

(a) Completing pending large-value payments;

(b) Clearing and settling material pending transactions;⁵

(c) Meeting material end-of-day funding and collateral obligations necessary to ensure the performance of items (a) and (b) above;

(d) Managing material open firm and customer risk positions, as appropriate and necessary to ensure the performance of items (a) through (c) above;

(e) Communicating firm and customer positions and reconciling the day's records, and safeguarding firm and customer assets as necessary to ensure the performance of items (a) through (d) above; and

(f) Carrying out all support and related functions that are integral to performing the above critical activities.

For purposes of this paper, the terms recovery (or recover) refers to the restoration of clearing and settlement activities after a wide-scale disruption;⁶ resumption (or resume) refers to the capacity to accept and process new transactions and payments after a wide-scale disruption.

Sound Practices

The agencies have identified four broad sound practices for core clearing and settlement organizations and firms that play significant roles in critical financial markets. The sound practices are based on long-standing principles of business continuity planning in which critical activities are identified, a business impact analysis is conducted, and plans are developed, implemented, and tested. Adoption of the sound practices will help protect the financial system from the risks of a wide-scale disruption and reduce the potential that key market participants will present systemic risk to one or more critical markets because primary and back-up processing facilities and staffs are located within the same geographic region.

1. *Identify clearing and settlement activities in support of critical financial markets.* An organization should identify all clearing and settlement activities in each critical financial market in which it is a core clearing and settlement organization or plays a

significant role. This assessment should include identification of activities or systems that support or are integrally related to the performance of clearing and settlement activities in those markets.

2. *Determine appropriate recovery and resumption objectives for clearing and settlement activities in support of critical markets.* For purposes of the sound practices, a recovery-time objective is the amount of time in which a firm aims to recover clearing and settlement activities after a wide-scale disruption with the overall goal of completing material pending transactions on the scheduled settlement date. Recovery-time objectives for clearing and settlement activities should be relatively consistent across critical financial markets. This promotes the compatibility of recovery plans and helps ensure that core clearing and settlement organizations and firms that play significant roles in critical financial markets will be able to participate in the financial system in times of wide-scale disruptions. Recovery-time objectives provide concrete goals to plan for and test against. They should not be regarded as hard and fast deadlines that must be met in every emergency situation. Indeed, the agencies recognize that various external factors surrounding a disruption such as time of day, scope of disruption, and status of critical infrastructure—particularly telecommunications—can affect actual recovery times.⁷ Furthermore, recovery time objectives might not be achievable following a late-day disruption without an extension of normal business hours.

Market participants agree that core clearing and settlement organizations must meet more aggressive recovery-time objectives than firms that play significant roles in critical financial markets. This is because core clearing and settlement organizations are necessary to the completion of most transactions in critical markets; accordingly, they must recover and resume their critical functions in order for other market participants to process pending transactions and complete large-value payments. It also is

reasonable to assume that there will be firms that play significant roles and other market participants in locations not affected by a particular disruption that will need to clear and settle pending transactions in critical markets. Therefore, core clearing and settlement organizations should plan both to *recover and resume* their processing and other activities that support critical markets. In light of the large volume and value of transactions/payments that are cleared and settled on a daily basis, failure to complete the clearing and settlement of pending transactions within the business day could create systemic liquidity dislocations, as well as exacerbate credit and market risk for critical markets. Therefore, core clearing and settlement organizations should develop the capacity to recover and resume clearing and settlement activities *within the business day on which the disruption occurs* with the overall goal of achieving recovery and resumption within two hours after an event.⁸ Core clearing and settlement organizations also should develop plans for communicating with participants during a disruption to facilitate their rapid recovery.

The ability of firms that play significant roles in critical financial markets to recover clearing and settlement activities depends on the timing of the recovery of core clearing and settlement organizations for those markets. For planning purposes, firms should assume that core clearing and settlement organizations will recover and resume clearance and settlement activities within the business day of the disruption. Accordingly, firms that play significant roles in critical financial markets should plan to recover clearing and settlement activities for those markets as soon as possible after the core clearing and settlement organizations have recovered and resumed their operations and *within the business day on which a disruption occurs*. In some markets, such as wholesale payments, the banking industry has had long-established recovery benchmarks of four hours and the largest participants in the wholesale payments market have actively discussed the need for a two-hour recovery standard by such

⁵ Transactions in government securities include the purchase and sale of U.S. government bills, notes, bonds and agency securities (including mortgage-backed securities issued by Government Sponsored Enterprises), as well as repurchase and reverse repurchase agreements and triparty repurchase agreements involving U.S. government and agency securities.

⁶ The goal of business recovery plans is the recovery of a particular activity or function and not the recovery of a disabled facility or system.

⁷ A number of firms have expressed concerns about the resilience of telecommunications and other critical infrastructure, and the current limitations on an individual firm's ability to obtain verifiable redundancy of service from such carriers. Firms that establish geographically dispersed facilities can achieve additional diversity in their telecommunications and other infrastructure services, which will provide additional resilience in ensuring recovery of critical operations. A number of financial firms are sponsoring industry-wide efforts to explore common infrastructure issues and approaches.

⁸ This includes recovery of clearance and settlement activities that would normally be performed by core clearing and settlement organizations and significant firms within a particular market's business hours on the day of the disruption. These activities include inputting material transaction data or payment instructions, and performing all steps necessary to clear and complete material transactions on their regular value or settlement dates.