



Report of the
Commodity Futures Trading Commission
on the Futures Industry Response to
September 11th

March 11, 2002

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Introduction

The Role of the Futures Markets

The Commodity Futures Trading Commission (the Commission or CFTC) is charged under the Commodity Exchange Act with deterring and preventing price manipulation and other disruptions to market integrity, ensuring the financial integrity of transactions in the commodity futures and option markets so as to avoid systemic risk, promoting responsible innovation and fair competition in these markets, and protecting all market participants against fraudulent or other abusive sales practices and from misuse of customer assets. Through oversight regulation, the CFTC enables the futures markets to serve better their two key functions in the economy: a mechanism for managing risk and a means of price discovery.

Futures markets exist primarily to provide a mechanism for managing risk, principally price risk. Producers, distributors, and users of physical commodities -- as well as those exposed to fluctuation in financials such as currencies, interest rates, and stock index values -- use futures contracts to manage (or “hedge”) their exposure to risk. Thus, disruption of a futures market can cause significant economic hardship for the users of these hedging tools.

Futures markets also perform a second function: they enable other markets to discover appropriate prices for commodities (and the products or services derived from commodities) by referencing quoted futures markets transactions. Businesses, investors, and even government entities throughout the economy depend upon these important price discovery mechanisms. Thus, disruption of a futures market can cause widespread economic hardship for those who look to it for price discovery information. For example, observers have noted that had the New York Mercantile Exchange, Inc. not succeeded in restoring operation of its market for futures contracts

based on crude oil so quickly and smoothly after the attacks, then the domestic and global stock markets might have suffered drastically.

There are 16 domestic futures exchanges designated by the Commission as contract markets. Approximately 65,000 persons are registered as floor brokers, floor traders, introducing brokers, associated persons, futures commission merchants, and commodity trading advisors. Although contracts for agricultural commodities have been traded in the U.S. for almost 150 years, the industry has in recent years expanded rapidly into many new markets. Futures and option contracts are now offered in a vast array of financial instruments, including foreign currencies, domestic and foreign government securities, and domestic and foreign stock indices.

There are more than 240 contracts actively traded on U.S. futures exchanges, twice as many as a decade ago, and the volume of trading has also doubled in the last ten years. The four largest exchanges are the Chicago Board of Trade (CBT), Chicago Mercantile Exchange (CME), New York Mercantile Exchange, Inc. (NYMEX), and New York Board of Trade (NYBOT) but there are other futures exchanges, regional and electronic, that also play important roles.

The Role of the CFTC

Congress created the Commission in 1974 as an independent agency with the mandate to regulate commodity futures and option markets in the United States. The Commission consists of five Commissioners who are appointed by the President and confirmed by the Senate, one of whom is designated by the President to serve as Chairman. The CFTC headquarter offices are located in Washington, D.C. The Commission also maintains large regional offices in Chicago and New York, and smaller regional offices in Kansas City, Los Angeles, and Minneapolis.

The CFTC has three operational divisions: the Division of Economic Analysis (DEA), Division of Trading and Markets (T&M), and Division of Enforcement (DOE). DEA helps the Commission -- through market surveillance, market analysis, and market research -- to fulfill its responsibility to promote markets free of manipulation or congestion so that they best serve the risk-shifting and price-discovery needs of the U.S. and world economies. T&M develops, implements, and interprets regulations that protect customers, prevent trading and sales practice abuses, and assure the financial integrity of firms that hold customer funds. DOE investigates and prosecutes alleged violations of the Commodity Exchange Act and the Commission's rules.¹

The Commission also has an Office of the General Counsel (OGC), which serves as its legal advisor, and an Office of the Executive Director (OED), which provides management services to support the Commission's programs. The Office of the Chairman includes the Office of International Affairs (OIA), which assists the Commission in responding to global market and regulatory changes by coordinating the Commission's international activities; the Office of Legislative and Intergovernmental Affairs (OLIA), which facilitates communications with Congress, other federal agencies, and state governments; and the Office of Public Affairs (OPA), which serves as the Commission's liaison with the news media, user groups, and the general public.²

Impact of the Terrorist Attacks

The futures industry demonstrated preparedness, resilience, and flexibility in the aftermath of the attacks. NYMEX and NYBOT, despite being directly and severely impacted by

¹ The Commission recently announced a reorganization plan to combine key elements of DEA and T&M into a single market oversight function, and will use other elements of T&M to oversee intermediaries. A separate office of chief economist will also be established.

² The reorganization will also combine OLIA and OPA into a single Office of External Affairs (OEA).

the September 11th attacks, successfully responded by following established contingency plans and/or by skillfully adapting to unforeseen challenges and new operational realities. NYMEX initially resumed trading on Friday, September 14th, using internet access to its electronic trading platform. It resumed open outcry trading on Monday, September 17th, after remarkable efforts to restore the functionality of its floor trading facility located only one block from the World Trade Center. NYBOT, whose facilities in 4 World Trade Center were destroyed, moved quickly into a well-conceived, well-resourced backup facility in Queens, complete with trading rings, and resumed its open-outcry trading operations on Monday, September 17th.

The Chicago exchanges were not physically impacted and, after closing their markets to observe an industrywide day of recognition on September 12th, resumed trading in all but their equity-based contracts on September 13th. Trading by all exchanges in contracts based on U.S. equities was suspended until the reopening of the underlying stock markets.

All clearing organizations for the futures exchanges and the banks that they utilize were prepared to function as soon as the exchanges reopened. Clearing operations were fully successful upon this resumption of trading. Virtually all reporting firms (futures commission merchants, clearing members, and foreign brokers) that are required to submit large trader data to the CFTC were able to do so as soon as trading activities resumed. This was accomplished through either their main computing facilities or backup locations. The CFTC's market surveillance large trader automated computer system was not disabled in any way.

Preparedness Efforts

The firms, clearinghouses, exchanges, and industry associations that make up this important industry had in place prior to the terrorist attacks a variety of preparedness measures

and contingency plans for disaster recovery and business continuity. This event produced an unprecedented opportunity for plans and preparations to be tested and, as it turned out, some organizations were better able to withstand and recover from the disruption. Plans and measures that proved most effective in preparing certain market participants to better handle this disaster can and should be held up as benchmarks, guidance, and inspiration to all market participants as the industry seeks to prepare itself, as it must, for disasters that it hopes never to face.

The CFTC, like other financial regulators, learned much about the adequacy of its own contingency plans. The CFTC had in place a Market Disruption Contingency Plan that set forth appropriate procedures to implement and relevant information to collect in the event of extreme market volatility, financial emergency, or disruption to physical or electronic facilities. During a period of such market disruption, designated CFTC staff are responsible under the Plan for: (i) collecting and analyzing information from various markets, market participants, and different self-regulatory organizations; (ii) communicating information to the Commission concerning market events and conditions and possible regulatory responses; and (iii) disseminating information and regulatory responses to markets, market participants, regulatory and self-regulatory organizations, other federal financial regulators, Congress, and the public.

The appropriate regulatory responses under the Plan vary from one market event to another but fall broadly into the categories of: identification and oversight of market moves, “first day” responses, subsequent follow-up and intensified oversight, and responses to particular market-related emergencies (such as the distress of a financial institution, physical emergencies, and major system malfunctions). In addition, the Commission prepared itself for potential problems connected with the Year 2000 date rollover by developing contingency plans focused on failures in building infrastructure services and mission-critical information systems.

It is fair to say, however, that neither the Market Disruption Contingency Plan nor the Commission's Y2K contingency plan contemplated the scope of disaster experienced on September 11th, which included the destruction or dislocation of two major exchanges and numerous trading firms combined with the destruction of a regional office of the Commission itself. Accordingly, the Commission, like many market participants, must now undertake a strategic review of every facet of its preparedness and contingency plans, both in terms of disaster recovery and business continuity. From instituting better backups of data and more complete archiving of institutional knowledge, to enhancing organizational flexibility and responsiveness in times of crisis, the Commission faces the challenge of ensuring the effective survival of its abilities to fulfill its core mission and accomplish its public policy goals.

It is the Commission's hope that -- by sharing through this initial report what it has learned thus far about its own preparedness as a federal financial regulator, and about the preparedness efforts of the exchanges, clearinghouses, and firms that it oversees -- it may benefit both other financial regulators and financial services firms in other industry sectors that are also reexamining their policies, procedures, and practices in the aftermath of September 11th.

This report is organized into three parts. The first part describes the efforts of the futures industry to resume operations as quickly as possible. The second part summarizes the Commission's efforts to restore its own operational capabilities and respond to administrative challenges in the aftermath of the attacks, challenges of the type also faced by many market participants displaced from the World Trade Center and surrounding area. Finally, the third part reviews what has been learned thus far about the disaster recovery and business continuity plans of both market participants and the Commission and discusses areas where further discussion, analysis, and cooperation within the industry and with the Commission may prove fruitful.

I. Reopening the Futures Markets

Two of the four largest commodity futures exchanges regulated by the CFTC were based in Lower Manhattan: NYBOT and NYMEX. Both were drastically impacted on September 11th and trading did not resume on either exchange for several days. Other futures exchanges, in Chicago and elsewhere, were also impacted by events in New York, particularly by the closing of the stock markets, and experienced temporary interruptions in trading.

In its preparedness and by its responses to this unprecedented disaster, the futures industry demonstrated foresight, resilience, and determination. Steady leadership, the creativity of technical staffs, and the courage and tenacity of everyone in the industry, made possible a remarkably fast and effective resumption of trading, restoring for the U.S. economy rapid access to risk-management and price-discovery tools uniquely provided by the futures industry. The Commission, in cooperation with other federal financial regulators, Congress, and the White House, strove to assist the industry in restoring operation of these important markets.

A. Tuesday, September 11th

1. The New York Board of Trade

NYBOT and its subsidiary exchanges were located in the World Trade Center complex. The Coffee, Sugar & Cocoa Exchange (CSCE) and the New York Cotton Exchange (NYCE) shared a trading floor in 4 World Trade Center.³ The Cantor Financial Futures Exchange (CX)

³ CSCE comprises Division A of NYBOT. NYCE, which includes two subsidiary exchanges, the New York Futures Exchange and the Citrus Associates of the New York Cotton Exchange, Inc., constitutes Division B of NYBOT. NYCE's Financial Instrument Exchange (Finex) Division also trades various currency futures products on a trading floor located in Dublin, Ireland, during non-trading hours in New York.

had its central matching computer and terminal operations in 1 World Trade Center.⁴ At 8:45 a.m. on September 11th, NYBOT suspended trading and successfully evacuated all of its staff and members from its facilities at 4 World Trade Center. By that time, the following NYBOT markets had opened for trading: NYCE's Finex Division, at 8:05 a.m., and CSCE's Cocoa market, at 8:30 a.m.⁵ The other NYBOT markets had not yet opened when the evacuation was ordered. The Cantor facilities were located on the highest floors of 1 World Trade Center and were destroyed with a horrendous loss of life before any evacuation could be effected. At the time of the attack, trading at CX was open on its 23-hour trading platform.⁶

NYBOT had in place a remarkably well thought out, well resourced contingency plan and immediately began preparing to resume trading from its back-up facility in Queens, which had been established after the 1993 bombing of the World Trade Center. It includes both a data center and a trading floor equipped with two open-outcry pits. All NYBOT trading and clearing data were fully backed up and kept current at this alternate site.

2. The New York Mercantile Exchange

NYMEX moved several years ago from the World Trade Center complex to One North End Avenue, several blocks away. Shortly after 9:00 a.m. on September 11th, NYMEX suspended trading and successfully evacuated its facilities. At that time, the following markets

⁴ Although not a subsidiary of NYBOT, CX is owned by NYCE and NYBOT members and NYBOT provides regulatory services for CX. CX trades various U.S. Treasury futures products.

⁵ The Finex Division had been open for trading on the Dublin trading floor from 3:00 a.m. to 8:00 a.m., New York time, on September 11th. Finex trades executed prior to the attack on September 11th cleared on the 11th using settlements from the 10th. With respect to other NYBOT markets, all open orders from September 11th were declared cancelled and any trades executed in the Cocoa market during the 15 minutes it was open were declared null and void and none were accepted for matching or clearing.

⁶ No trades were executed during the CX trading session on September 11th. All open positions on CX were subsequently closed pursuant to block transactions and trading in futures contracts was suspended effective September 17th. Trading on CX remains suspended at this time.

had opened: on the COMEX Division, the metals markets (copper, aluminum, gold and silver) had opened at various times between 7:50 a.m. and 8:25 a.m. and the FTSE Eurotop contracts had opened at 5:00 a.m. and on the NYMEX Division, the metals markets (platinum and palladium) and the propane markets had opened at various times between 8:10 a.m. and 8:30 a.m.⁷ Other NYMEX markets, including crude oil, unleaded gas, natural gas, and heating oil, had not opened by the time of the evacuation.⁸

Although it did not maintain a backup facility for open-outcry trading, NYMEX did have backup computer and data storage systems in place to support its trading and clearing activities. However, these systems were housed on Cortland Street, only one block east of the World Trade Center complex, and were inaccessible to NYMEX staff.⁹

NYMEX began holding emergency meetings of its board of directors on the morning of the 11th. These meetings, conducted initially by conference call and later in the homes of exchange managers and hotel ballrooms, would continue around the clock. NYMEX was successful early on in contacting the White House, emphasizing the important price discovery role played by energy-based futures markets such as that for West Texas Intermediate Crude, and securing a commitment from the Federal Emergency Management Agency (FEMA) to provide its “full support” to NYMEX’s recovery effort.

⁷ The NYMEX ACCESS trading session, which had opened for most contracts at 4:00 p.m. on September 10th, ended at 9:00 a.m. on September 11th. Except for the FTSE Eurotop contracts, all NYMEX futures contracts could be traded on NYMEX ACCESS®.

⁸ All NYMEX and COMEX Division trades executed on September 11th were subsequently matched and cleared. However, due to system and processing differences between the two divisions, the procedures varied slightly. NYMEX trades executed on the trade date of September 11th were ultimately cleared using settlements from September 10th, the prior trade date. COMEX Division trades executed on the trade date of September 11th were ultimately cleared with trades done in the NYMEX ACCESS® system for the trade date of September 14th. Banking functions associated with this trading activity for both divisions were conducted on Monday, September 17th.

⁹ NYMEX did subsequently move computers and other equipment to establish back-up systems at a location in New Jersey.

3. Other Commodity Futures Exchanges

At the time of the attack, the agricultural futures and option markets had not yet opened in Chicago, Kansas City, or Minneapolis and each of the exchanges in those cities decided not to open for trading that day. The financial contracts (interest rates and foreign exchange) had opened and were promptly closed. The New York Stock Exchange and the Nasdaq Stock Market, which do not open until 9:30 a.m., never opened on September 11th. By early in the afternoon, all of the exchanges had begun discussing the issue of whether or not to attempt to resume trading on Wednesday, September 12th.

4. The Regulators - Communication and Coordination

After making the decision on Tuesday morning to send all non-essential personnel in the D.C. and other regional offices home for the remainder of the day and establishing a procedure for contacting Commission employees who had been evacuated from the New York regional office in 1 World Trade Center, the Commission's Acting Chairman convened a meeting of senior staff to address several issues of immediate concern: (1) ensuring that unauthorized access to futures exchanges would be blocked in the event economic terrorism was being contemplated from any quarter; (2) discovering as quickly as possible the situation facing each of the New York futures exchanges and providing whatever support or information possible to those exchanges; and (3) coordinating with other federal financial regulators to keep the White House and Congress informed on the condition of the U.S. financial markets.

Concerns in the first category were quickly allayed as the Commission confirmed that all boards of trade under its supervision were closed. Commission staff next began contacting exchanges and industry associations to gather contact telephone numbers for managers of the

New York exchanges. By mid-afternoon, the Commission was able to reach executives of both NYMEX and NYBOT at their homes and to learn basic information about the status of the exchanges: that the NYMEX facility appeared to be intact but might be inaccessible for some time, that the primary NYBOT facility was likely destroyed but that a backup facility existed in Queens, and, most importantly, that both exchanges appeared to have been successful in getting most of their people safely out of the World Trade Center complex.

Coordination with other federal financial regulators had already begun by this time, enabling the Commission to inform the New York exchanges that other futures exchanges in Chicago and elsewhere, as well as the securities exchanges, had decided on their own not to open for any trading on Wednesday, September 12th, in recognition of the tragedy that had befallen their colleagues in New York's financial district.

Before noon, the CFTC had participated in a password-protected "all markets" call hosted by Nasdaq with market participants and regulators representing the stock, options, and commodity futures markets. At 1:00 p.m., the CFTC participated in the first call among the President's Working Group on Financial Markets (PWG), which is normally chaired by the Secretary of the Treasury and also includes the Chairmen of the Federal Reserve Board (Fed), the Securities and Exchange Commission (SEC), and the CFTC. Although meetings of the PWG are normally hosted at the Treasury Department, security concerns near the White House had led to closure of key Treasury offices and the PWG conference calls during this period were therefore hosted by the Vice Chairman of the Fed.

The Acting Chairman of the CFTC emphasized to the other PWG members that the futures exchanges had expressed strong concerns, with which he agreed, that it was imperative for banks, financial markets, and regulators to closely coordinate their responses to market

interruptions. During this initial call, the PWG discussed the need for coordinated reopenings of the financial markets following what by then appeared would be an almost certain day of voluntary closures by all U.S. exchanges on Wednesday, September 12th. The members agreed to a convene for a series of conference calls to ensure coordination of their efforts.

In a subsequent conference call on Tuesday, the PWG members confirmed that each supported the voluntary decisions of exchanges to remain closed on Wednesday, September 12th, as prudent in light of security, access, and safety concerns at some exchanges and as respectful of the tragedy that had befallen colleagues and associates. Also discussed was the assessment that the nation's financial infrastructure remained intact and strong and that trading in all financial products would resume as soon as practicable.

On Tuesday evening, the CFTC participated in another all-markets call hosted by Nasdaq, during which the major stock exchanges agreed to announce their decision to remain closed on Wednesday. Participants also discussed various operational issues. Later in the evening, the CFTC spoke again with NYBOT managers to discuss various issues, including NYBOT's offer to share scarce space and trading time at its backup facility with NYMEX. This spirit of cooperation echoed a separate invitation by NYMEX for NYBOT to share space in the NYMEX facility when access thereto could be restored.

The Commission also kept Congress apprised of events on Tuesday, September 11th. Before 11:00 a.m., the Commission's Office of Legislative and Intergovernmental Affairs (OLIA) had notified the staffs of key committees of the loss of the New York regional office, the decision to send home non-essential staff, and the apparent voluntary closure of all futures exchanges.

The Commission also monitored international developments. On September 11th, staff of the Commission's Office of International Affairs (OIA) were at the Washington, D.C. offices of the Federal Reserve, meeting with the 28 members of the joint task force on securities clearing and settlement systems, which includes members of the Committee on Payment and Settlement Systems of the Bank for International Settlements, composed of central bankers from the G10 countries and the International Organization of Securities Commissions (IOSCO), which represents securities regulators from more than 100 jurisdictions. That evening, OIA contacted the Futures Industry Association (FIA) to offer assistance and to receive any information that would be of interest to non-U.S. regulatory authorities.

B. Wednesday, September 12th through Friday, September 14th

1. NYBOT

NYBOT was able to make effective use of its website, updating it four or five times each day with information for traders, employees, and others, as the exchange continued to ready its backup facility and its members for the resumption of open-outcry trading there.

2. NYMEX

NYMEX reported that its first priority, after ascertaining the safety of evacuated staff, was to assess its facilities. Well before dawn on Wednesday, a team of managers volunteered to investigate the condition of the exchange's primary facility. New York City Police officers escorted them for part of the trip but they had to walk in the last eight blocks. The team found that emergency generators were running and that the building appeared to be in very good shape.

Notwithstanding the absence of significant damage to the facility, it would still take several days and would require overcoming many challenges, including the lack of electricity and water utilities and the need to transport large numbers staff into Manhattan via water ferry, before NYMEX could resume even its electronic trading.¹⁰ NYMEX was successful in doing just that, getting key people into the facility and overcoming connectivity issues, security considerations, and software compatibility challenges in order to reopen the trading of NYMEX products on a never-before-utilized web-based version of its electronic trading platform, NYMEX ACCESS®.¹¹ Beta testing was conducted on the morning of the 14th, and trading on the system commenced at 2:30 p.m. that day.¹²

3. Other Exchanges

On Thursday, September 13th, all futures exchanges outside of New York reopened for trading. With respect to CBT and CME, the key issue was whether member firms with offices and banks located in or near the World Trade Center were able to conduct business, in particular whether they were able to meet their financial and data transmission obligations to the clearing organizations. Stock index futures and option markets remained closed because the U.S. equities exchanges, particularly the New York Stock Exchange, had not yet reopened.

¹⁰ Problems with AT&T frame relay circuits in Lower Manhattan made it impossible to accomplish electronic trading without an immediate migration from NYMEX's proprietary communications network to the internet.

¹¹ Prior to the attack, NYMEX ACCESS® utilized a closed proprietary network exclusively. The launch of the new web-based version of NYMEX ACCESS® had been scheduled for early September but had been delayed for various reasons.

¹² A pre-opening session was held from 2:00 - 2:30 p.m. NYMEX ACCESS® went down from 2:38 - 4:00 p.m. to correct a problem with user profiles and trading rights. Once resolved, NYMEX ACCESS® remained open until 6:00 p.m.

4. The Regulators

The Commission continued to participate actively in multiple daily calls among industry participants, both directly and through the all-markets calls hosted by Nasdaq, and among the members of the PWG. To optimize the Commission's information-gathering efforts, Acting Chairman Newsome delegated to Commissioner Holum responsibility for overseeing coordination and communication with international markets and regulators, to Commissioner Spears responsibility for monitoring the agricultural and physical commodity markets, and to Commissioner Erickson responsibility for fielding issues with respect to technology and operational matters. These delegations proved to be very useful. For example, through the efforts of Commissioner Spears, the Commission was able to assist NYMEX in its efforts to regain access to its facility for key technical staff by communicating clearly and quickly to the National Economic Council, which served as liaison to FEMA, the importance and urgency of NYMEX's need.

Commissioner Erickson and his staff participated in conference calls coordinated by the FIA that focused on the immediate needs of futures commission merchants (FCMs) and exchange clearing members, many of whom were directly impacted by the attacks. These firms needed to re-establish electronic contact with the clearinghouses and clearing banks so that the necessary transfers of records and funds could be made among firms, clearinghouses, and exchanges. The Managed Funds Association (MFA) was also actively reaching out to its memberships, including commodity pool operators and commodity trading advisors registered with the Commission, to facilitate communication of information to, from, and about affected members in New York.

On the market surveillance front, the Commission's DEA staff examined the positions of large traders and clearing members in equity index futures to assess financial exposures prior to the resumption of trading in equities on September 17th. CFTC staff also provided large trader position data to the surveillance staffs of NYMEX and NYBOT until they could gain access to their own surveillance systems.

OLIA continued to keep Congressional staff informed of developments and, by that afternoon, was able to update its reports to Congressional staff to inform them of the confirmed destruction of NYBOT's primary facility, the apparent survival but inaccessibility of NYMEX's facility, the availability of a NYBOT backup facility, generous offers of support within the futures community (such as CME's offer to provide NYMEX with electronic trading capability and the Minneapolis Grain Exchange's offer of space on its trading floor), the cooperative efforts of the Chicago exchanges to coordinate their reopenings in non-equity contracts, the apparent success of all clearing activities, and the cooperative efforts of the federal financial regulators.

By Thursday morning, OLIA was able to report to Congressional staff that the safety of every employee in the Commission's New York office had been confirmed. Congressional and White House staff were invited to attend a special meeting of the Commission on Thursday to discuss the reopening of trading in non-equity based futures contracts and other market surveillance issues. Key White House and Congressional staff, as well as representatives from the Department of Agriculture, attended this meeting. As the markets closed on the first day of trading in non-equity futures contracts, OLIA reported to Congressional staff that trading was active but orderly with adequate liquidity and price variations within normal ranges on the Chicago and other Midwest exchanges.

Also during this period, OLIA kept the CFTC's Acting Chief of Staff, Executive Director, and finance staff apprised of Congressional developments pertaining to emergency funding. By Friday afternoon, OLIA was able to respond to requests from Congressional staff for information on additional funding that the Commission would need to cover both the costs of returning to normal operations in New York and the costs of additional security and emergency preparedness measures for the Commission's facilities.

On September 12th, OIA, in coordination with the Office of Commissioner Holum and at the request of Acting Chairman Newsome, took several steps to ensure that non-U.S. regulators and market authorities had open lines of communication with the Commission about both the post-attack responses of U.S. firms and markets and the consequences of the attack that might be relevant to the oversight of their own firms and markets.

OIA provided a continuously manned contact number for foreign regulators and market authorities that needed more information about specific U.S. firms or markets. In addition to assuring that CFTC contact information on the password-protected members page of the IOSCO website was kept up-to-date and communicating separately with the U.K. and German authorities (where the bulk of U.S.-related trading is conducted), OIA posted specific contact information for non-U.S. inquiries on the IOSCO web site. Discussions with other authorities allowed OIA to learn early on that European authorities had suspended trading in U.S.-based derivatives.

OIA responded to requests from firms doing business in multiple jurisdictions for information on personnel and possible regulatory relief available in the U.S. OIA was in contact with Treasury's International Division and served as a conduit for certain inquiries from that section to other parts of the CFTC. OIA also worked with IOSCO to communicate information on trading resumption in U.S. equity markets. IOSCO members shared with OIA information

about their markets, including information on the pricing of collective investments and derivatives with exposures to the U.S. markets and rumors of suspicious transactions.

C. The Weekend, September 15th and 16th

1. NYBOT

Having resolved to open for trading on Monday, September 17th, NYBOT conducted a successful mock trading session for traders on Saturday, September 15th at its backup facility which confirmed that all of its systems for trading, price dissemination, and clearing were fully operational. At that time, members also were assigned booths and phone lines, and various security measures were instituted to ensure access only by authorized members and clerks. These efforts ensured that both the exchange and the traders were prepared for a successful launch of open-outcry trading on Monday.

2. NYMEX

Although it had succeeded in rolling out its new internet trading platform, NYMEX still faced numerous operational challenges to overcome before it could resume open-outcry trading. In addition to securing electricity, water, and other utilities for its primary trading facility, the exchange had to arrange for water transportation into Lower Manhattan of more than 2,000 employees, traders, and support staff. The exchange also faced unexpected challenges, such as the failure of a backup generator. Nonetheless, by Monday morning, the NYMEX trading facility was the only building open in the World Financial Center-Battery Park City complex.

3. The Regulators

Over the weekend, CFTC staff continued to participate in several all-markets calls, which were also joined by other federal financial regulators, in anticipation of a closely coordinated, and tightly monitored reopening of all stock, option, and equity-based futures markets on Monday morning. The regulators and exchanges agreed upon protocols for continuously open lines of communication throughout the trading day and clarified their plans for moments of observed silence at or before the opening bells.

D. Monday, September 17th

1. NYBOT

Because its backup facility in Queens is smaller than was NYBOT's World Trade Center facility (two trading rings, one for futures and one for related options, versus thirteen in the World Trade Center), NYBOT decided to operate reduced trading hours for each commodity, with different contracts being traded consecutively rather than concurrently. When NYBOT reopened for trading on Monday, its official trading hours for the two trading rings were as follows:¹³

Cocoa	7:30 to 9:00 a.m.
Coffee	9:30 to 11:00 a.m.
Sugar	11:30 a.m. to 1:00 p.m.
Cotton	1:30 to 3:00 p.m.
FCOJ	3:30 to 5:00 p.m.

¹³ In addition to the CSCE and NYCE contracts that traded in the rings in the backup facility, NYFE contracts traded at a post in a separate room: the NYSE Composite Index and Large Composite Index and the Russell 1000 Index and 1000 Large Index contracts were traded from 9:30 a.m. to 4:15 p.m., and the CRB Index and the SPCI were traded from 10:45 a.m. to 2:00 p.m. (later extended to 10:00 a.m. to 4:00 p.m.). Finex products were traded in New York at a post in the trading room from 8:05 a.m. to 3:00 p.m. (later changed to 9:35 a.m. to 3:00 p.m.); Finex products were traded in Dublin from 3:00 a.m. to 8:00 a.m. (EST) (later extended to 9:30 a.m.).

The backup facility also had only 100 booths (compared to approximately 500 in the World Trade Center) and originally had only two phone lines per booth. Because of the limitation on phone lines, the same phone number was used by customers to place orders for different futures contracts, depending on the time of day (*i.e.* customers were asked to call the number in the booth during the time the market they were interested in was trading in the ring). To offset this limitation, NYBOT obtained approximately 200 cell phones for use by members.

2. NYMEX

NYMEX resumed open outcry trading at One North End Avenue on Monday, September 17th, following a memorial observation, at approximately 11:45 a.m. Trading hours for the remainder of that week were as follows:

- COMEX metals and NYMEX metals and propane futures and option contracts traded in various staggered three-hour trading sessions between 9:30 a.m. and 12:40 p.m.
- FTSE Eurotop futures contracts opened at 10:00 a.m. and closed at 11:00 a.m.
- NYMEX energy futures and option contracts traded in various staggered trading sessions between 10:30 a.m. and 1:45 p.m.
- Coal futures contracts opened at 11:30 a.m. and closed at 1:15 p.m.
- NYMEX ACCESS[®] was open from 5:00 p.m. to 8:00 p.m. and reopened at 5:00 a.m. with metals and propane contracts closing at 9:00 a.m. and other energy contracts closing at 10:00 a.m.¹⁴

¹⁴ On September 20th, NYMEX extended NYMEX ACCESS[®] trading hours for the natural gas futures. NYMEX ACCESS[®] was open from 2:00 p.m. until 8:00 p.m. and from 5:00 a.m. until 10:00 a.m.

3. Other Exchanges

In Chicago, trading in stock index futures and option contracts recommenced on Monday morning in perfect coordination with the reopening of the securities markets.

4. The Regulators

The Commission monitored the functioning of the futures markets closely on Monday as markets came back on line in coordination with the opening of the securities markets. DEA monitored market activity as the equity-based contract prices fell slightly but remained within very normal ranges, as energy prices also fell slightly within normal ranges. T&M monitored the financial integrity of the clearing and payment systems, confirming that intraday settlement cycles went smoothly, that customer margin obligations were being met, and that no significant operational difficulties were encountered. At mid-morning, Acting Chairman Newsome reported to the PWG that trading was proceeding in an orderly manner and that pricing generally appeared to be responding to fundamentals rather than to fear or alarm.

E. Moving Forward, September 18th to the Present

1. NYBOT

The use of exchange-issued cell phones was only a temporary solution at the backup facility. Accordingly, NYBOT had a new telephone switch installed on the weekend of September 22nd and additional lines the following week. In November, NYBOT added two trading rings to the backup facility and two more rings were opened on February 11th, bringing the total to six. The new rings occupy some of the additional 16,000 square feet that NYBOT secured at this location, with some portion being utilized for support activities. The abbreviated

trading hours were extended somewhat in early November with the opening of the third and fourth rings. NYBOT again extended the trading hours for each of its agricultural products when additional support space and trading rings came on line in February.

NYBOT suffered an interruption of trading at its backup (now primary) facility on November 12th when American Airlines Flight 587 crashed on Long Island, disrupting telephone service in the area. The exchange expressed concern over continuing trading when some customers might not be able to reach their floor brokers. Trading resumed the next day.

2. NYMEX

Since September 17th, NYMEX has slowly expanded the trading hours for both floor trading and NYMEX ACCESS® trading. At this time, trading hours are not as extensive as before September 11th.

3. Other Exchanges

All of the commodity futures exchanges, including those in New York, have undertaken efforts to review and update their contingency plans, both for disaster recovery plans and business continuity, in the aftermath of September 11th.

4. The Regulators

The Commission participated in daily conference calls of the PWG, which continued through the week of September 17th. As part of its efforts to assist FCMs, introducing brokers (IBs), commodity pool operators, and commodity trading advisors as they resumed operations with the full reopening of the futures and securities markets, the Commission announced on September 19th a broad package of regulatory relief measures designed to assist these market

intermediaries in carrying on with business in the face of challenges presented by the attacks on the World Trade Center.

These formal measures complemented the CFTC's initial responses to issues of immediate concern to firms and exchanges as they prepared for the resumption of trading, which began the previous week in many non-equity-based futures contracts. The Commission also encouraged firms whose particular circumstances warranted relief beyond that provided in the general measures to contact the CFTC, the National Futures Association, or their designated self-regulatory organizations.

The relief announced included notice that the CFTC would not consider September 11th through 14th as business days for the purposes of specified reporting and minimum capital requirements, notice of bulk transfer obligations, and records inspection requirements imposed by CFTC regulations. This effectively extended certain reporting deadlines and recognized that firms may have had difficulty during that week in moving funds, issuing notices, providing customers with access to records, or precisely measuring portfolio values.

Firms whose physical operations were disrupted as a result of the attacks and which were consequently unable to comply with regulations requiring that records be readily accessible and that the means to translate records stored on electronic or micrographic media be available at all times would not be required to do so for the 31-day period from September 11th through October 11th. Such disrupted firms that were unable on September 11th, 12th, 13th, or 14th to comply with requirements of specified regulations concerning the calculation of segregated funds and secured amounts were also excused from those requirements for those four days. For such firms that were unable to comply with the confirmation statement, transaction application, and position closeout requirements of other specified regulations on September 11th through 14th,

those days would not be counted by the CFTC as either business or calendar days in determining such compliance.

Some firms whose operations were disrupted by the attacks quickly resumed operations but in alternate facilities or with limited resources and, consequently, may have had difficulty complying with noon deadlines for certain segregated funds calculations. Such firms were permitted, until October 11th, to extend those deadlines to the close of business on the applicable business days. Similarly, firms that were unable to access time-stamping equipment were permitted to substitute the use of reasonable alternative methods during the 10-day period from September 11th through 21st.

On October 5th, T&M issued an advisory to clarify for market participants that certain exemptive relief granted by the SEC to registered securities broker-dealers in connection with the events of September 11th would also apply to FCMs and IBs. This clarification was useful because the Commission's rule regarding minimum financial requirements for FCMs and IBs, Rule 1.17, incorporates by reference certain provisions of specified SEC rules, including SEC Rule 15c3-1, and, in connection with the events of September 11th, the SEC had previously granted relief from this and certain other rules.

For example, the SEC determined that broker-dealers, when computing the amount of net capital on hand under SEC Rule 15c3-1, need not consider the days through October 5th as business or calendar days for purposes of taking required deductions from net capital because of failures to complete government securities transactions. Accordingly, and pursuant to authority delegated by the Commission to the Director of T&M under CFTC Rule 140.91, T&M determined to incorporate by reference any relief granted by the SEC as a consequence of the events of September 11th that pertained to any SEC rules that are incorporated by reference into

the CFTC's rules. The benefit for market participants was, to the extent that capital calculations by FCMs and IBs might incorporate certain of the requirements of SEC Rule 15c3-1, to extend the relief granted by the SEC to securities broker-dealers with respect to those provisions to FCMs and IBs in an equal manner.

The Commission has continued to address the particularized needs of market participants. For example, T&M has issued an Advisory setting forth a mechanism by which registrants that had records lost or destroyed in the attacks may obtain regulatory relief. These registrants are permitted to submit an inventory of the lost or destroyed records that identifies them by category and date. The registrants will then only be required to reconstruct certain information specified in T&M's advisory and will be permitted to replace lost records with duplicates, if available. T&M will continue to work with individual market participants or groups that face challenges not addressed by the forms of regulatory relief announced thus far.

In addition to providing regulatory relief, the Commission monitored international developments and cooperated with foreign regulators. In September, OIA staff attended a meeting in Madrid of the IOSCO Technical Committee's Standing Committee 3 (SC3) on Regulation of Market Intermediaries and participated in SC3's discussions relating to regulatory responses to the attacks, including issues related to:

- Contingency planning regarding emergency communications with firms;
- Contingency planning regarding firms' secondary "hot pad" computer facilities;
- Contingency planning regarding lost data recovery;
- Firms' experiences regarding liquidity needs;
- Regulators' granting of temporary relief from capital requirements; and
- Issues relating to suspension of trading on some markets or of certain products.

The committee chairman suggested that SC3 conduct additional work on contingency planning and disaster recovery to take account of experiences on and after September 11th.

Staff attended the Council of the Securities Regulators of the Americas (COSRA) meeting in Montreal in October, at which COSRA adopted a resolution on readiness for market disruptions that urged each jurisdiction to review the transparency and accessibility of marketplace rules (including those related to disruptions and defaults) and the sufficiency of disaster recovery arrangements. Also during October, OIA participated in a meeting of the IOSCO Technical Committee in Rome, at which the committee appointed a special project team to review contingency planning, client identification, and expanded cooperation and information sharing among securities regulators. At that time, OIA staff also attended a meeting of the IOSCO Technical Committee's Standing Committee 2 on Secondary Markets (SC2), during which OIA contributed to discussions on supervisory issues and regulatory responses. SC2 expanded its ongoing study on trading halts to examine whether existing available supervisory powers were adequate to address market emergencies posed by September 11th.

F. Cooperation with Law Enforcement Authorities

DOE requested information from foreign authorities that regulate markets for derivatives products whose prices might have been sensitive to the terrorist attacks. Specifically, the Division focused on energy products, precious metals, interest rates, currencies, and securities indexes because these products could conceivably have been utilized by terrorists or their associates to profit from the attacks. Based on a review of derivatives markets worldwide, requests were sent to regulators in the major market centers for activity in commodities of a sensitive nature.

After receiving prior approval from the Federal Bureau of Investigation (FBI), DOE requested the following information from foreign regulators:

1) whether any person on a confidential FBI watch list was regulated by the authority or had participated in derivatives trading, either on-exchange or over-the-counter; and

2) for the period from August 17th to the date of request, any suspicious transactions in any cash or derivatives market (including, but not limited to, energy products, precious metals, interest rates, currencies, and securities indexes) where a customer could have benefited from the events on September 11th.

In addition to this general request, DOE sent more specific requests for assistance to two foreign regulators. To date, no regulators have reported to DOE any suspicious transactions or persons participating in their derivatives markets. The foreign regulators continue to monitor the markets for suspicious activity that may relate to the September 11th attacks.

II. Restoring Commission Operations

Beginning on the morning of September 11th, the Commission and its staff faced the challenge of responding simultaneously to unprecedented situations on two fronts. First, as the oversight regulator for an important segment of the financial services industry, the Commission needed to assess the condition of the futures markets, to monitor and assist in whatever manner possible with their recovery, and to keep the executive and legislative branches of the federal government informed of the situation. These efforts were described in Part I of this report.

Fulfilling its responsibilities to the markets and the public required the Commission and its staff to simultaneously overcome an internal challenge: restoring the full functionality of an agency that had lost one of its two largest regional offices and had been forced by security concerns to evacuate most of staff from its Washington, D.C. headquarters and its remaining regional offices. This involved extraordinary efforts in personnel management, facilities acquisition, telecommunications, budget modification, and even mail handling. Those efforts are described in this part of the report. Challenges in the area of information technology that faced the Commission are described in Part III.

A. The First Two Weeks

Events unfolded rapidly during the morning of September 11th and the Commission had to respond to administrative challenges on multiple fronts. First, all employees except essential senior staff were evacuated from headquarters and regional offices. Essential staff remained to coordinate efforts with other federal financial regulators and the exchanges, to locate New York staff, and to respond to questions from the public.

OED quickly established a “control room” in the Commission’s executive conference room in Washington, D.C. and equipped it with a bank of phone lines. Key staff manned these phone lines on September 11th and 12th, locating New York staff, sharing information on the Employee Assistance Program (EAP), and fielding incoming calls.

Immediately after the first attack, OED began compiling a list of New York employees and home phone numbers. An ongoing attempt to contact each employee began. The task was difficult due to the lack of a central database of emergency contact information, the absence of current phone numbers and addresses in the personnel files of some employees, and the difficulty of getting calls through to New York. The Enforcement staff in New York had established a phone tree prior to this event, and as a result, the New York Division of Enforcement was able to contact its staff quickly. Diligence and internet search tools proved useful in contacting other New York staff. The last New York employee was tracked down on Thursday morning.

The Commission used its outgoing voicemail system to communicate information about the status of the Washington, D.C. office and about the National Futures Association (NFA) Hotline, which offered to assist in fielding calls from the public and the industry. NFA subsequently issued a press release about its availability to assist in answering questions.

The Commission’s EAP provider was instructed to provide immediate counseling for employees and their families, particularly in New York, which included 24-hour one-on-one telephone counseling, face-to-face individual and family counseling for New York employees, and the formation of EAP-facilitated support groups. On September 20th, New York employees were provided the opportunity to share their experiences with each other at a hotel in Newark. Commissioners, division directors, and other senior managers attended the session.

Other employee issues presented administrative challenges. (For example, payroll data was to have been entered on the 10th and 11th. In spite of the disruptions, all payroll data was successfully entered and D.C. timekeepers continued to enter payroll data for the New York staff through November.) The Commission's website, www.cftc.gov, proved to be a valuable tool during this period. Because it was operated by another entity and hosted at a remote location, the website was updated and operated without interruption even when CFTC staff were evacuated and CFTC servers were taken off-line for security reasons. As a result, CFTC employees, including displaced New York employees accessing the internet from home computers, had access to up-to-date Commission information. OED continued to add information to the Commission's public website and its intranet, including information on the NFA hotline, EAP information, and links to other relevant websites. OED established a special section of the website for password access by New York staff.

To enable those New York employees who felt ready to do so to participate in the efforts to restore market operations, OED acquired phone cards and temporary cell phones and configured laptop computers. New York phone numbers were forwarded to all CFTC offices and new e-mail addresses and a new network for New York were set up on the servers in Washington, D.C..

With its offices in the World Trade Center destroyed, an immediate priority for the Commission was finding temporary and long-term replacement space. The General Accounting Office confirmed that the Commission could accept an offer of free temporary space from Burson-Marsteller, a public relations firm, which supplied fifty New York employees with phones, cubicles, office supplies, and fax and copying capabilities. Commission staff covered many administrative details, such as notifying all Commission registrants that filings which had

previously been sent to New York should now be sent to Washington, D.C. or Chicago.

Meanwhile, Commission staff coordinated with the agency's real estate agent to begin the search for permanent space in a markedly different Manhattan office market.

To deal with the unforeseen costs arising from the events in New York, the Commission submitted a supplemental appropriations request to OMB on September 13th to cover expenses in three categories: immediate responses, recovery efforts, and going-forward preparedness. The request was later amended on October 4th to reflect higher than expected costs to acquire and build-out replacement office space and a variety of human resource needs not fully reflected in the original submission. OMB immediately approved certain emergency funds for apportionment by the end of the 2001 fiscal year.

B. The Next Four Weeks

The Commission's administrative staff were largely occupied during the remainder of September and most of October with negotiating leases for both short-term office space in Jersey City, New Jersey, and permanent space in Lower Manhattan. OED also arranged additional EAP counseling sessions. Weekly meetings with a permanent space project team -- consisting of the Commission's real estate representative, project manager, a data and security consultant, an architectural firm, an engineering firm, and a construction company -- proved effective, particularly with the inclusion of a manager from the New York regional office who could relay the concerns of New York staff.

On the human front, the Commission arranged a ceremony to recognize the special sacrifices and dedication to service of the New York employees. The program included a

presentation of the Commission flag to the New York staff and follow-up consultations with EAP counselors.

The White House submitted on October 17th a recommended supplemental budget request for the CFTC to cover the costs of restoring the New York office to its previous capabilities and additional funds to cover the cost of developing an information technology disaster recovery plan.

C. Moving beyond the Immediate Aftermath

Once a final agreement for temporary space in Jersey City was reached, the Commission next arranged for equipment rental, moving services, and the configuration of computer and telecommunications networks to enable an early December move-in date. Meanwhile, the lease for permanent space at 140 Broadway was finalized and buildout plans developed.

On the budget front, the Commission received a confirmed supplemental appropriation of \$16.9 million to fund restoration of the New York regional office and various preparedness needs, including network redundancy, security program enhancements, fault tolerant system designs, and operational continuity.

Administrative challenges continued to complicate the Commission's full return to normal operations. For example, the anthrax threat forced OED to consult the Center for Disease Control, the General Services Administration, and the Office of Personnel Management in preparing a response to mail contamination. Ultimately, the Commission asked the U.S. Postal Service to hold all Washington, D.C. mail pending test results and any required treatment of CFTC facilities. Mail for the New York office, which was being routed through Washington, D.C. was held as a precautionary measure. OED found alternative means of managing

Commission business by, for example, working with vendors to develop alternative methods of invoicing. All tests results were negative and mail service resumed in early December.

D. What Worked Well

Various aspects of the Commission's response to the attacks and the loss of its New York regional office were very successful. The EAP, which was not in place in 1993 when many of the current New York staffers were also with the Commission, was effective in providing immediate support. Cooperation and teamwork among the Commissioners also proved to be a success story. For example, Commissioner Erickson's help was key in locating the interim temporary space for New York staff. More generally, communication technologies, such as cellular phones and laptop computers, but most particularly a website accessible from virtually anywhere a displaced New York employee might be, proved invaluable in keeping the organization working together as a cohesive team.

E. Issues to Address

Although the CFTC had some emergency procedures in place, these should be improved. The Commission must develop an effective emergency procedures manual to specify roles and responsibilities and should distribute both home and office copies of this manual to all employees. In addition, employees should be given updated procedures on how to contact each other and a central point of contact. Emergency procedures, including communication protocols, should be periodically updated and employees should receive regular training therein.

If the CFTC's Washington, D.C. telephone contractor had not happened to have been in the building at the time of the attacks, OED may not have been able to set up the bank of phones in the control room. Thus, emergency access to the vendor or the development of such skills

with the staff is advisable. It may also be advisable to establish a toll-free number for employees and employees in all offices should have an emergency procedures card with clear instructions on how to call-in. A global emergency message should be prepared for distribution to the main phone line as well as individual phones at any affected location. The ability to reach every employee at home should be improved by maintaining an up-to-date database of employee contact information. Toward that end, OED is working on such a database and is evaluating the manner in which to collect and maintain employee home phone, address, and emergency contact information, in light of concerns with privacy, security, and rapid accessibility in case of need. OED is also evaluating e-mail and other alternatives to cell phone contacts, for use when call volume spikes and calls will not go through. Other administrative responsibilities also merit attention. For example, the Commission must ensure that property records are updated on a regular basis. An incomplete inventory of furniture, equipment, and supplies in the New York office complicated recovery efforts.

Perhaps, most importantly, and as discussed in Part III of this report, the Commission must analyze and improve upon its data backup, redundancy, storage, and retrieval capabilities to better ensure that critical information, whether first created at headquarters or at one of the regional offices, is not lost in a disaster.

III. Initial Review of Preparedness Efforts

In this segment of the report, the Commission reviews what has been learned thus far about the preparedness -- particularly contingency plans for disaster recovery and business continuity (DRBC plans) -- of both itself as a federal financial regulator and of the various market participants that play such important roles in the smooth, reliable, and efficient operation of the commodity futures markets. In addition to conducting internal analyses of the various responses to the attacks, the Commission has solicited the input of market participants in several ways thus far. In October, Acting Chairman Newsome wrote to the exchanges, clearinghouses, and NFA to request their assistance in completing an initial survey, which is described below. In November, Commissioner Erickson chaired a meeting in Chicago of the Commission's Technology Advisory Committee, which was attended by Acting Chairman Newsome and numerous industry leaders, to discuss the responses of market participants to the attacks and their aftermath. These initial outreach efforts, together with informal discussions with market participants, have already provided invaluable insights -- many of which are reflected below -- and the Commission looks forward to a continued productive dialogue with market participants.

A. Preparedness of Market Participants

To learn more about the preparedness of market participants, both prior to September 11th and moving forward, a survey approach was taken. Two dozen of the largest FCMs were asked to describe both their immediate reactions to the disaster and their contingency plans. The U.S. futures exchanges, their affiliated clearinghouses, and the NFA were each asked to summarize immediate responses to the disaster, to assess which responses were most effective, to describe potential improvements identified thus far, and to suggest industry-wide initiatives or regulatory

actions that may be desirable. These institutions also submitted to the Commission copies of their existing contingency plans.

1. The Futures Commission Merchants

FCMs play a crucial risk intermediation role in the commodity futures markets by serving as the front-line defense against the financial difficulties of individual traders rippling through and becoming systemic problems. Accordingly, because of their importance to the integrity and smooth functioning of the markets and because many FCMs were directly affected by the attacks upon the World Trade Center, the Commission and the NFA cooperatively undertook a survey of two dozen of the largest FCMs to learn about the state of their DRBC efforts. All firms responded. This survey covered topics including the level of detail in formal DRBC plans, how such plans actually worked during the disaster, and any anticipated changes or improvements identified thus far.

The survey results revealed that nearly all firms had documented disaster recovery plans in place and that these were periodically tested and kept up-to-date on an ongoing basis. The plans generally contemplated interruptions in the availability of public utilities and provided for the use of alternative trading platforms or substitute marketplaces. The firms differed in their approaches to communicating these plans to employees, however, with some firms communicating plans throughout their organizations periodically but others not heretofore having contemplated doing so until after an event occurs. The plans generally included provisions for alternative office space and transportation to such space.

All firms duplicated essential computer and telecommunications systems at backup facilities and routinely backed up essential data. Most backup facilities and data storage facilities are located some distance from the main facilities, but a few are close, some within a

mile or less. In the latter cases, these firms are revisiting their plans in light of September 11th. Nearly all firms have duplicated critical staff competencies to some extent. They use various methods to accomplish this duplication, including cross-training, having employees perform similar functions at geographically dispersed sites, and designating back-up duties.

Of the 18 firms surveyed that were directly impacted by the events of September 11th, all were generally satisfied with the performance of their disaster recovery and business continuity plans. Concerns were expressed, however, that such plans did not fully anticipate the severity of these events in terms of the geographic scope and duration of the disruptions, and the impact on communications systems. Many firms had difficulties caused by the widespread nature of the disaster and the disruptions to telecommunications services. Many firms noted the importance of locating backup facilities a safe distance from primary sites, given the unfavorable experiences they or their competitors had with backup facilities that were in the same disaster zone as the primary facilities. A few firms noted the difficulties presented by a long-term dislocation.

Many firms are modifying their plans in light of September 11th. These modifications include improving systems and increasing capacity at disaster recovery facilities, improving network connectivity and communications with exchanges, and improving capacity to conduct business functions from geographically dispersed offices. A few firms mentioned the issue of “interdependent” failures; that is, failures at other institutions with which an FCM may have one or more mission-critical relationships. Planning for such failures presents unique challenges.

2. The Exchanges, Clearinghouses, and NFA

In addition to surveying FCMs on reactions and preparedness, the Commission surveyed the major U.S. futures exchanges and their affiliated clearing organization, which together with

NFA constitute the industry's self-regulatory organizations (SROs), as to both their own preparedness as trading facilities and their responses as SROs.¹⁵ Each entity was asked to describe the steps it took in response to the events of September 11th, to assess the effectiveness of the industry's disaster recovery efforts following September 11th, to discuss any modifications of its individual DRBC plans thus far being considered, and to make suggestions for improving the industry's preparedness. All entities responded to the request and those responses are summarized below.

a. Immediate Reactions to the Disaster

All of the U.S. futures exchanges and clearing organizations undertook prompt and ongoing efforts to communicate with employees, members, other exchanges, and the Commission in the wake of the September 11th attacks. They also cooperated in a coordinated shutdown and reopening of futures and option trading that took into consideration the closure of the securities markets. The various organizations exhibited great resilience and flexibility in taking advantage of the different resources and alternatives available to them. Examples of such reactions included:

- Utilizing backup trading facilities for open outcry trading or electronic trading;
- Implementing electronic trading for contracts normally traded by open outcry;
- Quickly securing new data center, backup data center, or office facilities;
- Establishing executive command centers at remote locations;
- Coordinating with foreign exchanges on clearing member issues;

¹⁵ These included NYBOT, CBT, CME, NYMEX, the Kansas City Board of Trade (KCBOT), Minneapolis Grain Exchange (MGE), CX, New York Clearing Corporation (NYCC), Board of Trade Clearing Corporation (BOTCC), Chicago Mercantile Exchange Clearing House (CMECC), Kansas City Board of Trade Clearing Corporation (KCBOTCC), and NFA.

- Maintaining 24-hour operations to assist members with trade entries; and
- Identifying regulatory requirements from which relief might be needed.

In general, the exchanges reported encountering little, if any, difficulty as a direct result of the suspension and subsequent resumption of trading. The New York exchanges reported far greater difficulties, on the other hand, in such areas as communicating with member firms. NYMEX, in particular, also reported problems in gaining access to facilities, and finding sources of electricity and water.

The exchanges readily identified a number of actions that were deemed very effective. For example, daily industry-wide conference calls coordinated by FIA were noted as particularly useful. Other steps noted as effective included:

- Contact with other exchanges, including foreign exchanges, to coordinate disaster responses;
- Commission efforts to coordinate information and market reopenings and to relax regulatory requirements;
- Disaster assistance and offers of assistance from others in the industry; and
- Using websites to communicate information to employees, traders, and other affected parties.

The exchanges also identified a number of challenges they faced in connection with both individualized and industry-wide disaster recovery efforts, which included:

- Lack of geographically-remote emergency backup facilities for some clearing members and for some settlement and custody banks;
- Inability of telecommunications vendors and other utilities to provide uninterrupted service or seamless switching to backup sites;

- Trouble getting adequate information from settlement and custody banks; and
- Relocation of large numbers of clearing members and associated communication difficulties.

b. Contingency Plans

Some of the institutions among the exchanges, clearinghouses and one industry association that were surveyed, responded by submitting copies of written contingency plans, which varied in both scope and detail. Two such plans could be described as comprehensive, while others were limited, for example, to recovery of information processing capabilities but not recovery of other key capabilities. Several institutions provided summary descriptions of their strategies for disaster recovery and/or business continuity.

The submitted plans and summaries indicated that these institutions had heretofore been somewhat better prepared to respond to problems related to partial system failures than to total disasters. Four respondents provided copies of contingency plans for problems less severe than a catastrophe. Two others provided summary descriptions, strategies, and business practices for partial system failures.

Many of the responding organizations reported that they have already identified areas of significant potential modification in their pre-September 11th contingency plans. The modifications being considered within the industry include the following:

- Acquisition or expansion of geographically-remote backup trading facilities;
- Securing emergency access to alternate trading facilities at another exchange;
- Establishing geographically-remote disaster recovery sites for data;

- Giving greater attention to the disaster recovery capabilities of vendors and partners, including testing of their respective disaster sites and circuits; and
- Formalizing previously informal plans or plan components.¹⁶

c. Suggestions for Industry-wide Initiatives

Many institutions also made useful suggestions for improving industry-wide preparedness, which reflected both the common experiences of many organizations and the differing impact of events on industry participants. These suggestions focused on steps which the suggesting organizations believed to be important, but which would require coordination and cooperation on an industry-wide basis. They included:

- Identifying best practices for emergency voice and data communications, via the Internet and otherwise, among all industry participants, including exchanges, clearing organizations, and members;
- Establishing emergency procedures, tested annually, on an industry-wide basis, including participation by the Federal Reserve and banks involved in the futures industry;

¹⁶ Aspects of a comprehensive contingency plan frequently listed by information management professionals include:

- a written document that is continually updated and communicated to relevant staff;
- that is defined at the department level;
- that is tested with sufficient frequency and intensity that key staff are kept familiar and can, if needed, perform their roles expeditiously;
- and that:
 - identifies and prioritizes critical business processes;
 - identifies key staff responsible for those processes and their contact information;
 - arranges for activation of, and transport of staff to, an alternate operations facility;
 - identifies and arranges for necessary equipment, supplies, and records at the alternate location;
 - arranges for use of a computer backup site with necessary equipment and communications;
 - includes an adequate data backup program and offsite storage facility;
 - maintains an emergency contact list for vendors and service providers; and
 - provides for adequate training and testing.

- Designating a central clearinghouse, such as the website of the Institute for Financial Markets, for information from and for all market participants;
- Maintaining an industry-wide emergency contact directory, covering all exchanges, clearing organizations, and FCMs, including home and cellular telephone numbers as well as e-mail addresses;
- Prearranging post-disaster priority treatment for industry members by key telecommunications and utility providers;
- Planning for coordinated, expedited post-disaster resumption of futures trading;
- Bilateral meetings between the Commission and each exchange to review individual DRBC plans; and
- Providing disaster recovery training for all industry employees.

d. Previous Reviews of Contingency Plans

Since IOSCO's adoption in 1990 of Principles for Screen-Based Trading Systems -- which included guidance for exchanges and clearinghouses that "[b]efore implementation, and on a periodic basis thereafter, [any electronic trading] system and system interfaces should be subject to an objective risk assessment to identify vulnerabilities (e.g., the risk of unauthorized access, internal failures, human errors, attacks, and natural catastrophes) which may exist in the system design, development, or implementation" -- the Commission has reviewed contingency plans of new applicants, if submitted voluntarily, for consistency with the IOSCO guidance.

In anticipation of the Year 2000 date rollover, the Commission obtained and reviewed the contingency plans of exchanges and clearinghouses. Developing these plans afforded these institutions the opportunity to assess the vulnerabilities of their information management and

communications technologies and to explore alternative backup resources. Some of these were put into place as a result of this review, including backup facilities with mirrored data and the capacity to operate on the electronic platform of overseas partners.

Nonetheless, it is fair to say that neither the reviews of contingency plans voluntarily submitted by new applicants nor the review of Y2K plans focused on preparedness for a large-scale disaster such as September 11th. Accordingly, the CFTC, like many market participants, is now undertaking a strategic review of every facet of its preparedness and its contingency plans, both in terms of disaster recovery and business continuity. From instituting better backups of data, offsite storage, and more complete archiving, to enhancing organizational flexibility and responsiveness in times of crisis, the Commission faces the challenge of ensuring the effective survival of its abilities to fulfill its core mission and accomplish its public policy goals.

B. Preparedness of the CFTC

1. Immediate Reactions to the Disaster

The Commission had to respond to the disaster on several fronts simultaneously. The Commission's reaction to the destruction of its New York regional office, the efforts to verify the safe evacuation of New York staff, the precautionary evacuation of non-essential staff in other offices, and the restoration of Commission operations are detailed in Part III of this report.

Because a state of emergency was declared in Washington, D.C. early on September 11th, the CFTC network was shut down to ensure the safety of the Commission's data. The network for the executive offices was restored relatively quickly to retain access to international market and news information through the Internet. Because information on the Integrated Surveillance System (ISS), which is used to conduct daily surveillance of the futures and option markets, and

the Exchange Database System (EDBS), which contains trade data from the exchanges, is stored on servers in Washington, D.C. and Chicago, respectively, no surveillance or trade data was lost. (This data is also secured by routine off-site back ups.) The Commission's information system firewall was modified to enable the Division of Trading and Markets to directly monitor trading activity, which was essential to the Commission's ability to approve startup of NYMEX's internet platform, as discussed in Part I.

2. The Benefits of Y2K Preparations

During 1999, the Commission's Office of Information Resources Management (OIRM) worked with all parts of the Commission to develop a contingency plan in preparation for the Year 2000 date rollover. That plan was published on September 15, 1999, and addressed two areas of concern: (1) building infrastructure failures; and (2) mission-critical information system failures. The Commission's strategy for responding to a building infrastructure failure was to install communications equipment in each of its three main offices (Washington D.C., Chicago, and New York City) and to equip essential staff with laptop computers for remote access to essential network services. The Commission's strategy for responding to the failure of either of its two mission-critical systems was to arrange with the SROs for access to information contained within comparable SRO systems.

The Commission developed a schedule for deployment of resources required to implement the plan under either contingency, a list of essential staff positions, a cost estimate and funding strategy, and an implementation plan. The Commission tested, implemented, and verified the effectiveness of these plans during the fall of 1999. The Commission did not experience any building infrastructure or information system failures during the date rollover.

Because the Commission's New York office was located in 1 World Trade Center, both the remote access facilities and the arrangements with the SROs for access to their information proved helpful to the Commission in responding to the logistical challenges presented by the attacks. Many of the New York office staff were able to work from home, dialing into the Commission's remote access facilities using laptops provided by the Commission. Other staff members were provided temporary work space and access to necessary information at the offices of the New York SROs.

3. Protecting Market Surveillance Capabilities

The Market Surveillance Section of DEA, in conjunction with the agency's Chief Information Officer (CIO), is currently working to meet the requirements of the Government Information Security Reform Act (GISRA). A documented assessment of market surveillance program security has been completed using the CIO Council's Federal Information Technology Security Assessment Framework. Based upon this assessment, a draft security plan has been produced in compliance with NIST Special Publication 800-18, Guide for Developing Security Plans for Information Technology Systems. Other upcoming milestones include a program Risk Assessment and Rules of Behavior.

4. General Information Security Issues before September 11th

In the spring of 2000, OED arranged for an Information Technology Assessment to be performed externally, which resulted in a report that recommended several new initiatives. As a result, the Commission has taken a number of steps to enhance information security, including assigning a senior staff person to develop an information security program and having the CIO

work with the information security specialist and program offices to conduct security self-assessments of the Commission's computer systems.

5. Increased Emphasis on Security Issues after September 11th

Immediately after the attacks, OIRM began assessing its ability to restore computing services. That assessment identified a number of deficiencies in existing contingency plans. During the first two weeks after September 11th, OIRM developed an action plan to remedy those critical deficiencies for which sufficient resources were available and developed a supplemental budget request to remedy those deficiencies that would require additional resources. (This request was funded in a supplemental appropriation.) That action plan includes such things as improving the program for creation and offsite storage of backup tapes and offsite retention of system documentation. OIRM has initiated discussions with those program offices that rely upon the Commission's mission-critical systems to begin the process of identifying the disaster recovery requirements for those systems.

C. Moving Forward ... What's the Next Step?

The Commission believes that it is appropriate to continue to solicit the views of market participants, both individually and through their associations, to determine whether and how to best encourage the development of guidance, standards, or best practices in the areas of disaster preparedness, disaster recovery, and business continuity. Invaluable insights have been gained in the Commission's initial outreach efforts through the DRBC surveys and the November 2001 Technology Advisory Committee meeting. In addition to those discussed above, these insights have included the following observations, many of which were received from market participants directly involved in the New York recovery efforts:

- Every single aspect of operational needs (including, without limitation, electricity, water, natural gas, fuel oil, telecommunications, personnel transport, food and drinking water provision) must be considered in emergency planning efforts or critical dependencies will be missed (e.g. having electricity for computers but not being able to run air conditioning systems to maintain safe computer operating temperatures);
- Feasibility of backup operations should be confirmed in advance to avoid legal or regulatory impediments (e.g. special air quality permits that might be required for the sustained operation of diesel generators);
- Communication protocols among staff, with regulators and other government authorities, with other organizations on whom an organization depends for mission critical functions, and even the media must be planned and tested exhaustively;
- It is not enough for key staff to understand the organization's own contingency plans, they must also understand the contingency plans of other organizations with whom important business relationships exist;
- People are an organization's most valuable asset and contingency plans must include providing staff (and relevant market participants such as traders) with the means to reach the organization, giving them the tools they need, and making sure they are safe, secure, and comfortable (for example, staff and market participants expected to use a backup trading facility should have phone numbers, driving directions, mass transit options, parking alternatives, restaurant recommendations, and so forth);

- Regular testing is essential to successful implementation of contingency plans when needed (for example, NYBOT conducted quarterly tests up to July 2001);
- Regular backups should mirror every aspect of an organization's systems; and
- Telecommunications dependencies must be scrutinized for single points of vulnerability.

As one possible avenue for continued cooperation, the Institute for Financial Markets (IFM) has offered to evaluate issues surrounding the promulgation of guidance on coordinating disaster recovery plans among different institutions, an area of preparedness whose importance was emphasized by the ripple effect of the attacks across institutions that routinely rely on one another in the performance of mission-critical functions. Such an effort -- led by the IFM, for example, in cooperation with other market participants -- could take whatever form those participants believe will be most effective in identifying challenges, approaches, and solutions.

Some of the areas in which such efforts may yield substantial benefits include:

- communications, both telephonic and internet-based;
- backup facilities, both for computers and key operations such as trading;
- protocols and up-to-date information to support communications within and across institutions, firms, and regulators during a crisis;
- non-financial support services, such as access to power and water necessary to sustain operations; and
- effective access to government authorities (at local, state, and federal levels).

The relative priority of each of these areas, the appropriate participants in such efforts, and the suggestion of other areas of fruitful cooperation will be the subject of both intra-industry and industry-regulatory dialogues.

It is also important to emphasize that the scope of analysis undertaken in consideration of these preparedness issues should not be limited only to terrorist threats. Other types of catastrophe could threaten the stability of the futures and options markets. Thus, the scope of analysis should include, at a minimum, consideration of:

- natural disasters, such as floods and earthquakes that affect multiple entities;
- failures in the telecommunications infrastructure;
- other types of infrastructure failure, such as massive or prolonged power outages;
- the bankruptcy or other collapse of a key institution, particularly one that creates a ripple or “domino” effect on other market participants; and
- fraud or other malfeasance on a sufficiently large scale to undermine the credibility of one or more key markets or market participants.

In all such analyses, two overriding factors should be kept in mind: the continuing globalization of the markets and, again, the critically important but not always obvious interconnections among entities that present the threat of network failures in mission-critical functions.

The Commission hopes that this report will be helpful, both as an analysis of the events on and after September 11th and in planning for the future. The Commission looks forward to working, both internally and with market participants, to build upon the successes witnessed last year as contingency plans were put into action. We must all realize that these measures can and should be continuously improved and the lessons learned thus far will improve our ability to do so. Though we hope never to again face such a tragedy, it is nonetheless incumbent upon each of us to do our very best to prepare this sector of the financial system to recover promptly from adversity and to continue to perform its critically important role in the economy.