

**Board of Governors of the Federal Reserve System  
Office of the Comptroller of the Currency  
Securities and Exchange Commission**

**Joint Report on Efforts of the Private Sector to Implement the  
*Interagency Paper on Sound Practices to Strengthen  
the Resilience of the U.S. Financial System*  
April 2006**

**Introduction**

Congress in the Intelligence Reform and Terrorism Prevention Act (“Terrorism Prevention Act”)<sup>1</sup> required the Federal Reserve, the Office of the Comptroller of the Currency, and the Securities Exchange Commission (agencies) to prepare a study, due no later than April 30, 2006, on the efforts of the private sector to implement the *Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System*<sup>2</sup> (Sound Practices Paper). As directed in the legislation, this report discusses the efforts of private sector financial services firms covered by the Sound Practices Paper to implement enhanced business continuity plans, and the extent to which implementation has been done in a geographically dispersed manner. This report also addresses the agencies’ views whether the Sound Practices Paper should be expanded to a larger range of private sector financial services firms that play significant roles in critical financial markets and whether legislative and regulatory changes are needed to expedite implementation by affected firms and optimize business continuity planning by the financial services industry.

As discussed below, the regulated financial firms have made progress in implementing the Sound Practices Paper. Even though the sound practices are guidelines, covered firms have agreed to implement them and are working closely with the agencies to meet supervisory expectations. In this regard, the core clearing and settlement organizations, which present the greatest potential risk to the operation of the financial system, have made significant investments in their operating infrastructures, and all have achieved substantial implementation of the sound practices. Firms that play significant roles in critical financial markets have completed or should complete during 2006 substantial implementation of the sound practices. Supervisory staffs of the agencies are in the process of reviewing verification information and assessing whether the sound practices have been effectively implemented.

The agencies believe that the sound practices are an appropriate point of reference for mitigating the impact of a wide-scale disruption by all private sector financial services firms. However, they do not believe that expanding the current scope of the application of the Sound Practices Paper would provide sufficient additional resilience to outweigh the costs to financial market participants. The Sound Practices Paper expressly encourages all financial firms to review and consider implementation of

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<sup>1</sup> Intelligence Reform and Terrorism Prevention Act of 2004, Section 7803(e), S. 2845 (“Emergency Securities Response Act of 2004”) (December 17, 2004).

<sup>2</sup> Sound Practices Paper, Securities Exchange Act Release No. 47638 (April 7, 2003), 68 FR 17809 (April 11, 2003).

the sound practices, and some firms have been responsive to this request in the design of their business continuity plans. In addition, the agencies continue to monitor the risk to the financial system a supervised institution's failure could pose and have contacted firms that, based on more recent information, now meet the definition of core clearing and settlement organization or firm that plays significant roles in critical financial markets to ask them to implement the sound practices.

## **Sound Practices Paper and Implementation Efforts of Covered Firms**

Scope of Sound Practices Paper. One of the lessons learned during the events of September 11 is that firms across the financial system are highly interdependent. An operational disruption at one can create settlement risk and, ultimately, credit and liquidity risks at others. The Sound Practices Paper, which builds on longstanding principles of business continuity management, is meant to address the external risk that financial firms pose to the smooth operation of the financial system, and is based on the premise that firms that provide critical services or otherwise present significant external risk during a wide-scale disruption have a shared obligation to meet higher recovery standards in order to minimize systemic risk.<sup>3</sup>

The Sound Practices Paper identifies resumption or recovery objectives for critical clearing and settlement activities by two groups of firms. The first group is core clearing and settlement organizations, which are the firms that provide clearing and settlement services for critical financial markets or act as large-value payment system operators and present systemic risk should they be unable to operate.<sup>4</sup> The second group is firms that play significant roles in one or more critical financial markets by participating (on behalf of themselves or their customers) with sufficient market share (at least five percent) such that their failure to settle their own or their customers' material pending transactions by the end of the business day could present systemic risk. The agencies were careful to limit the scope of the paper to the financial firms that, because of the settlement risk they present, should be expected to target higher resilience standards than they might otherwise choose for purposes of mitigating their particular business risks.

The definitions of a core clearing and settlement organization and a firm that plays a significant role in a critical financial market were adopted in the Sound Practices Paper after considerable study of the operation of the financial system and reflect the

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<sup>3</sup> Systemic risk is defined in the Sound Practices Paper as "the risk that the failure of one participant in a transfer system or financial market to meet its required obligations will cause other participants to be unable to meet their obligations when due, causing significant liquidity or credit problems or threatening the stability of financial markets." The use of the term is based on the international definition of systemic risk in payments and settlement systems contained in "A glossary of terms in payment and settlement systems," Committee on Payment and Settlement Systems, Bank for International Settlements (2001).

<sup>4</sup> The critical financial markets identified in the Sound Practices Paper are federal funds, foreign exchange, commercial paper, U.S. government and agency securities, and corporate debt and equity securities. It is understood that wholesale payments services provided by depository institutions underpin all of the critical markets.

joint views of the agencies, industry members, and the public. The agencies published a draft of the Sound Practices Paper in the Federal Register on September 5, 2002, and approximately 90 comments were received.<sup>5</sup> Based on the comments, the definitions were refined. For example, the commenters advised the agencies to use at least a five percent U.S. dollar volume threshold as the criterion for a significant firm.<sup>6</sup> At the time the final paper was published, the agencies specifically contacted each firm that, based on the analysis of available data, was determined to meet one or more of the criteria in a critical financial market and asked the firm to implement the sound practices.

The Sound Practices Paper is designed to assure that the two groups of firms will be able quickly to recover operations sufficient to complete material open transactions thereby minimizing the settlement risk to the financial system. Accordingly, the sound practices include meeting the objective of recovering or resuming clearing and settlement activities within-the-business-day on which a disruption occurs and maintaining geographically dispersed resources sufficient to meet those recovery or resumption objectives. By identifying specific risk-based recovery standards, the Sound Practices Paper seeks to assure that there will be a relatively consistent degree of preparedness across these firms.

Implementation of Sound Practices by Covered Firms. The core clearing and settlement organizations were asked to substantially implement the sound practices by the end of 2004. This was extended to the end of 2005 in light of the amount of work and investment required to meet the agencies' expectations that these organizations demonstrate the ability to recover and resume critical clearing and settlement activities within a two-hour timeframe from a geographically remote backup site. The core clearing and settlement organizations, which are located in Manhattan, demonstrated a significant commitment to implement the sound practices within this timeframe. They all now have data and operations centers that are geographically remote from primary sites. All but one of the core clearing and settlement organizations had to establish completely new data centers and operations facilities in order to meet the required geographic diversity. Several of the core clearing and settlement organizations share or periodically shift processing work between the primary and remote backup sites, which provides assurance that they will be able to continue clearing and settlements in the event of a disruption at either location. Supervisory staffs are reviewing verification and testing documentation for one organization that plans to shift processing to backup sites when a disruption occurs, and for another that completed its remote data center at the end of 2005.

The banks and broker-dealers that were identified as firms that play a significant role in one or more critical financial markets were asked to implement the sound practices. Supervisory staffs are still assessing whether significant firms have substantially achieved the sound practices. Based on supervisory reports to date, it

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<sup>5</sup> 67 FR 56835, September 5, 2002.

<sup>6</sup> The draft paper asked whether the definition of "firm that plays a significant role in a critical financial market" should include some specific dollar or volume threshold and specifically suggested five, seven and ten percent market shares as possible criteria.

appears that the significant firms either have substantially achieved or should substantially achieve the sound practices during 2006. Five of the firms are still implementing the sound practices: two are finalizing arrangements for operations centers and three are finalizing arrangements for data centers that support their clearance and settlement activities in one or more critical markets.<sup>7</sup> Supervisory reports indicate that these firms have substantially implemented the sound practices in other respects. Even though the sound practices are guidelines, covered firms have agreed to implement them and are working closely with the agencies to meet supervisory expectations. Accordingly, the agencies do not believe there is a need for legislative or regulatory changes to optimize implementation by covered firms.

With respect to achieving geographic diversity of primary and backup sites, significant firms are meeting the expectations of the Sound Practices Paper. The Sound Practices Paper expressly does not mandate minimum mileage requirements for distances between primary and backup facilities; rather each firm has flexibility to implement the sound practices based on its own risk profile in consultation with its regulatory agency. Significant firms have or are establishing geographically diverse backup sites, in many cases hundreds of miles away from their primary sites, and all firms have made measurable improvements in their backup arrangements. As the Sound Practices Paper states, long-standing principles of business continuity suggest that backup arrangements should be as far from primary sites as necessary to avoid being subject to the same set of risks as the primary location. As part of their sound practices review, supervisory staffs of the agencies are discussing recovery arrangements with significant firms to determine the extent to which firms are able to avoid reliance on the same infrastructure components, including the impact of a wide-scale evacuation, although as discussed *infra*, firms may not always be able to obtain complete information about certain critical infrastructure constraints.

Implementation of the sound practices has led covered firms to make significant investments in backup facilities, technology, and staff. As a result, covered firms have increased their resilience to a wide-scale disruption, and the U.S. financial system is considerably more likely to recover rapidly from such an event.

Expansion of Scope of Sound Practices Paper. In considering whether there is a need to expand the scope of the Sound Practices Paper, it is important to consider the resilience of the financial system overall. A broad range of financial services firms falls under a scheme of federal regulation and many of them already are subject to either regulatory or market-based expectations pertaining to recovery objectives and business continuity planning. But, even before the modern banking and securities statutes and regulations were adopted, the financial industry was expected to meet a very high standard of care in the handling of customers' funds, securities, and confidential financial information. Thus, financial institutions have a long-standing culture that emphasizes strong internal controls, physical and cyber security, and a comprehensive approach to

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<sup>7</sup> The Sound Practices Paper noted that the three-year implementation target (April 2006) could be an aggressive target for some firms and allowed for a longer implementation period for such firms as necessary.

business continuity planning that recognizes the importance of recovering and resuming business operations. The financial sector is recognized as one of the most resilient of the commercial sectors and it performed extremely well during and following the events of September 11.

All federally insured banking organizations are subject to supervisory guidance on business continuity. In April 2003, the Federal Financial Institutions Examination Council (FFIEC) issued expanded guidance on business continuity planning.<sup>8</sup> The guidance addresses both operations and business risk issues that all depository institutions must incorporate into their business continuity plans. The guidance specifically refers to the need to plan and test for recovery of critical business lines and functions--such as retail banking services--in the event of a wide-scale disruption, as well as scenarios in which physical or cyber assets (e.g., consumer information) and personnel are lost. Subsequently, the FFIEC issued guidance on managing risks associated with information technology operations, management, electronic banking, outsourcing, and wholesale and retail payments systems. These areas are part of the banking agencies' ongoing, on-site examination programs.

Similarly, all broker-dealers are subject to regulatory requirements with respect to establishing and maintaining business continuity plans and setting appropriate recovery objectives. Broker-dealers refer to the recovery time objectives of the trading markets as a benchmark for their own business resumption plans.<sup>9</sup> On April 16, 2004, the SEC approved rules of the NYSE and NASD, the primary self-regulatory organizations (SROs) for broker-dealers, requiring member firms to maintain business continuity plans that address a series of specified topics (including assuring that customers can have prompt access to their funds and securities in the event the member does not continue in business). These firms are inspected against SRO rules on a regular basis. Moreover, market discipline also provides a strong incentive for firms to voluntarily improve their resilience: investors and counterparties want to know a financial firm's resilience. The securities industry, which bore the heavy brunt of the events of September 11, has been extremely active in encouraging the resilience of all market participants. Indeed, in October 2005, trade associations for the securities, fixed income and derivatives industries sponsored a market-wide test that provided the opportunity to submit, execute, and settle test orders. The test received wide participation and had very positive results; a similar test will be held in October 2006. Most recently, the industry has been proactive in raising awareness of the need to augment business continuity plans to address pandemic flu.<sup>10</sup>

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<sup>8</sup> The FFIEC is a formal interagency body empowered to prescribe uniform principles, standards, and report forms for the federal examination of financial institutions by the Federal Reserve, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency, and the Office of Thrift Supervision--the federal banking agencies--and to make recommendations to promote uniformity in the supervision of financial institutions. The guidance cited in the paragraph can be accessed at [www.ffiec.gov](http://www.ffiec.gov).

<sup>9</sup> See footnote 13 *infra*.

<sup>10</sup> Beginning in September 2005, industry members have sponsored several open meetings in order to be briefed about avian flu by medical authorities, discuss evolving crisis response plans for New York City, and to share best practices. Industry associations, such as the Financial

The responsibility for managing business continuity applies even if a financial institution outsources to a third party the performance of services and processes that are subject to regulation and examination by its supervising agency (e.g., asset management, customer account processing, retail and wholesale payment clearing and settlement, and business continuity and disaster recovery services). It is the agencies' position that, notwithstanding the use of a service provider to perform various activities, a regulated financial institution cannot shift responsibility for compliance and risk management to the service provider. For example, a registered broker-dealer may contract with a service provider to keep and maintain certain records on its behalf, but the broker-dealer may not delegate to the service provider compliance responsibility with respect to the recordkeeping requirements of the federal securities laws. Should a service provider not have the appropriate level of resilience, a financial institution would be required to move to a provider that can demonstrate an appropriate level of resilience.<sup>11</sup> The Bank Service Company Act specifically authorizes the federal banking agencies to examine third parties that provide certain services to banks to the same extent as if such services were being performed by the bank itself on its own premises.<sup>12</sup> The scope of service provider examinations may include assessments of firms' audit functions; organizational structures and management oversight; product and service development and delivery; customer support; vendor management; information technology; information security; disaster recovery; and business continuity.

These regulatory programs and industry initiatives form a sound foundation upon which certain firms that are subject to the Sound Practices Paper are expected to build even more resilience because of the potential risk they present to the financial system.

The trading markets operated by the SROs and electronic communications networks (ECNs) also are subject to supervisory expectations that they will have robust, risk-based business continuity planning programs.<sup>13</sup> Moreover, the trading markets and

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Service Sector Coordinating Council, are helping to coordinate efforts and recently issued an advisory paper entitled *Preparations for "Avian Flu"* in January 2006. See [www.fsscc.org/reports/avianflu.html](http://www.fsscc.org/reports/avianflu.html). In March, the Federal Reserve and OCC (along with other banking regulators) advised supervised institutions to incorporate the risks posed by pandemic flu into business continuity plans.

<sup>11</sup> The larger service providers have robust backup facilities and recovery objectives tailored to client firm requirements. Moreover, the agencies understand that since September 11, service providers are being carefully scrutinized by client financial institutions for recovery capabilities and cyber security.

<sup>12</sup> 12 U.S.C. § 1861 et seq. The federal banking agencies utilize a risk-based process to identify those technology service providers that should be examined jointly; the process includes identifying the types of services provided, as well as the number and the aggregate size of insured financial institutions serviced. In addition, each agency identifies service providers that could be examined as part of its regular bank supervisory process.

<sup>13</sup> See *Policy Statement: Business Continuity Planning for Trading Markets*, Securities Exchange Act Release No. 48545 (September 25, 2003), 68 FR 56656 (October 1, 2003). The *Policy Statement* states that the SRO-operated markets and ECNs should have plans permitting restoration of trading activities no later than the next business day following a wide-scale disruption.

their supporting organizations have taken additional steps, both individually and collectively, to address the potential short-term effects on the equity securities trading markets of wide-scale disruptions at major financial centers. While the trading markets play an important role in the nation's financial system and have a public, even iconic, profile, in the aftermath of the events of September 11, the trading markets were closed for several days due to the lack of telecommunications connectivity without engendering any long-term impact on the financial health of the economy, the financial sector or a loss of confidence by investors.

The agencies believe that this test--whether the financial system can tolerate a disruption of one or more entities without degrading its operations, creating settlement risk of a systemic nature, or causing a loss of public confidence--should remain the paramount consideration in determining whether a firm should be subject to the Sound Practices Paper. For example, investment companies, which provide access to the securities markets for many retail investors, do not individually maintain sufficient market share to meet the criteria. The entire investment company industry accounts for approximately 20 percent of the aggregate market value of U.S. common stocks. In the equity market, which accounts for the largest amount of assets invested in investment funds, each of the top three mutual fund management companies in terms of percentage of market value of U.S. stocks has equity assets under management of less than five percent of the market value of all stocks.<sup>14</sup> Another example involves the impact a disruption at a transfer agent would have on the markets. Transfer agents record changes of ownership, maintain the issuer's security holder records, cancel and issue certificates, and distribute dividends. While it is true that transfer agents provide services in support of the completion of secondary trades, a disruption at a transfer agent is unlikely to have an immediate impact on the operation of securities markets. This is because the corporate securities markets require broker-dealers to settle transactions through a core clearing and settlement organization where securities are registered in the core clearing organization's nominee name. As a result, a majority of these transactions settle without changes in record ownership by the transfer agent.

The agencies recognize that a significant disruption at any of these organizations would degrade the functioning of the financial sector in various ways and result in inefficiencies for consumers and other market participants. However, it is clear that some would have a more pronounced impact than others based on the role they play in the U.S. financial system. Other than the core clearing and settlement organizations, the consequences of a disruption at these organizations would vary along a continuum. However, a disruption in their operations could be tolerated for a brief period, or their operations could, to a certain extent and with some loss of function, be shifted to or performed by other market participants. In fact, competing markets and financial institutions are positioning themselves to absorb the business of a disrupted entity. The

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<sup>14</sup> For the market value of all stocks traded in the United States, *see* United States Federal Reserve, Flow of Funds Accounts of the United States--Z.1 Release, March 9, 2006. For the value of equity assets under management by leading mutual fund management companies, *see* Lipper Analytical New Applications (asset data as of January 31, 2006). The Lipper data includes retail equity mutual funds and equity mutual funds only available to insurance company separate accounts.

sheer breadth and competitive structure of the financial services industry, as well as the number of exchanges and over-the-counter markets, provide a high degree of redundancy across the sector.<sup>15</sup>

Accordingly, after careful consideration, the agencies do not recommend expanding the Sound Practices Paper to additional private sector financial services firms at this time. Firms subject to the Sound Practices Paper reflect the agencies' best judgment and the consensus of a broad array of financial sector participants as to those entities that present systemic risk to operation of the financial system. Moreover, the Sound Practices Paper is not a static document. In 2005, the agencies updated their market share data and identified an additional core clearing and settlement organization and several firms that now meet the five percent criteria of a firm that plays a significant role in a critical financial market. These firms have been contacted and have agreed to implement the Sound Practices Paper for those business lines.

While the agencies do not recommend that the Sound Practices Paper be formally extended to a wider group of financial firms, the Paper encourages all financial firms to review and consider implementation of the sound practices, particularly if a firm's transactions levels approach those deemed to be significant. Moreover, commenters on the draft paper agreed that business continuity plans of all financial institutions should address the need for the rapid recovery and timely resumption of critical operations following a wide-scale disruption (including a loss or inaccessibility of staff in at least one major operating location); and strive for a high level of confidence, through ongoing use or robust testing, that critical internal and external continuity arrangements are effective and compatible. In fact, some firms not covered by the Sound Practices Paper have voluntarily implemented the sound practices, which suggests that the paper resonates with firms for business and competitive reasons and could become a benchmark for larger financial companies.

The agencies are mindful of the risk that an unanticipated event, such as a terrorist attack, could occur in a manner that we have not seen before and for which we may not be completely prepared. Moreover, we live with the continuing threat of turbulent weather, which could severely damage the critical infrastructure and facilities of financial services firms. In addition, the financial services industry cannot fully protect against infrastructure disruptions of telecommunications, and it can only provide limited resilience against disruptions in other elements of the critical infrastructure, such as power, transportation, and water. Since September 11, the agencies and the financial services firms have worked hard at improving risk identification and management processes. Moreover, the agencies and financial firms have adopted a more forward-looking, proactive approach to preparing for wide-scale disruptions than prior to September 11. Today, business continuity plans of financial firms are expected to focus on the impact of a disruption, rather than the cause of the disruption (all hazards approach). This helps ensure that high impact but low probability risks are incorporated

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<sup>15</sup> For example, there are thousands of banks; most consumers use more than one bank, and they have alternative ways to access cash, other assets, and credit. The first firms to recover from a wide-scale disruption will gain market share vis-à-vis their slower competitors.

into the planning process. At present, financial services firms are reviewing their business continuity arrangements to address the risks posed by a newly-identified threat--pandemic flu. For almost 100 years, the nation has not had reason to plan for a protracted absentee rate of 30 to 50 percent of a firm's personnel for four to six weeks in waves over a 12 to 18 month period; yet today firms are working to find ways to contain the spread of such an influenza, protect employees, and maintain continuity of critical business operations. Therefore, while no business continuity plan provides complete protection against an unanticipated event, the agencies believe that the financial services firms are considerably more resilient than they were prior to September 11.

## **Conclusion**

As discussed above, the core clearing and settlement organizations have substantially implemented the sound practices. While supervisory staffs are still reviewing verification documentation and test results, significant firms have achieved or should complete substantial implementation by the end of 2006. Because these firms are meeting their commitment to achieve the sound practices, the financial sector is considerably more resilient to a wide-scale disruption than they had been prior to September 11. As discussed, firms subject to the Sound Practices Paper reflect the agencies' best judgment and the consensus of a broad array of financial sector participants as to those entities that present systemic risk to the operation of the financial system. Other financial services firms also are subject to various post-September 11 business continuity expectations and requirements, and many have made significant voluntary improvements in their resilience. Accordingly, the agencies do not see a need at this time to expand the Sound Practices Paper to cover additional private sector financial services firms, or to adopt additional legislative or regulatory requirements for supervised financial institutions.

The U.S. economy and financial system are highly interdependent and risks posed by a wide-scale disruption cross the commercial sectors. Like other sectors, the financial sector worries about the resilience of the critical infrastructure to wide-scale disruption. The agencies strongly recommend that future work aimed at achieving greater resilience should be performed within this broader context by agencies or private sector umbrella groups that can speak across sectors.