

# **Financial System Resilience: U.S. Experience Since 9/11**

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# U.S. Experience Since 9/11

## Presentation Overview:

### I. What we learned

- U.S. financial system strengths and vulnerabilities

### II. What we've done

- Sound Practices development and implementation

### III. Outstanding challenges

- U.S. and internationally

# I. What We Learned

- Remarkable resiliency of the system...
- ...But vulnerabilities existed
  - Integrated nature of the financial system
  - Traditional primary/backup approach limited
  - Communication / connectivity is vital

# Integrated Nature of the System

- Interdependencies
  - Geographic and financial concentrations
  - Complex business processes
  - Tremendous volumes and values
- Potential inconsistencies
  - Planning for different stresses/scenarios
    - Long-lasting/regional v. temporary/local
  - Unproven / incompatible plans
    - Independent testing and execution of plans
    - Front/back office; counterparties/customers/utilities

# Traditional Approach Limited

- Primary-backup model
  - Local/firm-specific/unit-specific disruptions
- Inherent dependency on key people
  - Relocating critical staff to backup site
- Emphasizes geographic proximity
  - Minimize relocation/recovery time

# Communication/Connectivity Vital

- Unrecognized single points of failure in telecom infrastructure
  - 3 telecom central offices in WTC complex
- False sense of security
  - “Billing” diversity  $\neq$  “routing” diversity

# II. What We've Done

## “Sound Practices” Approach

- Development
  - Post-9/11 consultation and analysis
- Description
  - Objectives
  - Definitions
  - Main requirements
- Implementation
  - Approach
  - Timetable and status
  - Success factors

# Post-9/11 Consultation and Analysis

- Interagency project
  - Fed, OCC, SEC, NYSBD
- Private-sector consultations: “Round 1”
  - Banks, securities firms, market utilities
- Feb. 26, 2002: “Financial Industry Summit on Business Continuity”
  - Discussion paper, meeting summary
- Private-sector consultations: “Round 2”

# Post-9/11 Consultation and Analysis (continued)

- Draft “White Paper”
  - Issued September 5, 2002
- Over 90 comments received
- Private-sector consultations: “Round 3”
  - Final review with potentially affected firms
- Interagency Sound Practices
  - Issued April 8, 2003

# Sound Practices: Objectives

- Rapid recovery: wide-scale disruption
- Rapid recovery: loss/inaccessibility of staff
- High confidence through use or testing

**NOTE: *Objectives are NOT event specific***

# Key Definition: Wide-Scale Disruption

- Causes severe infrastructure disruption
  - Reaches across metropolitan or other area and adjacent, economically-integrated communities
  - Affects transportation, telecom, power, or other critical components
- Results in wide-scale evacuation or inaccessibility of the population
  - Reaches people within normal commuting range of the disruption's origin

# Key Definition: Critical Markets

- Fed funds, FX, commercial paper
- US Government and Agency securities
- Corporate debt and equity securities
  
- NOTE: *Others could adopt voluntarily*

# Key Definition: Critical Activities

- *Large-value payment processing*
- *Clearing/settling material transactions*
- End-of-day funding
- Firm and customer risk management
- Communicate/safeguard positions/records
- Related/supporting activities
- **NOTE: *Trading was NOT included***

# Key Definition: Core Clearing and Settlement Organization

- Systemic risk if it does not *recover and resume* its critical activities intra-day
  - Recover: clear and settle *pending* transactions
  - Resume: clear and settle *new* transactions
- No viable immediate alternative
- Could be a financial utility or an individual firm

# Key Definition: Firm that Plays a Significant Role

- Systemic risk if it does not *recover* its critical activities intra-day
  - Recover: clear and settle *pending* transactions
- Avoid “disorderly exit”
- Explicit threshold for “significant”
  - Consistently clears or settles 5% of value in that critical market

# Sound Practices: Main Requirements

1. Identify critical activities
2. Determine recovery/resumption objectives
3. Maintain sufficient geographically dispersed resources
4. Routinely use or test arrangements

# Sound Practice 1:

## *Identify Critical Activities*

- Firms can play a variety of roles
  - Could be “core” in certain critical markets
  - Could be “significant” in other critical markets
  - Could be neither in other critical markets
- Include all related/supporting activities

## Sound Practice 2: *Determine Recovery/Resumption Objectives*

- **Core:** plan to recover and resume critical activities within the business day
  - Goal: re-initiate processing of pending and new transactions within 2 hours after event
- **Significant:** plan to recover critical activities within the business day
  - Goal: re-initiate processing of pending transactions within 4 hours after event

## **Sound Practice 3: *Maintain Sufficient Geographically Dispersed Resources***

- Back-up sites should avoid being subject to the same risks as the primary site
  - Wide-scale disruption/destruction of infrastructure supporting primary site
  - Wide-scale evacuation or inaccessibility of staff supporting the primary site
- Firms retain flexibility in meeting objectives
  - No specific mileage requirement
  - No mandated technologies or approaches

# ***Maintain Sufficient Geographically Dispersed Resources (continued)***

- Achieving dispersion was a challenge
  - Many data back-up arrangements used synchronous mirroring technologies that limited separation
  - Many back-up arrangements relied on the same labor pool as the primary site
- In these cases:
  - **Core:** should establish even more distant back-up arrangements
  - **Significant:** should strive to develop even more distant back-up arrangements

# Sound Practice 4: *Routinely Use or Test Back-up Arrangements*

- Test against wide-scale disruption scenarios
  - Connectivity, capacity, data integrity
  - Counterparties, customers, third-party vendors
  - Include back-up to back-up testing
- **Core:** require participants to test with them
  - Consider organizing industry-wide stress tests
- **Significant:** use testing opportunities offered by core firms and other key entities
  - Work cooperatively on industry-wide tests

# Implementation: Approach

- Specific target dates for implementation
  - Ensure industry-wide coordination and compatibility of efforts
  - Avoid unfair competitive distortions
- Flexibility
  - Take practical account of individual firm differences
  - Risk profile, level of resilience, unique business circumstances

# Implementation: Timetable and Status

## Identified *core organizations*

- Timetable
  - Target: achieve sound practice by end 2004
  - Flexibility considerations:
    - Concrete, substantial improvement by end 2004
    - Clear commitment to achieving sound practice
    - Aggressive milestones
- Status
  - Have achieved substantial implementation

# Implementation: Timetable and Status

## Identified *significant firms*

- Timetable
  - Target: achieve sound practice within 3 years
  - Flexibility considerations:
    - Plan calls for implementation as soon as practicable
    - Ongoing review of strategy
    - Interim steps compatible with meeting sound practices
- Status
  - Have achieved, or should achieve, substantial implementation by the end of this year

# Implementation: U.S. Success Factors

- Industry leader consensus on objectives
  - Coherence, coordination, and confidence
- Senior management “buy-in” on implementation
  - Create a mandate at the top
  - Approach BC as a competitive strength
- Treat BC as ongoing/integral, not one-time/add-on
  - Business processes
  - Training and development
  - Technological development cycles
  - Leverage national/international resources
- Take up the challenge of geographic separation
  - Leverage national/international “footprint”
  - Leverage new solutions for data mirroring

# III. Outstanding Challenges

- U.S.
  - Ongoing implementation of sound practices
    - Evolving roles core organizations and significant firms; testing; “striving”
  - Continuing and new risks
    - Telecom and other infrastructure; cyber attacks; pandemic risks; the unknown
- International
  - Each market is different
    - Structure, risks, strengths, vulnerabilities
  - Yet globalization creates/changes interdependencies and risks across the international financial system
    - “It’s only as strong as its weakest link”