to its participants information about the risks and costs that they incur by participating in the FMI, consistent with the requirements in principle 23 in the appendix.[22] At a minimum, the FMI should disclose to its participants overviews of the FMI's system design and operations, rules and key procedures, key highlights of business continuity arrangements, fees and other material costs, aggregate transaction volumes and values, levels of financial resources that can be used to cover participant defaults, and other information that would facilitate its participants' understanding of the FMI and its operations and their evaluation of the risks associated with using that FMI.

In addition, the Board expects such an FMI to complete the disclosure framework set forth in the CPSS-IOSCO *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology* ("disclosure framework" and "assessment methodology").[23] The disclosure framework establishes the international baseline set of information that all FMIs are expected to disclose publicly and review regularly.[24] An FMI is encouraged to use the guiding questions in the assessment methodology to guide the content and level of detail in their disclosures. The Board expects each FMI to make its disclosure readily available to the public, such as by posting it on the FMI's public website, to achieve maximum transparency.

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[22] The Board's Regulation HH imposes an equivalent public disclosure requirement.

[23] See CPSS-IOSCO, *Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology*, December 2012, available at http://www.bis.org/cpmi/publ/d106.pdf.

[24] Although the Board expects disclosures to be robust, it does not expect FMIs to disclose to the public sensitive information that could expose system vulnerabilities or otherwise put the FMI at risk (for example, specific business continuity plans).

To ensure each FMI's accountability for the accuracy and completeness of its disclosure, the Board expects the FMI's senior management and board of directors to review and approve each disclosure upon completion. Further, in order for an FMI's disclosure to reflect its current rules, procedures, and operations, the Board expects the FMI to update the relevant parts of its disclosure following changes to the FMI or the environment in which it operates, which would significantly change the accuracy of the statements in its disclosure. At a minimum, the FMI is expected to review and update as warranted its disclosure every two years.

As part of its ongoing oversight of FMIs, the Board will review public disclosures by FMIs subject to its supervisory authority to ensure that the Board's policy objectives and expectations are being met.[25] Where necessary, the Board will provide feedback to the FMIs regarding the content of these disclosures and their effectiveness in achieving the policy objectives discussed above.[26] The Board acknowledges that FMIs vary in terms of the scope of instruments they settle and markets they serve. It also recognizes that FMIs may operate under different legal and regulatory constraints, charters, and corporate structures. The Board will consider these factors when reviewing the disclosures and in evaluating how an FMI addresses a particular standard. Where the Board does not have statutory or exclusive authority over an FMI, it will be guided by this policy in cooperative efforts with other domestic or foreign authorities to promote comprehensive disclosures by FMIs as a means to achieve greater safety and efficiency in the financial system.

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[25] Any review of a disclosure by the Board should not be viewed as an approval or guarantee of the accuracy of an FMI's disclosure. Without the express approval of the Board, an FMI may not state that its disclosure has been reviewed, endorsed, approved, or otherwise not objected to by the Board.

[26] If the Board materially disagrees with the content of an FMI's disclosure, it will communicate its concerns to the FMI's senior management and possibly to its board of directors, as appropriate. The Board may also discuss its concerns with other relevant authorities, as appropriate.

C. General policy expectations for other payment systems within the scope of the policy

The Board encourages payment systems within the scope of this policy, but that are not included in any of the categories in section B above, to implement a general risk-management framework appropriate for the risks the payment system poses to the system operator, system participants, and other relevant parties as well as the financial system more broadly.

1. Establishment of a risk-management framework

A risk-management framework is the set of objectives, policies, arrangements, procedures, and resources that a system employs to limit and manage risk. Although there are a number of ways to structure a sound risk-management framework, all frameworks should

a. identify risks clearly and set sound risk-management objectives;
b. establish sound governance arrangements to oversee the risk-management framework;
c. establish clear and appropriate rules and procedures to carry out the risk-management objectives; and
d. employ the resources necessary to achieve the system's risk-management objectives and implement effectively its rules and procedures.

a. Identify risks clearly and set sound risk-management objectives

The first element of a sound risk-management framework is the clear identification of all risks that have the potential to arise in or result from the system's settlement process and the development of clear and transparent objectives regarding the system's tolerance for and management of such risks. System operators should identify the forms of risk present in their

system's settlement process as well as the parties posing and bearing each risk. In particular, system operators should identify the risks posed to and borne by them, the system participants, and other key parties such as a system's settlement banks, custody banks, and third-party service providers. System operators should also analyze whether risks might be imposed on other external parties and the financial system more broadly.

In addition, system operators should analyze how risk is transformed or concentrated by the settlement process. System operators should also consider the possibility that attempts to limit one type of risk could lead to an increase in another type of risk. Moreover, system operators should be aware of risks that might be unique to certain instruments, participants, or market practices. Where payment systems have inter-relationships with or dependencies on other FMIs, system operators should also analyze whether and to what extent any cross-system risks exist and who bears them.

Using their clear identification of risks, system operators should establish the risk tolerance of the system, including the levels of risk exposure that are acceptable to the system operator, system participants, and other relevant parties. System operators should then set risk-management objectives that clearly allocate acceptable risks among the relevant parties and set out strategies to manage this risk. Risk-management objectives should be consistent with the objectives of this policy, the system's business purposes, and the type of payment instruments and markets for which the system clears and settles. Risk-management objectives should also be communicated to and understood by both the system operator's staff and system participants.

System operators should reevaluate their risks in conjunction with any major changes in the settlement process or operations, the transactions settled, the system's rules or

procedures, or the relevant legal and market environments. System operators should review the risk-management objectives regularly to ensure that they are appropriate for the risks posed by the system, continue to be aligned with the system's purposes, remain consistent with this policy, and are being effectively adhered to by the system operator and participants.

b. Establish sound governance arrangements to oversee the risk-management framework

Systems should have sound governance arrangements to implement and oversee their risk-management frameworks. The responsibility for sound governance rests with a system operator's board of directors or similar body and with the system operator's senior management. Governance structures and processes should be transparent; enable the establishment of clear risk-management objectives; set and enforce clear lines of responsibility and accountability for achieving these objectives; ensure that there is appropriate oversight of the risk-management process; and enable the effective use of information reported by the system operator's management, internal auditors, and external auditors to monitor the performance of the risk-management process.[27] Individuals responsible for governance should be qualified for their positions, understand their responsibilities, and understand their system's risk-management framework. Governance arrangements should also ensure that risk-management information is shared in forms, and at times, that allow individuals responsible for governance to fulfill their duties effectively.

c. Establish clear and appropriate rules and procedures to carry out the risk-management objectives

[27] The risk-management and internal audit functions should also be independent of those responsible for day-to-day functions.

Systems should have rules and procedures that are appropriate and sufficient to carry out the system's risk-management objectives and that are consistent with its legal framework. Such rules and procedures should specify the respective responsibilities of the system operator, system participants, and other relevant parties. Rules and procedures should establish the key features of a system's settlement and risk-management design and specify clear and transparent crisis management procedures and settlement failure procedures, if applicable.[28]

d. Employ the resources necessary to achieve the system's risk-management objectives and implement effectively its rules and procedures

System operators should ensure that the appropriate resources and processes are in place to allow the system to achieve its risk-management objectives and implement effectively its rules and procedures. In particular, the system operator's staff should have the appropriate skills, information, and tools to apply the system's rules and procedures and achieve the system's risk-management objectives. System operators should also ensure that their facilities and contingency arrangements, including any information system resources, are sufficient to meet their risk-management objectives.

2. Other considerations for a risk-management framework

Payment systems differ widely in form, function, scale, and scope of activities, and these characteristics result in differing combinations and levels of risks. Thus, the exact features of a system's risk-management framework should be tailored to the risks of that

[28] Examples of key features that might be specified in a system's rules and procedures are controls to limit participant-based risks, such as membership criteria based on participants' financial and operational health; limits on credit exposures; and the procedures and resources to liquidate collateral. Other examples of key features might be business continuity requirements and loss-allocation procedures.

system. The specific features of a risk-management framework may entail tradeoffs between efficiency and risk reduction, and payment systems will need to consider these tradeoffs when designing appropriate rules and procedures. In considering such tradeoffs, however, it is critically important that system operators take into account the costs and risks that may be imposed on all relevant parties, including parties with no direct role in the system. Furthermore, in light of rapidly evolving technologies and risk-management practices, the Board encourages all system operators to consider making risk-management improvements when cost-effective.

The Board may seek to understand how a system achieves the four elements of a sound risk-management framework set out above. In this context, the Board may seek to obtain information from system operators regarding their risk-management framework, risk-management objectives, rules and procedures, significant legal analyses, general risk analyses, analyses of the credit and liquidity effects of settlement disruptions, business continuity plans, crisis management procedures, and other relevant documentation.[29] The Board also may seek to obtain data or statistics on system activity on an ad hoc or ongoing basis. All information provided to the Federal Reserve for the purposes of this policy will be handled in accordance with all applicable Federal Reserve policies on information security, confidentiality, and conflicts of interest.

[29] To facilitate analysis of settlement disruptions, systems may need to develop the capability to simulate credit and liquidity effects on participants and on the system resulting from one or more participant defaults, or other possible sources of settlement disruption. Such simulations may need to include, if appropriate, the effects of changes in market prices, volatilities, or other factors.

D. Cooperation with other authorities in regulating, supervising, and overseeing financial market infrastructures

When the Board does not have statutory or exclusive authority over an FMI covered by this policy, this section will guide the Board, as appropriate, in its interactions with other domestic and foreign authorities to promote effective risk management in and transparency by FMIs. For example, the Federal Reserve may have an interest in the safety and efficiency of FMIs outside the United States that are subject to regulation, supervision, or oversight by another authority but that provide services to financial institutions supervised by the Board or conduct activity that involves the U.S. dollar.[30] In its interactions with other domestic and foreign authorities, the Board will encourage these authorities to adopt and to apply the internationally accepted principles set forth in the appendix when evaluating the risks posed by and to FMIs and individual system participants that these authorities regulate, supervise, or oversee.

In working with other authorities, the Board will seek to establish arrangements for effective and practical cooperation that promote sound risk-management outcomes. The Board believes that cooperative arrangements among relevant authorities can be an effective mechanism for, among other things, (1) sharing relevant information concerning the policies, procedures, and operations of an FMI; (2) sharing supervisory views regarding an FMI; (3) discussing and promoting the application of robust risk-management standards; and (4) serving as a forum for effective communication, coordination, and consultation during normal circumstances, as well as periods of market stress.

[30] An FMI may be subject to supervision or oversight by the Board and other authorities, as a result of its legal framework, operating structure (for example, multi-currency or cross-border systems), or participant base. In such cases, the Board will be sensitive to the potential for duplicative or conflicting requirements, oversight gaps, or unnecessary costs and burdens imposed on the FMI.

When establishing such cooperative arrangements, the Board will be guided, as appropriate, by international principles on cooperative arrangements for the regulation, supervision, and oversight of FMIs. In particular, responsibility E in the PFMI addresses domestic and international cooperation among central banks, market regulators, and other relevant authorities and provides guidance to these entities for supporting each other in fulfilling their respective mandates with respect to FMIs. The CPSS report on *Central Bank Oversight of Payment and Settlement Systems* also provides important guidance on international cooperation among central banks.[31] The Board believes this international guidance provides important frameworks for cooperating and coordinating with other authorities to address risks in domestic, cross-border, multi-currency, and, where appropriate, offshore FMIs.

[31] See *Central Bank Oversight of Payment and Settlement Systems*, part B on "Principles for international cooperative oversight," May 2005, available at http://www.bis.org/cpmi/publ/d68.pdf.

Part II. Federal Reserve Intraday Credit Policies

[No change to existing part II of the policy.]

Appendix – CPSS-IOSCO Principles for Financial Market Infrastructures

Principle 1: Legal basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a central counterparty that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit

exposure to the central counterparty in extreme but plausible market conditions. All other central counterparties should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the central counterparty in extreme but plausible market conditions.

Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Principle 6: Margin

A central counterparty should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Principle 10: Physical deliveries

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

Principle 11: Central securities depositories

A central securities depository should have appropriate rules and procedures to help ensure the integrity of securities issues and minimize and manage the risks associated with the safekeeping and transfer of securities. A central securities depository should maintain securities in an immobilized or dematerialized form for their transfer by book entry.

Principle 12: Exchange-of-value settlement systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Principle 14: Segregation and portability

A central counterparty should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the central counterparty with respect to those positions.

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Principle 17: Operational risk

An FMI should 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. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Principle 20: FMI links

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should 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 FMI. All relevant rules and key procedures should be publicly disclosed.

Principle 24: Disclosure of market data by trade repositories

A trade repository should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

By order of the Board of Governors of the Federal Reserve System, November 6, 2014.

Robert deV. Frierson,
Secretary of the Board.

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