Chapter Five

ANALYSIS OF CAPITAL ADEQUACY

A. Introduction

All registered broker-dealers, other than sole specialists and sole market makers on an options floor, are subject to the Commission's net capital rule, Rule 15c3-1 under the Securities Exchange Act of 1934 ("Exchange Act") (17 CFR Sec. 240.15c3-1), even if they do not carry customer accounts. 1/ The rule prescribes minimum liquidity standards for broker-dealers. Its purpose is to ensure that broker-dealers maintain sufficient liquid assets to satisfy promptly the claims of customers and broker-dealers, and to provide a cushion of liquid assets in excess of liabilities to cover potential market and credit risks. The rule helps promote the financial viability of, and public confidence in, the securities industry by protecting both customers and other broker-dealers from risks and exposures in the broker-dealer. 2/

There are two methods for determining required net capital, the basic (or aggregate indebtedness) method and the alternative method. A broker-dealer that elects the basic method for computing its net capital must have net capital equal to at least 6 2/3% of its aggregate indebtedness or, stated conversely, the aggregate indebtedness may not exceed 1500% of the broker-dealer's net capital. The rule defines aggregate indebtedness as the total money liabilities of a broker or dealer arising in connection with any transaction. 3/ In addition to this percentage requirement related to liabilities, the broker or dealer must maintain a minimum net capital regardless of its aggregate indebtedness, depending on the nature of its business. Under the basic method, each firm must maintain a minimum net capital of at least $25,000 unless it carries no customer accounts and holds no funds or securities belonging to customers and otherwise limits its business as described in particular sections of the rule.

The rule prescribes additional capital requirements for a market maker in securities. A market maker is required to have and maintain net capital at least equal to $2,500 for each security in which it makes a market if the security has a market value of $5.00 or more and $500 for each security whose market value is less than $5.00. The rule provides, however, that a market maker shall have minimum net capital of at least $25,000, but does not require a market maker to have minimum net capital greater than $100,000 under these additional market-maker capital requirements. 4/

1/ Floor brokers on an exchange also are exempt from the net capital rule under certain circumstances. *See* Rule 15c3-1(b)(2).

2/ All registered broker-dealers must also comply with the Commission's Customer Protection Rule, Rule 15c3-3, adopted under the Exchange Act. It requires a precise accountability for customer funds and securities held by the broker-dealer and precludes the broker-dealer from using customer funds or securities to finance its own trading activities or expenses.

3/ Rule 15c3-1(c)(1). The rule specifically excludes certain liabilities from aggregate indebtedness, usually because the liability is adequately collateralized by an asset of the broker-dealer.

4/ *See* Rule 15c3-1(a)(4).

A broker-dealer that elects the alternative method of computing net capital must maintain net capital equal to at least 2% of its customer related receivables, known as aggregate debit items, computed in accordance with a prescribed formula. 5/ The broker-dealer also must maintain minimum net capital of at least $100,000.

In addition to the minimum requirements, the net capital rule and the rules of the various self regulatory organizations contain early warning levels below which a firm's net capital cannot fall without adverse consequences. For example, a firm may not withdraw equity capital in any form to pay shareholders or partners if its net capital is less than 5% of aggregate debit items (if it computes net capital under the alternative method) or its aggregate indebtedness exceeds 1000% of its net capital (if it computes net capital under the basic method). 6/

Broker-dealers that do not carry customer accounts or hold customer funds or securities and limit their securities activities as prescribed by the rule are allowed to maintain minimum net capital of $5,000 (rather than $25,000) provided they limit their proprietary transactions to ten or fewer per year. Most of these firms are "introducing" brokers, which introduce customers to another broker-dealer (clearing broker-dealer) or sell securities on a best efforts basis.

The term "net capital" is defined in the rule. 7/ Generally, net capital is computed by adding to net worth, as computed under generally accepted accounting principles, certain liabilities subordinated to the claims of customers and deducting from net worth certain assets not readily convertible into cash and certain percentages of the market values of all proprietary positions. These percentage deductions, referred to as "haircuts," are intended to provide for the market and credit risk inherent in the firm's securities positions.

Under the basic method, a broker-dealer must deduct 30% from the market value of its long or short equity positions, whichever is greater. 8/ The lesser of the long or short positions receives a deduction of 15% on that amount in excess of 25% of the greater position's market value. Conversely, under the alternative method, the deduction is 15% of the equity positions held long but 30% of the market value of the short positions in excess of 25% of the market value of the long positions.

The broker-dealer must also deduct from net worth unsecured receivables (except those specified) and certain operational charges related to its inability to process securities transactions efficiently. For example, a broker-dealer must charge its capital

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5/ See Rule 15c3-3a.

6/ In addition, NYSE Rule 326 authorizes the NYSE, under certain circumstances, to restrict a member carrying customer accounts from expanding its business or to compel a reduction of business if its net capital falls below the early warning levels. See also NASD Section 38, Rules of Fair Practice.

7/ See Rule 15c3-1(c)(2).

8/ The amount of the haircut for a debt security depends on the issuer of the security, its maturity date and, as to certain debt, the rating of the debt instrument.

for securities transactions that remain open five days after settlement date (aged fails to deliver) and certain unreconciled items in the broker-dealer's records. 9/

B. Upstairs Firms

1. Consequences of the Market Break for Net Capital of Upstairs Firms 10/

a. Large Investment Banking Firms and Wire Houses

In the course of the market break study, the Division examined the financial statements for the month of October 1987 of fifteen of the largest investment banking and integrated retail firms (the latter are often referred to as "wire houses"). During the month of October, thirteen of these fifteen firms reported a cumulative pre-tax loss of almost $700 million. 11/ Two firms reported gains--one of almost $17 million; the other of less than $1 million. The losses were not spread evenly among the thirteen firms. The lowest reported loss was approximately $5 million, while two of the firms reported losses of approximately $120 million each.

9/ A fail to deliver arises when a selling broker or dealer has not delivered to the purchasing broker or dealer securities at the settlement date. Subparagraph (c)(2)(ix) of Rule 15c3-1 imposes certain charges on a broker-dealer for aged fails to deliver.

10/ The Commission's Directorate of Economic and Policy Analysis ("DEPA") prepared a study entitled "Financial Condition of Broker-Dealers, October 1987" in which it evaluated the effect of the market break on the securities industry. DEPA compared 58 NYSE member firms' financial conditions on October 31, 1987 with their financial conditions on September 30, 1987. A copy of the study is attached hereto as Appendix G.

11/ The losses for the month of October of these 15 firms in descending order of magnitude were as follows:

Losses For October 1987
$123,269,119
118,605,145
80,409,741
69,682,450
65,203,000
62,199,306
43,869,215
40,702,143
34,852,684
18,522,840
17,795,000
16,891,173
4,820,000
+876,000 (GAIN)
+16,807,660 (GAIN)

A substantial portion of the losses was attributable to realized or unrealized losses from equity positions. Between October 14 and October 30, 1987, the firms reported combined losses of approximately $796.5 million in their equity positions. Two of the firms lost over $100 million. Table 5-1 shows the losses in descending order of magnitude for fourteen of these firms. One firm did not report its losses resulting from its equity positions.

TABLE 5-1
Losses in Equity Positions Between
October 14 and October 30

$133,388,000
128,349,000
88,115,000
83,074,000
72,000,000
62,914,000
57,858,000
50,674,000
50,100,000
44,500,000
17,733,000
5,000,000
2,862,000
(no loss reported)
TOTAL $796,567,000

In the case of four large investment banking firms, losses in firm proprietary positions in equity securities to some degree were exacerbated by contractual commitments those firms had made in connection with the underwriting of the common stock of British Petroleum ("BP"). The firms were part of a group of underwriters that had agreed to purchase securities of BP from the British Government, as part of its privatization program, at a fixed price several weeks before the securities could be resold to investors in the United States. The October market break, however, occurred after the pricing and prior to the proposed public offering of the securities. As a result, the securities declined substantially in value; the broker-dealers, however, were committed to pre-break prices. Moreover, the firms were faced with the substantial risk of being unable to place the offering at an acceptable price and therefore being forced to absorb extremely large positions of BP into their inventories or sell the securities into the market at the risk of further depressing the price. Because the Bank of England ultimately determined that it would offer to repurchase the securities at a price above the post-break market value, the losses to the four broker-dealers were substantially contained to pre-tax losses of approximately $325 million.

Many of the firms also reported losses from error accounts and bad debts, totalling approximately $235.8 million. Presumably, most of these losses arose from losses in cash and margin accounts. Table 5-2 details the losses in descending order of magnitude.

TABLE 5-2
Losses from Error Accounts and Bad Debts

$73,585,731
43,222,556
31,132,360
21,872,065
20,292,000
15,584,215
8,428,581
7,837,000
5,605,000
5,103,000
2,061,180
783,795
328,020
0
0
TOTAL $235,835,503

Despite these losses, each of these firms, as well as all other sizeable firms, remained above the early warning levels discussed earlier in this chapter. At month end, after the losses, the fifteen firms showed a total ownership equity of approximately $16.9 billion, a total net capital of approximately $9.4 billion and excess net capital above required minimum levels of approximately $8.3 billion. In large part, the losses were contained because of the diversified nature of the firms' assets. The market value of the equity positions of these firms at the end of September was only a relatively small fraction of their total assets. From the financial reports, the market value of the equity positions in almost every case was less than 20% of the total market value of all securities positions and in most cases less than 5% of the total assets of the firm.

TABLE 5-3
Firm Equity Positions as of September 30, 1987

$1,481,706,093
1,384,474,605
1,171,319,515
1,016,961,181
971,506,510
852,962,286
641,352,000
432,659,640
399,627,000
393,847,077
274,634,000
271,748,471
174,374,960
162,208,834
91,513,000

During the month of October, several large firms responded to their equity losses and the volatile market conditions by substantially increasing their net capital through infusions of equity capital from parent or affiliated entities or through subordinated borrowings. One firm added $100 million in equity capital and $60 million in subordinated borrowings. Another firm added $100 million in equity capital. A third firm added equity capital of approximately $600 million. Even without the infusions, however, all of the firms would have remained above the early warning levels at the end of October. 12/

While large firms generally demonstrated substantial resiliency during the market break because they had substantial capital and diversified inventory positions, the problems encountered by certain large firms should be noted.

As publicly reported, Charles Schwab & Co., Inc. ("Schwab"), a brokerage subsidiary of the Charles Schwab Corporation and a member of the New York Stock Exchange, incurred a $22 million fourth quarter loss because customers failed to meet margin calls in connection with the October market break. The $22 million charge was mainly attributable to a single customer's inability to meet margin calls in connection with his investments in uncovered Standard and Poor's 100 Index ("OEX") put options. Schwab reportedly reached a court-approved settlement of its claim of $84 million against the investor arising from his unsecured obligations for $67 million in cash and notes. Pursuant to terms of the agreement, Schwab received $25 million in cash and a full recourse, non-interest bearing $42 million note payable in equal annual installments over a period of 5 years. Schwab also established reserves totalling $13 million for all other unsecured customer receivables.

L.F. Rothschild & Co., Incorporated ("Rothschild"), a New York Stock Exchange member firm, carried approximately 90,000 customer accounts for itself and as a clearing broker-dealer for introducing firms. As a result of the sharp decline in equity markets during the month of October, Rothschild incurred a loss of approximately $51.6 million, which eliminated almost all of its net capital in excess of early warning levels. The losses resulted from Rothschild's arbitrage and over-the-counter activities and defaults in the accounts of customers introduced to it on a fully disclosed basis by an introducing firm. Although Rothschild has maintained net capital in excess of the early warning levels, it has taken measures to reduce its risk portfolio in proprietary positions to protect itself in the event of further extreme market volatility. Moreover, as a result of an ongoing review of its business undertaken before the events of October 19, Rothschild has implemented cut-backs in its public finance and municipal bond trading activities, thereby substantially reducing its personnel. Rothschild also has entered into an agreement with Broadcort Capital Corp. to clear its customer securities transactions through Broadcort on a fully-disclosed basis.

b. Medium-Sized Firms

The Division also reviewed the financial reports of eight medium-sized firms, each carrying a substantial amount of customer accounts. These firms had mixed results in October. Four firms had net income for the month as follows:

12/ Some of the increases in net capital resulted from reductions in securities positions and thus haircuts.

Net Worth	Net Income
$82,229,000	$137,233
10,400,000	40,230
9,140,600	295,850
61,987,264	111,358

On the other hand, four firms had losses for the month as follows:

Net Worth	Net Loss
$37,987,970	$1,379,853
95,409,291	6,974,709
28,003,758	3,659,672
109,785,517	20,720,570

Some of the losses were caused by customer defaults in cash and margin accounts; however, most were attributable to realized or unrealized losses in proprietary equity positions. In addition to these firms, other firms suffered losses that were material to the firms' net capital positions. For example, one firm which had tentative net capital 13/ of about $1 million lost $455,000 in October because of unsecured debits ("receivables") and unrealized losses in the firm's trading inventory. A second firm lost almost $1 million in October 1987, primarily because of investment and trading account losses. This represented some 30% of its October excess net capital at the end of October. A third firm lost $573,000 in October, or 23% of its October 31 excess net capital. The loss was caused primarily by unrealized declines in its inventory positions. Despite these relatively sharp losses for October, only three firms carrying customer accounts had to cease business because they were in violation of the net capital rule for reasons stemming from the October market break.

Firms characterized as trading or arbitrage firms, with almost no other lines of securities business, suffered extremely large losses due to the market break. The Division reviewed the financial statements of five major arbitrage firms. Those firms lost approximately $462 million in October. This figure represents a loss of 41% of their combined net worth. Each firm, however, had, at month end, net capital substantially above the required level.

c. Upstairs Firms That Ceased Operations

Approximately 6,700 upstairs firms that do not solely transact business on the floor of an exchange are registered as broker-dealers with the Commission. Slightly less than 1% of that number (fifty-eight firms) were in violation of the net capital rule for reasons related to the October market break and ceased operations at least temporarily. About one-half or thirty of those broker-dealers did not recover from the events of the week of October 19. The great majority of these firms fell below the required levels of net capital because of losses in proprietary accounts or expected losses in customers' cash or margin accounts. (See Table 5-8 at the end of this chapter.)

13/ Tentative net capital is the net capital of a broker-dealer before haircuts.

Of these, only one firm that carried customer accounts, H.B. Shaine & Co., Inc., is being liquidated pursuant to provisions of the Securities Investor Protection Act of 1970 ("SIPA") and under supervision of a court appointed trustee.

The nature of these fifty-eight firms' business may be broadly classified into 3 categories: (i) firms that carry customer accounts; (ii) firms whose primary business is trading for their own accounts and which do not carry customer accounts; and (iii) firms that introduce customer accounts to carrying (or clearing) broker-dealers.

i. Self-Clearing Broker-Dealers

Three broker-dealers that carry customers' accounts ceased operations (at least temporarily) because they were in violation of the net capital rule as a result of the October 19 market break. 14/

H.B. Shaine & Co., Inc. ("Shaine"), located in Grand Rapids, Michigan, was a NYSE and NASD member broker-dealer and market maker in thirty-seven NASDAQ securities The firm had two offices, approximately fifty registered representatives, and carried about four thousand customer accounts. It ceased operations on October 19 because of an inability to meet an intra-day variation margin call from the Options Clearing Corporation ("OCC") stemming from positions in uncovered OEX put options sold by about twenty customers. Although Shaine reported net capital of $500,000 on September 30, 1987, the customers' accounts on which the customers defaulted liquidated to a total deficit of about $5 million. During the week of October 19, 1987 a trustee was appointed for Shaine under SIPA.

Two other broker-dealers closed temporarily because of capital deficiencies. Lowell, Listrom & Co., Inc. was forced to close for two business days because of a decline in the market value of proprietary securities related to the October 19 market break. An increase in the market value of its proprietary securities and resolution of aged failed to deliver contracts resulted in its reestablishing capital compliance.

14/ One other clearing firm ceased doing business during the October 1987 time period; however, that firm failed because of financial difficulties generally unrelated to the October market break. K.A. Knapp & Co., Inc. ("Knapp"), a NASD member broker-dealer with headquarters in Grand Rapids, Michigan, had experienced financial problems prior to the market break. Knapp acted as an underwriter for a firm commitment offering of shares in Centrac Associates, Inc. ("Centrac") in September 1987. The stock, issued at $5.00/share, was selling for approximately $3.00/share in early November and, after Centrac filed a petition for bankruptcy on November 13, the stock had little or no value. Knapp had approximately 130,000 shares of Centrac long in inventory. Apparently, Knapp had trouble selling its entire obligation in part because it was not able to register ("blue sky") the issue in several states. The decline in value of Knapp's inventory of Centrac stock and other debts Knapp had to Centrac in connection with the offering resulted in an inadequate capital situation for Knapp. Knapp ceased doing business on November 13 and commenced to self-liquidate on November 16 under the general supervision of the NASD. Knapp has negotiated a transfer of its approximately 1,100 customer accounts to other broker-dealers. There is no indication that any customers will suffer any losses.

West Wind Trading Co., which makes markets in four NASDAQ securities, suffered trading losses in connection with the October market break and ceased doing business. The firm, which primarily trades for its own account, had only one customer. It withdrew securities from its proprietary account to satisfy a liability to its customer and was able to obtain sufficient capital to reestablish net capital compliance and re-opened on November 9, 1987.

ii. **Trading Firms**

Five firms that had no customers and whose primary business was trading for their own accounts ceased their securities operations at least temporarily because of losses from the October market break. The firms were: (a) AIG, Inc.; (b) Comdisco Equities, Inc.; (c) William D. Mayer & Co.; (d) Metropolitan Securities; and (e) Domestic Arbitrage Group.

AIG, Inc. was an options market maker that cleared its transactions through Bear, Stearns & Co. Inc. and also took positions in risk arbitrage securities. As a result of the market break, it lost approximately $40 million in its arbitrage securities. As of September 30, it reported net capital of $4 million. After the loss, its net capital was in deficit $14 million.

Comdisco Equities, Inc. ("Comdisco Equities"), which cleared its securities transactions through Bear, Stearns & Co. Inc., suffered an unrealized loss of approximately $100 million in equities trading and closed on October 20, 1987. Its parent, Comdisco, infused $35 million to bring it back into net capital compliance and re-opened on October 22, 1987. Subsequent to the market break, Comdisco Equities reported that it will withdraw from the risk arbitrage business. Comdisco Equities is gradually liquidating its market positions.

William D. Mayer & Co. ("Mayer") was primarily an options market maker in listed options that cleared its transactions through Weiss, Peck & Greer. During the week of October 19, Mayer lost $13 million in options market making and $7.8 million in the value of securities held for investment. Its net capital fell to a deficit of $13.6 million; it had reported net capital of $3.8 million on September 30.

Metropolitan Securities was an options market maker in listed options, and, in addition traded equity securities for its own account. It lost about $31 million in options market making in October. Its net capital was in deficit at the end of October by approximately $41 million; as of September 30, it reported net capital of $7 million.

Domestic Arbitrage Group ("Domestic") introduced customer transactions on a fully disclosed basis to Financial Clearing and Services Corporation ("FCSC") and was also a market maker in approximately 230 NASDAQ stocks and 100 "pink sheet" stocks. Domestic experienced financial difficulties because of $4.2 million in unsecured debits resulting from its customers' liabilities to FCSC and a $1 million decline in the value of its proprietary inventory.

iii. **Introducing Broker-Dealers**

As noted above, an introducing broker-dealer is one that has a contractual arrangement with another firm, the carrying or clearing firm, in which the carrying firm agrees to perform certain services for the introducing firm. Generally, the introducing

firm submits its customer accounts and customer orders to the carrying firm, which executes the orders and carries the accounts. The carrying firm's duties include the proper disposition of the customer moneys and securities after trade date, the transfer to the customer of the moneys and securities after settlement date, the holding of customer securities and funds, and the handling of the paper work associated with carrying customer accounts.

Approximately fifty-five firms that introduced customer transactions on a fully disclosed basis to clearing broker-dealers ceased operations because of violations of the net capital rule caused by losses directly related to the October market break. Most of the losses resulted from defaults by customers in failing to make payment to the clearing broker-dealers on unsecured monies owing to the clearing firm for which the introducing broker-dealers were contractually liable. The net capital rule requires the introducing broker-dealer to incur a deduction from its net worth equal to the amount of the unsecured deficit.

At least eleven of the fifty-five introducing firms made markets in over-the-counter securities. The losses sustained by these firms were a result of unsecured customer debits for which they were contractually liable and declines in the market value of proprietary inventory. Three of the fifty-five firms also suffered substantial trading losses related to their options market making business.

Approximately 40% of the introducing firms that ceased operations re-opened, usually within a week after their close. A number of firms forced to close because of unsecured customer debits were able to increase their net capital and therefore re-open by entering into subordination agreements with their clearing brokers. 15/ The remaining firms were able to acquire additional capital sufficient to bring them into compliance with the Commission's rules.

iv. Over-the-Counter Market Makers

As discussed above, the net capital rule includes certain additional capital requirements for market makers in over-the-counter securities. 16/ During the period following the market break, twelve broker-dealers that made markets in over-the-counter securities ceased operations. In some cases, the prices of the securities in which they made markets fell dramatically. The customer obligations, in some cases secured by the securities, became uncollectible. Frequently, the over-the-counter

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15/ The net capital rule allows broker-dealers, for purposes of computing net capital, to add certain satisfactorily subordinated liabilities back to net worth. Rule 15c3-1d. When a liability is subordinated, the lender has contractually agreed that every other unsubordinated creditor of the broker-dealer has a prior claim to the assets of the broker-dealer. For subordination agreements to be satisfactory for purposes of the net capital rule, they must (i) meet the criteria for acceptability found in Rule 15c3-1d, which, among other things, requires that they may not be repaid within a period of less than one year; (ii) be approved by the broker-dealer's designated examining authority; and (iii) remain in the form found acceptable by the self regulatory organization which acts as the firm's designated examining authority.

16/ See discussion supra at p. 5-1.

market maker introduces its customer accounts to another broker-dealer. As the customer accounts of the introducing market maker become unsecured, the carrying broker-dealer and its customers become exposed to risk associated with the default of those accounts.

Of the twelve over-the-counter market makers that ceased operations during the market break, ten introduced their accounts to other broker-dealers. All of the broker-dealers that carried the customer accounts of those firms suffered losses from unsecured customer obligations of their introducing market maker firms.

In addition to direct losses from market maker failures, other firms and customers are also exposed to potential market losses when a market maker significant in a particular security fails. Other less significant market makers may withdraw from the system or may restrict their purchases, often resulting in a free-fall in the prices of the securities.

The cases of two firms are particularly noteworthy. Haas Securities Corporation ("Haas"), a market maker in eleven over-the-counter stocks and a member of the New York Stock Exchange, ceased operations on October 28, 1987. Haas, which introduced customer transactions on a fully disclosed basis to Rothschild was forced to close because stocks in its inventory plummeted in market value and the receivables of customers introduced to Rothschild were unsecured, resulting in a reported $15 to $20 million net capital deficiency for Haas. Haas made markets in the following securities, which declined precipitously in value from Friday, October 16 to Monday, October 19: (i) Big O Tire, Inc., which declined in value from $8 1/4 to $5 1/4; (ii) Fountain Powerboat Industries Inc., which dropped in value from $11 to $6; (iii) TS Industries Inc., which dropped from $27 to $20 3/4; and (iv) Flores de New Mexico Inc. and Cliff Angle Ltd., for which no quotes were available on the NASDAQ screen on October 19, but which had traded at $11 1/4 and $10 1/2 respectively at the close of October 16.

Pace Securities Inc., a New York Stock Exchange member firm which introduces its customer transactions on a fully disclosed basis to Edward A. Viner & Co., Inc. ("Viner"), ceased operations because of difficulties related to customer transactions in securities in which Haas made markets. Many of Pace's customers did not pay for their orders and Pace therefore was left holding severely depressed stocks. The trades in question, which resulted in $4.6 million in losses, involved Big O Tire, Inc., Fountain Powerboat Industries, Inc. and TS Industries Inc. Pace reestablished capital compliance pursuant to a satisfactory subordination agreement entered into with Viner, and resumed operations on November 12, 1987.

2. Margin Accounts

Broker-dealers extend credit to customers to purchase equity securities or options in margin accounts. Margin is the equity in the account (i.e., the value of the securities in the account, minus any credit extended). When the customer buys securities in a margin account, the securities act as collateral for the extension of credit by the broker-dealer. If the customer sells securities short or sells uncovered options, the margin protects the broker-dealer against loss due to adverse movements in the prices of the securities sold short.

Minimum initial margin requirements are set by the regulations of the Board of Governors of the Federal Reserve System ("FRB"). The various securities exchanges set maintenance margin requirements.

While margin regulations require broker-dealers to maintain certain minimum margins and to liquidate customer collateral if margin is not provided within certain time limits, broker-dealers may also require their customers to provide margin that exceeds the minimums set by margin regulation. Similarly, broker-dealers are free to require their customers to provide margin at any time prior to the expiration of the appropriate time periods set by the applicable self regulatory organizations.

Margin procedures vary among broker-dealers. Most broker-dealers notify the customer that margin is due by telegram or mailgram. If the customer does not respond promptly, the broker-dealer liquidates positions in the customer's account until the customer's obligation to the firm is satisfied. In order to protect the firm against loss, broker-dealers generally, in the margin agreement with the customer, reserve the right to liquidate margin accounts at any time without notice to the customer. 17/ Many broker-dealers also restrict the customer's ability to enter into additional transactions while margin calls are outstanding.

Broker-dealers that have fewer, but more creditworthy customers, generally contact the customer directly when margin is due. The margin required by those firms often depends on the credit standing of the individual customer. Likewise, the time required for payment is a function of the credit exposure to the customer.

Immediately after the October market break, the Division collected margin account information from approximately twenty-five broker-dealers. These broker-dealers were selected because of the size of their capital and the volume of their customer business. At the time of the market break, the amount extended by broker-dealers through margin accounts was significant. The firms that were contacted by the Division reported credit extended in securities accounts in excess of thirty-one billion dollars. Margin calls made by the reporting firms increased substantially immediately after the market break. On October 16, the firms reported margin calls of $295.8 million. On October 19, those firms indicated that they had requested additional margin of $1.6 billion. On the two days following, the margin calls totalled $1.5 billion and $1.1 billion, respectively. Liquidations as the result of the margin calls are described below. Over the two week period following the break, the amount of margin calls gradually declined to the level at which they had existed prior to the break.

There is no federal regulation governing margin on commodities and commodities futures; Regulation T of the FRB applies only to securities transactions. Nevertheless, commodity futures customers are required to provide margin in accordance with the rules of the commodities exchanges.

On October 16, approximately $944 million in commodity margin calls were issued by the firms that provided data. Those firms issued over $11.6 billion in commodity

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17/ Rule 10b-16 under the Exchange Act requires broker-dealers to establish procedures to assure that each customer is given or sent a written statement disclosing the conditions under which additional collateral can be required. Rule 10b-16(a)(1)(vii).

margin requests during the next four trading days. On October 19, approximately $3.6 billion in margin was requested by the reporting firms. On October 20, 21 and 22, those firms made commodity margin calls of $2.7 billion, $2.55 billion and $2.76 billion, respectively.

Commodity account margin calls met by deposits of funds or securities exceeded the amount of securities margin calls met by deposits by three times over the two week period following the break. On October 16, the broker-dealers reported deposits of additional funds or securities in commodities accounts of $321 million. On October 19, 20, 21 and 22, those broker-dealers indicated that they had received deposits of funds or securities into commodities accounts of approximately $1.5 billion, $842 million, $906 million, and $1.3 billion, respectively. Over the same time period, funds or securities deposited in the securities margin accounts of the broker-dealers that provided us information amounted to approximately $65 million, $613 million, $277 million, $538 million and $194 million, respectively.

The amount of margin liquidations that occurred in securities accounts exceeded the liquidations of commodities margin accounts by four times. Liquidations reported in securities margin accounts on October 19, 20 and 21 were approximately $293 million, $426 million and $327 million, respectively. Over the same time period, commodity account liquidations were $66.5 million, $93.9 million, and $72.8 million.

A number of reasons may account for the differences between the amount of commodity margin calls satisfied by customers in contrast to the amount of securities margin calls satisfied by customers. First, the creditworthiness of the customers that invest in the instruments generally differs. Institutional, rather than retail, customers are more likely to enter into commodity futures transactions. Furthermore, since those transactions often consist of offsetting securities and futures positions, losses in, fo example, futures positions can be balanced by gains in securities positions.

Commodity account customers who held long positions in stock index futures also may have liquidated securities positions or transferred funds or securities into their commodities account in order to prevent liquidations of their index-related futures positions at a substantial discount. Normally, index futures trade at prices close to the composite prices of the related securities. As discussed in Chapter Two, throughout various intervals during the market break, the Standard and Poor's 500 index future was selling at a price significantly lower than the composite price of the securities constituting the index. At times, that discount approximated twenty percent of the price of the securities in the index.

3. Analysis

In general, we believe that the net capital rule adequately measures the actual and contingent risks for securities firms. The capital required by the net capital rule and broker-dealers' substantial excess net capital provided a reasonable safety margin during the October market break, at least for diversified firms. The market break, however, demonstrated that several provisions of the net capital rule should be reviewed. Certain of those areas are discussed in Chapter Four and in a later section of this Chapter relating to options market makers (Chapter 5-D). The remainder are discussed below.

a. Minimum Net Capital Requirements

The $25,000 minimum requirement under the basic method of calculating net capital under Rule 15c3-1 and the $100,000 requirement under the alterative method are applicable to broker-dealers conducting a general securities business. This includes broker-dealers that buy and sell stocks, bonds, options or municipal securities and/or engage in firm commitment underwritings as managing underwriters or as members of a syndicate. More importantly, these broker-dealers are permitted to carry the accounts and clear the trades of customers. Thus, customer funds and securities continuously flow through these broker-dealers and consequently customer exposure is potentially high.

These minimum levels of capital required for transacting a securities business were established in the early 1970's and have never been adjusted for inflation. Two developments raise concerns about the adequacy of the minimum capital requirements. First, as discussed in Chapter Three, the increased volatility experienced in October appears to be continuing, albeit to a lesser degree; higher market volatility increases exposure to both customer market defaults and trading defaults. Second, the development of index options and futures has provided new leveraged products that have increased the potential for substantial customer losses and accompanying defaults during a market break. Considering the continuing higher levels of volatility in the equities market 18/ and the demonstrated leverage of certain new products, the combination of which caused substantial losses to broker-dealers, the staff will review whether higher minimum capital levels for firms maintaining customer accounts would be appropriate.

Minimum capital levels for introducing broker-dealers also deserve reexamination To qualify for the reduced minimum net capital requirement, a broker-dealer must restrict its securities business to that permitted by the rule. In addition to being required to introduce all customer transactions to another broker-dealer, the $5,000 broker-dealer may only participate in "best efforts" or "all or none" underwritings; it must promptly forward all monies and securities of customers that may come into its possession or control; and when acting as principal, it may only engage in "riskless trades" that are cleared through another broker-dealer. These restrictions are designed to minimize the risk of loss associated with broker-dealers that handle customers' monies and securities. If the $5,000 broker-dealer operates its business beyond the permissible scope of the rule, it is considered to be operating a general securities business, and hence, subject to a $25,000 minimum net capital requirement.

In general, customers should not be exposed to risk associated with the operations of an introducing firm. There are, however, certain situations in which customers' monies or securities may be at risk. First, these broker-dealers do in fact receive customer funds and securities, some on a routine basis, that are required to be forwarded to carrying firms. Second, if any of these firms fail, their customers are often stranded; the carrying firms will usually not accept orders from customers directly because the carrying firms regard the customers as those of the introducing firms. As a result, the customers may suffer a period of illiquidity until the accounts can be

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18/ See discussion supra at Chapter Two.

transferred to another broker-dealer. Accordingly, the Division also will review a possible increase in minimum capital requirements for introducing broker-dealers. 19/

The Division also believes that a review of the minimum amount of capital necessary for one to qualify as an over-the-counter market maker should be conducted. This review should include an analysis of the amount of capital necessary for each security, as well as the appropriateness of the net capital ceiling of $100,000 on a market maker's minimum net capital requirement.

In reexamining the minimum capital requirements, the Division, of course, would review the impact of any change on the securities industry. An increased requirement, among other things, might require some broker-dealers to leave the business and might reduce the ability of new firms to enter the business. On the other hand, an increase in minimum capital requirements would provide broker-dealers with a greater capital cushion to withstand unanticipated events and meet their obligations to customers and broker-dealers. For those reasons, it also would provide greater protection for the Securities Investor Protection Corporation's insurance fund. If it is determined that the minimum capital requirements should be increased, the Commission would, of course, provide sufficient lead time to enable existing broker-dealers to meet any new requirements.

b. **Commodities**

We believe that the haircuts broker-dealers incur with respect to their commodity futures positions should be reviewed. The haircuts under Appendix B of the net capital rule, 20/ which largely conforms with similar provisions in the CFTC's capital rule, are dependent on the margin requirements of the various commodities boards of trade and clearing organizations. For example, the haircut a broker-dealer must incur wit respect to an uncovered 21/ proprietary futures position is equal to its margin requirement if it is a member of a clearing organization. The haircuts that futures commission merchants ("FCMs") that carry the accounts of commodities floor traders must take are also based on the board of trade or commodity clearing organization margin requirements.

While those margin requirements may be adequate for the purpose of protecting clearing corporations and FCMs against credit and default risks, we believe that margin requirements set by the self regulatory organizations may be inappropriate for measuring risk for capital adequacy purposes. Capital adequacy rules provide conservative but constant risk measurement of all the transactions in the firm. Futures margin requirements, on the other hand, measure risk for only particular transactions (which may include hedges) and may permit greater risk exposure than is warranted in a capital

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19/ A $5,000 minimum requirement may, however, still be appropriate for those broker-dealers who do business solely in best efforts underwritings where they handle no cash or securities.

20/ Appendix B to the net capital rule sets forth the haircuts for commodities and commodities futures positions.

21/ The term "covered" is defined in 17 CFR Sec. 1.17(j). Currently, the CFTC capital rule and Appendix B do not require deductions for covered futures contracts.

adequacy rule. Because of relatively low margin levels, those requirements must be frequently adjusted in reaction to varying market conditions. As noted earlier, the Chicago Mercantile Exchange's margin requirement for its Standard and Poor's 500 future was changed four times during the two week period following the market break. When margin requirements are used for capital purposes, rapidly adjusted margin requirements, which cause sudden changes in capital requirements, make it difficult for broker-dealers to plan capital employment effectively. During the period following the market break, two broker-dealers were temporarily forced out of compliance with the net capital rule solely because of unanticipated increases in capital requirements resulting from the Chicago Mercantile Exchange's changes in its margin requirements. Both broker-dealers were able to adjust their positions or obtain additional capital sufficient to regain compliance with the rule.

The Division staff intends to review whether Appendix B of the net capital rule should be amended to require broker-dealers to take haircuts for their securities related futures positions that are independent of margin requirements. Those haircuts should, of course, be related to the volatility of the underlying securities. Moreover, consideration should be given to imposing additional deductions for concentrated futures positions.

c. Haircuts on Equity Securities

Since 1975, the net capital rule has provided two separate methods for calculating haircuts related to a broker-dealer's equity securities positions. The method used by a broker-dealer depends on the election the broker-dealer makes with respect to its net capital requirement. As noted above, those broker-dealers calculating their net capital requirement under the basic method incur a haircut equal to 30% of the greater market value of the greater of their long or short equity securities positions. That haircut is increased by 15% of the market value of the lesser of their long or short positions, but only to the extent that those positions exceed 25% of the market value of the greater of the long or short positions.

Broker-dealers electing the alternative method of computing net capital incur a 15% haircut on their long equity securities positions. That haircut is increased by 30% of the broker-dealers' short equity securities positions, but only to the extent those short positions exceed 25% of the long positions. Although a broker-dealer electing the alternative method incurs a 15%, rather than a 30%, haircut on equity securities positions, the alternative method requires maintenance of higher minimum net capital. The absolute minimum net capital is $100,000 under the alternative method, as opposed to $25,000 required under the basic method.

Generally, the haircuts prescribed by the rule take into account market risk, credit risk, price volatility and liquidity of particular securities. The haircuts on debt securities include a series of percentage deductions that depend on the specific security and the composition of the positions entered into. The deduction for equity securities haircuts, however, has always consisted of one or two percentages broadly applied to the equity portfolio. The reason for this has been the great variation of risk that exists with respect to different equity securities. Depending on the amount of shares outstanding and the number of market makers willing to quote a particular issue, equity securities vary in degrees of liquidity. The financial condition of issuers is also disparate. In order to make the calculation of the rule as simple as possible, the rule has generally treated different issues of equity securities the same. Thus, the 15% and

30% haircuts in the present rule generally consider the various risks associated with equity securities without distinguishing between the particular positions.

Generally, the Division believes that the haircut levels provided adequate protection even during the period of extraordinary market volatility that occurred in October. Nonetheless, the Division believes that in light of the October market break and the increased volatility in the equity markets, the level and structure of equity haircuts should be reexamined. In particular, because liquidity levels are not the same for different types of stocks, the Division believes that consideration should be given to establishing several levels of haircuts to distinguish among different types of securities. Moreover, the Division believes that the question whether equity haircuts are a sufficient leverage limiting device for firms that do not carry customer accounts should be examined. Virtually all of the failures and episodes of serious financial difficulty that occurred during the market break involved these types of firms, that is, firms that trade for their own accounts, act as market makers or clear through other firms.

d. Activities of Affiliates

The October market break generally demonstrated the resilience of the broker-dealer industry. In particular, the strong capital positions of the major firms and, in many cases, their ability to obtain additional capital from their parents, enabled them to absorb substantial losses in their equity positions. Nevertheless, the Division believes the Commission should evaluate circumstances where there may be potential for a major financial firm failure. In this connection, the Division believes it is appropriate to consider the activities of unregulated entities affiliated with registered broker-dealers.

The large investment banking firms and wire houses generally are owned by holding companies that have other subsidiaries engaging in unregulated securities-related or banking-related activities. These unregulated entities attain a degree of leverage and take credit risks regulated broker-dealers cannot. 22/ In some cases, the registered broker-dealer's parent (without the broker-dealer's capital) or sister affiliates have significantly less capital and financial resources than the broker-dealer. Moreover, the Division believes that in many cases the creditors of those entities are indirectly relying on the credit of the broker-dealer and the ability of the holding company to shift capital from the broker-dealer to the unregulated entity.

Bridge financing involving holding companies of investment banking firms is an activity of particular concern. In a bridge financing transaction, the holding company commits its own capital, often for acquisition-related or leveraged buy-out transactions

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22/ In 1985, several unregulated government securities affiliates of broker-dealers failed due to fraudulent activity and a lack of accountability. In response, the Congress enacted the Government Securities Act of 1986, requiring the registration and financial regulation of government securities dealers. In addition, the Commission amended its financial responsibility rules with respect to its treatment of repurchase and reverse repurchase agreements. In particular, the net capital rule was amended to require registered broker-dealers to take charges with respect to transactions with unregulated affiliates in those instances where the affiliate does not allow regulatory examiners access to the affiliate's books and records.

of certain clients. 23/ In connection with the financing, the affiliated broker-dealer usually underwrites debt instruments of the client. The proceeds of that underwriting are generally used to satisfy the obligation of the broker-dealer's client under the bridge financing. Until the proceeds are collected, the broker-dealer's holding company is exposed to the risk that the broker-dealer's client may default on its bridge financing obligation.

As a result of the market decline, the ability of broker-dealers to market the debt instruments, the proceeds of which were intended to satisfy the bridge loan obligations of the issuers, was temporarily reduced. The events of the market break demonstrate the potential exposure from unregulated financing activity. 24/

In addition to bridge financing, broker-dealer affiliates have expanded their involvement in other non-securities activities. Some broker-dealers have large unregulated affiliates that deal actively in foreign currencies, mortgages, and interest rate swaps. Those affiliates are often highly leveraged and exposed to substantial market risk and credit risk related to their transactions.

The unregulated activities of an affiliate of a broker-dealer theoretically are not directly relevant to the regulated broker-dealer's capital, since the broker-dealer is not responsible for the affiliate's liabilities. Moreover, under the net capital rule, capital cannot be withdrawn from a broker-dealer if the withdrawal would leave its remaining capital below the early warning levels.

A broker-dealer may be indirectly affected, however, by an insolvency of an affiliate or a parent. Broker-dealers often need short-term financing. The failure of a related entity could have substantial effects on the liquidity of the broker-dealer. 25/ In addition, management might seek ways to divert capital from the broker-dealer to the extent permitted by the net capital rule. While this shift of assets would not, by itself, place the firm in net capital violation, it could leave the firm more exposed to failure during volatile market conditions. Further in cases where the related entity fails because of fraudulent activities, legal challenges to the corporate separateness of the broker-dealer may be made.

23/ The Commission has published two studies on bridge financing. These studies by the Divisions of Market Regulation and Corporation Finance, dated October 28, 1987, are available from the Office of Public Affairs of the United States Securities and Exchange Commission (News Release 87-77).

24/ One bridge loan financing that incurred difficulties because of the market break concerned the Southland Corporation. The firm postponed a $1.5 billion takeover-related offering of high yield bonds. Affiliates of two broker-dealers had made bridge loans of approximately $100 million each in connection with the proposed issue. The offering was ultimately completed.

25/ If the holding company itself fails, the creditors of the holding company could force a liquidation of the broker-dealer.

Significant failures in many of the areas noted could affect investors and financial firms. We believe that these system exposures deserve additional study by the Commission. 26/

C. Liquidity of Broker-Dealers

1. Introduction

Large firms have the capacity to obtain substantial leverage by borrowing. As of October 31, 1987, the fifteen largest firms (in capital terms) had total assets of approximately $377 billion and total equity capital of $16 9 billion. In most firms, bank loans are not a significant portion of liabilities. Rather, assets are funded in most part (other than through capital) by repurchase agreements, securities lending activity, and intra-company borrowing, generally on an unsecured basis. With isolated exceptions, the Division did not find that the market break had a significant impact on these activities. 27/ The financing of customer receivables is largely accomplished through the use of free credit balances, the lending of margin securities to another broker-dealer or unsecured borrowings from affiliates. Again, the Division did not find significant interruptions in the availability of these financing vehicles.

Broker-dealers, however, often need overnight or short term financing from banks to carry or clear securities transactions, to deposit unusual amounts of margin before collections from customers, or to close out stock loan activities before the securities can be turned around. The largest, most well known, investment banks generally have access to unsecured or subordinated loans. Others, however, may have to borrow on a secured basis, and provide collateral through a variety of methods. The need for this short-term financing was increased substantially during the market break because of extremely large futures and options variation margin calls and increased securities settlement obligations. 28/

26/ We recognize that many broker-dealers are now owned by holding companies engaged in a wide range of commercial activities (e.g., Sears Roebuck which controls Dean Witter). We do not believe that substantial oversight of these non-financial activities is necessary or appropriate at this time.

27/ During the period following October 19, 1987, several broker-dealers had difficulty obtaining government securities in the repurchase market. Some counterparties chose not to lend securities to broker-dealers in order to avoid perceived credit risks associated with the market break. The Federal Reserve Bank of New York ("FRBNY") responded to this concern by relaxing restrictions on lending its own securities and letting it be known that it was increasing market monitoring. As actual losses suffered by broker-dealers became known, those market participants who had ceased loaning securities to particular broker-dealers resumed lending.

28/ Two broker-dealers reported substantial delays in receiving payments from a futures clearing corporation on October 20th. One reported receiving in excess of $900 million after 5:00 p.m. (Eastern time) while another reported receiving over $500 million after 1:00 p.m. (Eastern time). Normally, funds are made available by the futures clearing corporations at approximately 10:00 a.m. (Eastern time).

In general, it may be said that domestic banks headquartered in New York City or Chicago did not materially change their lending policies for large broker-dealers during the weeks of October 19th and October 26th, although there were reports of isolated problems. There were widespread indications, however, that many regional and foreign banks withdrew credit lines or severely constricted lending arrangements, perhaps because these banks did not have many broker-dealer customers or were unfamiliar with the equities markets.

2. **Background** 29/

Bank lending policies toward broker-dealers vary widely. At the New York City banks, and some foreign banks, the management of loans to securities firms is usually handled by a bank division that is frequently referred to as the "Wall Street lending group." Although a particular bank may have overall limitations on the credit that may be extended to securities firms as a whole, senior loan officers in the Wall Street lending group are responsible for making individual loan decisions. 30/

Small teams of analysts within the Wall Street lending groups are responsible for cultivating relationships with particular borrowers and, in most cases, monitoring the banks' credit risk. 31/ In connection with their lending operations, the banks regularly review periodic and annual reports, along with financial statements made available by the institutions. In addition, the banks also may ask broker-dealers for copies of the FOCUS reports that they provide to the Commission on a quarterly basis. Banks generally do not offer guaranteed lines of credit to brokerage firms because most of the brokerage firms are unwilling to pay fees for such lines and the banks frequently are unwilling to accept the credit risk. Nevertheless, internal lending guidelines are established by the banks for each borrower. These guidance limits may change as a result of a bank's ongoing assessment of its relationship with a particular broker-dealer. Credit requests by a broker-dealer within a bank's internal guidance limits may be processed by the more junior loan officers. Because a credit request that exceeds the guidance limits requires additional approval by a senior loan officer, most broker-dealers have some idea about the extent of a bank's lending commitment to their firms. A small number of banks indicated that they openly discuss their guidelines as part of their marketing approach with broker-dealers.

Banks provide secured and unsecured loans to broker-dealers to finance firm securities positions and customer margin transactions. The willingness of banks to lend on an unsecured basis varies greatly and is largely determined by the capitalization of the borrower. Several of the major New York City banks, and most of the foreign

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29/ In connection with this study, the Division interviewed nineteen banks in New York City and Chicago.

30/ In contrast, the Chicago banks tend to conduct their lending relationships with securities firms out of their general corporate lending departments. Members of the corporate lending department with expertise insecurities and commodities firms are assigned to manage lending to these segments.

31/ At one major New York City bank visited by the staff, there were separate credit and marketing teams that reported to the bank's senior management through different channels.

banks, limit their lending on an unsecured basis to a small number of top-tier broker-dealers. The majority of credit extended to broker-dealers, other than the top-tier firms, is provided on a secured basis. Moreover, as discussed earlier, almost all specialists borrow on a secured basis. Some of the major lenders to broker-dealers indicated that they restrict all their lending, even to top-tier brokerage firms, to secured loans.

The form of secured lending differs from bank to bank. Although in some cases banks take physical possession of collateral, the security interest of the bank in the collateral is most frequently perfected by a lien placed on securities in the broker-dealer's account at the Depository Trust Company ("DTC"), or by transfer to the bank's account at DTC. 32/ Within the broad classification of secured loans, some banks also include loans made on an "Agreement to Pledge" ("AP") basis.

An AP loan is a hybrid loan form developed to accommodate the operational difficulties and costs associated with transferring the collateral to the lender's account at DTC, or taking physical possession, for overnight loans. 33/ When a bank makes a loan that is secured on an AP basis, the brokerage firm provides the bank with a list of securities, which it has either segregated on its own books or in vaults, that are intended to collateralize the bank's loan. The securities offered as collateral for a bank's loans change on a daily basis. Accepting collateral on an AP basis requires the lender to rely upon the internal controls of the broker-dealer to assure that proper procedures for segregating securities are followed. Accordingly, banks also must assess the quality of the back office operations of broker-dealers in determining whether to lend on an AP basis. In order to assure that collateral is properly segregated by the broker-dealer, the bank may conduct spot audits.

Article 8 of the Uniform Commercial Code ("UCC") generally requires physical possession of securities, or a registered pledge, to perfect a lien on securities in order to maintain the creditor's secured position in the event of a borrower's bankruptcy. 34/ Nevertheless, many banks believe that the segregation of securities effected in

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32/ A few banks also accept securities placed in accounts with the Midwest Clearing Corporation through its pledge program.

33/ In order to pledge collateral through DTC's pledge program, a broker-dealer must be a participant in DTC. The bank providing the loan need not be a DTC participant, but must at least enter into a pledge agreement with DTC. When the broker-dealer and the bank have agreed to the loan and the securities to be used as collateral, the broker-dealer instructs DTC to transfer the securities by a book-entry movement from the broker-dealer's account to the bank's pledge account. The bank then delivers the loan amount to the broker-dealer through channels outside of DTC. When the loan is completed, the bank releases the securities from its account to the broker-dealer's account. DTC assesses program participants a monthly charge and a charge for each pledge. See DTC Rules 1 and 3. One large firm that was required by banks to pledge its securities through DTC stated that the cost of that requirement was $13,000 a month. This includes interest costs and movement charges. The firm pays $.22 per movement and averages 700 movements a day.

34/ Collateral pledged through the DTC system clearly satisfies this requirement.

connection with a loan made on an AP basis provides the bank with at least a purchase money mortgage on the securities that is valid for a period of 21 days under the UCC.35/ While the banks view AP loans as a form of secured lending, certain factors, such as the reliance on the quality of management and vulnerability to fraud, make AP lending decisions similar to those for unsecured credit. Many banks are willing to lend to broker-dealers on an AP basis only so long as the firms' other creditors lend on an AP basis as well. Their position in this regard reflects a concern that in the event of a default, those lenders requiring DTC pledges may be regarded as bona fide purchasers under the UCC and have a prior claim on the broker-dealers' assets. Thus, a decision by one bank to require DTC pledges for its loans to a broker-dealer could cause the broker-dealer's other lenders to demand similar collateral.

The collateral permitted for secured loans is fairly consistent among banks. At the outset of lending relationships, banks inform broker-dealers of broad classes of equity and debt securities against which they will lend. For example, many banks will not lend on a secured basis against equity stocks valued at less than five or ten dollars, or against high yield bonds. In addition, the New York City banks will not lend against options. In contrast, several of the major Chicago banks indicated that they will lend against long options secured through the Options Clearing Corporation ("OCC") options pledge program. Within the range of acceptable securities, banks also try to avoid receiving a concentration of a particular issuer's securities as collateral.

The collateral value assigned to various securities is determined by the bank's internal lending policy but must be within the limits set by Regulation U of the FRB. Regulation U establishes the maximum amount that banks can lend to purchaser's of securities for certain purposes. For "margin stock," which includes equity securities listed on national securities exchanges as well as national market system ("NMS") securities and other more liquid over-the-counter securities, the maximum loan value is 50%.

Regulation U, however, provides exemptions from the maximum loan limitations that permit banks to make special purpose loans to broker-dealers, with only good faith margin, where the loans are secured by hypothecated customer securities, are used to finance the purchase of securities for prompt delivery with repayment to the bank, or where certain emergency conditions exist. In addition, there are specific exemptions in Regulation U that permit banks to lend on a good faith basis to finance the positions of specialists and over-the-counter market makers. Because the collateral requirement under Regulation U for loans to finance specialists' and market makers' positions is not specific, banks individually determine the maximum amount they will lend against

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35/ See UCC Sec. 8-321(2). Sec. 8-313(1)(i), (1978), but see also Sec. 9-309 (a creditor may lose protection if the securities come into possession of a bona-fide purchaser). At least one court has indicated that a similar procedure used by broker-dealers in connection with the sale of government securities in repurchase agreements effected on a hold-in-custody basis would constitute a transfer for purposes of Sec. 8-313(1)(d), where the broker-dealer has control of the securities, provides confirmations, and segregates the customers' securities on its books. See In re Bevill, Bresler & Schulman Asset Management Corp., 67 B.R. 557, 603-17 (D.N.J. 1986).

particular classes of securities. 36/ While there is a range of collateral value provided by the banks, depending upon the creditworthiness of the particular customer, the advance rates (i.e., the amount a bank will lend against collateral) tend to range from 75-90% of the value of the securities.

The banks receive, on a daily basis, lists of collateral pledged against their loans through DTC or on an AP basis. The identity of the securities pledged as collateral may change on a daily basis. Operational personnel monitor the collateral pledged by the broker-dealers to determine whether the collateral falls within the bank's margin limits, whether there are excessive concentrations of a particular issuer's securities, and whether unacceptable collateral is being offered. Fluctuations in the market value of the securities offered as collateral to a bank may cause the bank to request additional margin. Similarly, the bank may be requested to release collateral whose market value has increased. During normal activity, margin calls are made each morning based on the previous day's closing prices. Broker-dealers respond to the margin calls by providing additional collateral during the day, and the adjustments are reflected in the next day's list of collateral.

The loan rates charged broker-dealers by the banks reflect the quality of the borrower and the nature of the loans. Loans are generally quoted at a rate slightly above the Fed Funds rate. In many cases, however, the borrower may be able to negotiate the rate. The rates quoted by banks to brokers also are a function of the banks' competitive positions in the markets. Discussions with major New York City banks reveal that they do not view themselves as sources of "cheap money." Instead, the broker loan business at these banks is viewed as one part of the banks' overall relationship with the securities firms, particularly in the case of major broker-dealers. Thus, a bank may agree to lend to a broker-dealer where it also receives income from compensating balances, day loans, or clearance and settlement of securities transactions. In contrast to the major New York City banks, some regional and foreign banks, which more recently have entered the broker loan market, are reported to loan at very narrow spreads to the Fed Funds rate in order to attract new clients.

Broker-dealers, particularly major firms, tend to have borrowing relationships with a number of banks. Thus, they can allocate their borrowing on a daily basis, based upon a variety of factors. These may include the cost of funds and the desirability of maintaining a credit relationship with a particular lending institution. Through diversification, broker-dealers eliminate some of their exposure to adverse credit decisions by a particular bank. Although the large broker-dealers diversify their lending relationships, smaller firms, including most of the specialists, do not appear to maintain lending relationships with more than one or two banks.

In addition to traditional broker loans, banks also have credit exposure to broker-dealers on an intra-day basis in connection with broker-dealers' foreign exchange trading and clearance and settlement operations for government securities. As part of their foreign exchange operations, banks may be called upon to transfer funds to a broker-dealer or third party, with the expectation that payment will be made shortly thereafter. Settlement of a particular foreign exchange trade may call for a complex series of interrelated transactions, with ultimate payment on the trade coming from a third party unrelated to the original transaction. Convention in the industry calls for

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36/ See discussion in Chapter Four supra.

settlement of a foreign exchange transaction during business hours of the country whose currency is being exchanged. Thus, in a dollar/yen exchange, the yen may have to be delivered during business hours in Japan, while subsequent payment of the dollars would be made the same day during business hours in the United States. During the period between delivery of the yen and receipt of dollars in payment, the bank has in effect advanced credit to its counterparty and is exposed to the risk that it will not receive dollars in return.

Banks encounter similar "pay away" exposure for much briefer periods of time in the course of clearing transactions in government securities. As with foreign exchange transactions, the bank may be called upon to advance funds or securities to be sent over the Fedwire 37/ to effect trades in government securities on behalf of its customers. Because simultaneous credits or debits will occur in the account of the customer's bank at a Federal Reserve Bank, as well as the account of the counterparty's bank, the banks are responsible for the transaction regardless of whether or not they receive payment or securities from their customers. Thus, banks are required to monitor their own customers' records closely and must try to determine in advance of effecting a transaction whether a customer's account at the bank is sufficiently funded. Where sufficient funds or securities are not present, the banks will permit "daylight overdrafts," as long as assurances are provided that funding for the transaction is to be supplied by a transfer of funds or securities over the Fedwire from the customer's account at another bank. Between the time the bank effects a trade on behalf of its customer and receives the wire transfer into the customer's account, the bank is exposed to the risk that it will have purchased or sold securities on behalf of its customer, and yet not receive payment or securities in return.

3. Bank Lending During the Market Break

(a) Broker Loans

(i) General

As noted earlier, some broker-dealers experienced problems obtaining credit during the week of October 19th. Our information suggests, however, that banks generally continued to function as lenders to the brokerage community and accommodated the increased demands of their customers for loans.

Bank lending to the brokerage community during the days immediately following the market break appears to have increased significantly. According to FRB data, loans made by banks to broker-dealers and other borrowers to purchase and carry securities positions totaled approximately $15 billion on Wednesday of the week prior to the

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37/ The Fedwire is the Federal Reserve System wire transfer facility, which provides a system for transferring funds and U.S. government securities between all 12 Federal Reserve Banks, their 24 branches, the Federal Reserve Board office in Washington, D.C., the U.S. Treasury Department's offices in Washington, D.C. and Chicago and the Commodity Credit Corp.

break. 38/ On October 21st, 39/ however, the FRB reported that bank loans for purchasing and carrying securities increased to $22 billion. By November 4th, the loans had receded to $12.2 billion, below pre-break levels. Of the $7 billion increase in loans, almost $5.5 billion came from New York City banks, which increased the amount of their loans to the industry by 82% from the previous reporting period. Chicago banks increased their lending by 21%.

During the week of October 19th, while senior bank executives outside the Wall Street lending groups monitored the market's decline, most banks reported that credit decisions remained the responsibility of the Wall Street lending groups. Although the unusual circumstances dictated added caution, the majority of banks appear to have followed existing lending procedures and continued to provide loans to broker-dealers within the parameters of their banks' internal guidance limits. 40/ Bankers faced greatly heightened demands for credit from broker-dealers on the Tuesday and Wednesday following October 19th. On October 16th and October 19th, specialists and OTC market makers accumulated larger than average inventories of securities as the market dropped. At the same time, firms active in the futures markets were receiving extremely large margin calls. In order to finance settlement of their securities positions, meet margin calls on futures, and facilitate securities settlement with customers in the event of counterparty fails, large broker-dealers reportedly began to borrow from banks in substantial amounts on Tuesday and Wednesday, October 20th and 21st, while smaller dealers, including specialists, sought assurances that financing would be available on settlement date for securities they had purchased. At the same time, the collateral value of securities pledged to secure broker loans had declined substantially.

In many cases, senior bank management made decisions to support the brokerage community during the crisis. The actions of the FRB and the FRBNY were widely praised for encouraging banks to continue to lend. On October 19th and 20th, calls were placed by high ranking officials of the FRBNY to senior management of the major New York City banks, indicating that, while banking prudence should be maintained, they should encourage their Wall Street lending groups to use the additional liquidity being supplied by the FRBNY to support the securities community. In addition, the

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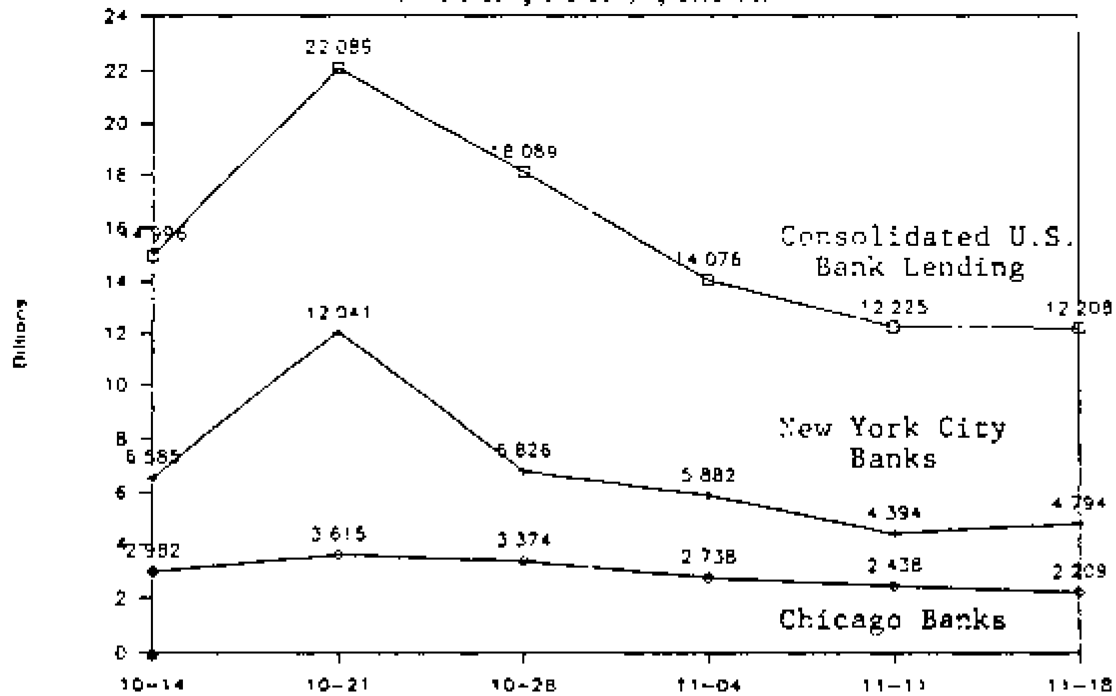
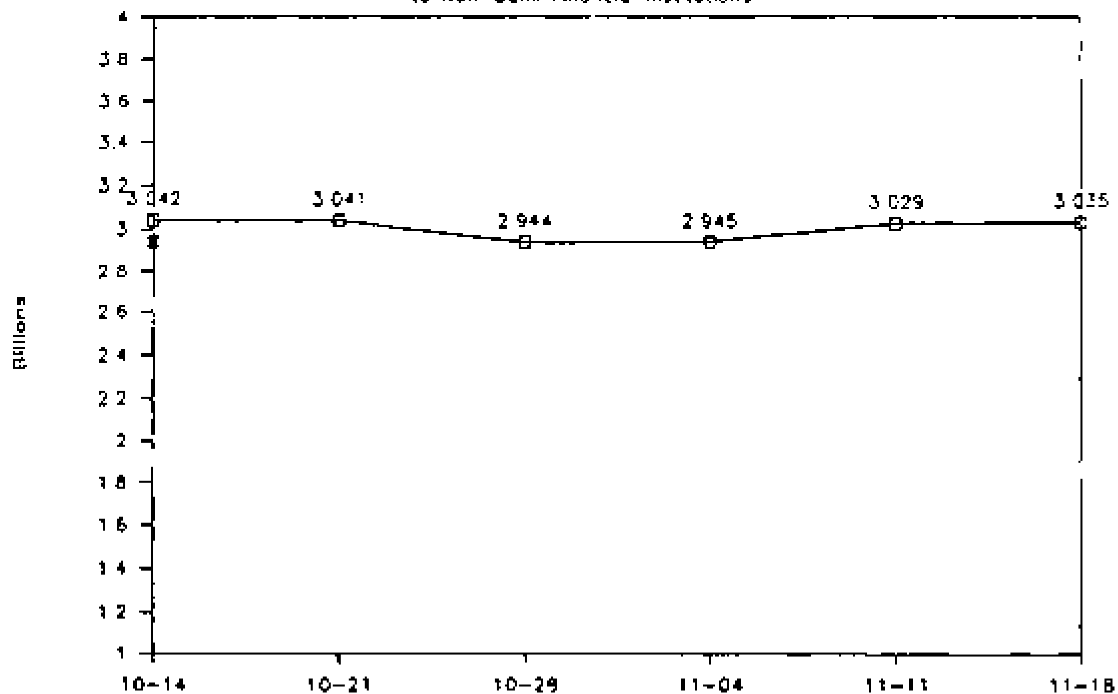
38/ See Table 5-4. These figures are taken from the FRB's statistical releases. Loans for purchasing and carrying securities include all loans to broker-dealers, as well as loans made to any other borrowers, including mutual funds, to finance settlement of securities positions and renew outstanding loans. Borrowing by mutual funds to finance redemptions also may have accounted for a portion of the increased loan demand shown on October 21st.

39/ Figures available from the FRB are reported by the banks at mid-week. They do not reflect intra-week lending. Consequently, increases in loans to finance variation margin calls, or government and options settlement on the 20th, may not be fully reflected. Similarly, increased lending to finance the settlement of equity trades on October 26th also may not be reflected.

40/ Few banks appeared to have specific plans for coping with emergencies such as the market break. Nevertheless, one bank, which seemed to have the largest number of active borrowers in the securities industry, indicated that its analysts had previously rehearsed procedures in the event of a 200 point drop in the DJIA.

TABLE 5-4





* Graphs reflect data provided in the FRB's "Weekly Consolidated Condition Report of Large Commercial Banks." Loan activity shown in both graphs includes loans to mutual funds and other non-broker-dealers.

statement issued by the Chairman of the FRB at 8:30 a.m. on Tuesday indicating that the FRB would be ready "to serve as a source of liquidity to support the economic and financial system" was considered significant. While the banks realized that they would be ultimately responsible for any losses attributable to broker loans, the phone calls and public statement were credited with easing the psychological impact of the tremendous drop in the DJIA, reassuring bankers in their efforts to maintain their lending function. 41/

Although the banks closely monitored the decline of the DJIA and sought assurances from some borrowers that were rumored to be in trouble, most stated that routine lending procedures were followed. Margin calls were made to customers on Tuesday and Wednesday mornings in accordance with routine procedures, although closer attention was paid to the collateral pledged by the broker-dealers. Most banks reportedly were sensitive to the difficulties being experienced by their customers and placed no unusual demands regarding the type of collateral to be received or timing of the responses to margin calls. The banks noted that most of their customers responded to the margin calls in regular fashion and without complaint.

In addition to regular morning margin calls, some banks also made intra-day margin calls to their customers. Banks were conscious that the overall drop in the DJIA may not have accurately reflected their own credit exposure, based upon the concentrations of securities pledged as collateral for specific loans. Thus, while two banks made intra-day margin calls on Monday, based upon an assumed 15% and 25% reduction in the value of their customers' collateral, others focused on firms that had concentrations of particular securities and requested that additional collateral be supplied to offset the reduction in their value.

Selective intra-day margin calls also were used in some cases as a means of "testing" particular borrowers. By using intra-day margin calls, some banks expected to detect any problems that their borrowers were experiencing that might have presented a credit risk to the banks. Risk arbitrageurs, in particular, were viewed by the banks as presenting a potential problem because of the concentration of their positions and the high degree of leverage employed by such firms.

A number of banks also lowered the collateral value accorded securities held by certain firms, and required that securities be pledged by selected firms through DTC, rather than on an AP basis. One New York City bank, for example, indicated that it lowered its advance rate on collateral from 80% to 75% to certain borrowers, thus reducing the funds available on a given amount of collateral. The bank's decisions appear to have been made on a case-by-case basis, however, and did not affect the willingness of the bank to increase the amount of its loans to those customers, so long as additional collateral was provided. Moreover, at the same time the bank asked for increased collateral from some of its customers, it expanded its loan commitment to the same firms and its unsecured lines of credit to other clients.

Similar actions were taken by other banks and appear also to have been made on a case-by-case basis or in response to concerns about specific classes of borrowers, such as specialists or arbitrageurs. Another New York City bank lowered its advance

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41/ Representatives of the FRBNY also were physically present at some of the banks during the period of the market break.

rate to all specialists from 75% to 70% in response to the wide fluctuations in stock values, rather than making intra-day margin calls. Moreover, to maintain lending relationships with their customers, the banks reported that they emphasized to specialists that the banks' requests for more collateral were not inflexible; if the requests presented undue difficulties, the banks indicated a willingness to compromise. In contrast, certain Chicago banks increased their advance rates to options market makers' clearing firms on a case-by-case basis, from 75% to 80% to up to 100% and, in isolated instances, higher.

As noted, many banks that lend on an AP basis will do so only on the understanding that other creditors will not have a senior claim to the broker-dealer's assets. There was considerable concern among banks during the week of the market break that other lenders would require specific broker-dealers to supply collateral through DTC. The concern of many banks during this period was reflected by the actions of one major New York City bank, which informed each of its borrowers that it would continue to lend on an AP basis, but expected to be notified if any of the firm's other creditors required DTC collateral. A decision by one bank to alter the collateral requirements of a firm could have caused other banks to follow suit. In addition, there was an awareness at some banks that, in light of the high volume of trades executed during the break, broker-dealers may not have been following the procedures designed to assure that the banks' collateral was properly segregated. Banks attempted to monitor the collateral pledged on an AP basis and in some cases exercised their right to conduct audits during the week of the 19th.

The reactions of the banks, in terms of modifying acceptable security procedures, generally varied based on each particular bank's perception of the creditworthiness of its customers. In response to rumors in the brokerage community and the banks' own perception of the capitalization of particular firms, banks asked some broker-dealers, on an individual basis, to provide collateral through DTC. Moreover, in a number of instances where broker-dealers were asked to convert to DTC collateral, the banks reported that requests were made on an informal basis. Thus, one bank mentioned that when a broker-dealer responded to its request to convert from AP to DTC collateral by indicating it would take a day to make the conversion, the bank rescinded its request.

One of the major New York City banks reported that it requested certain top-tier brokerage firms to convert previously unsecured lines of credit to loans collateralized by liens on securities at DTC. Faced with the alternative of converting to DTC collateral, which may have adversely affected the brokerage firms' other lending relationships, the firms chose not to continue borrowing from the bank. Notwithstanding these difficulties, it should be noted that the bank significantly increased its overall lending amounts to the industry during the break.

At the same time that banks were calling customers to verify rumors and request additional collateral, broker-dealers were attempting to verify the availability of credit lines. Banks reported that a number of their customers made such inquiries, but did not ultimately draw upon the lines of credit that were offered. One senior loan officer at a major New York City bank indicated that some of his customers had chosen to test the availability of credit from foreign and regional banks initially out of concern that they might be the first to restrict credit.

The staff's interviews with a number of the top-tier broker-dealers are not necessarily inconsistent with the banks' reports, although they provide a different

perspective on the broker-dealers' requests. One major broker-dealer reported that some of its unsecured lines of credit were reduced by $500 million. Other major broker-dealers also reported that their unsecured lines of credit were temporarily reduced. These broker-dealers indicated that, although some banks reduced their lines of credit, they had sufficient remaining unsecured credit sources.

(ii) Foreign Banks

As noted earlier, there were numerous reports that foreign banks withdrew their support of broker-dealers during the market break. Staff interviews suggest that many foreign banks reduced their lending to the industry; others were willing to increase their loans to securities firms, but not to the same extent as domestic banks. Although no directly equivalent statistics are available, data from the FRB indicate that U.S. branches and agencies of foreign banks maintained existing loan amounts to non-bank financial institutions, including broker-dealers, during the period when U.S. banks increased loans to purchase and carry securities by approximately 50%.

As a rule, foreign banks have entered the U.S. broker-dealer lending market by providing funds at lower rates than U.S. banks. For the most part, the foreign banks interviewed by the staff tend to limit their lending relationships with U.S. broker-dealers to those firms in the top-tier. Moreover, U.S. branches of foreign banks generally rely upon their main offices abroad to set major credit policies. Thus, while the U.S. offices were responsible for day-to-day administration of the loans, senior officials residing abroad set guidance lines for their customers.

The reactions of the foreign banks to the events of the week of October 19th varied greatly. Since the staff interviewed only six foreign banks, three headquartered in Japan and three headquartered in Europe, it is difficult to generalize. Nevertheless, it appears that foreign banks immediately raised rates in an effort to discourage additional lending and to test whether their customers had other sources of funds. One European bank reported that it raised its rate 0.25% on October 20th. When its customers borrowed up to their usual lending limits on that day, despite the higher rates, it raised its rates 0.25% again on October 21st. Only when demand dropped as a result of the additional increase, did the bank feel confident that it was not the sole source of liquidity for its customers. At that point, the bank lowered its interest rates.

A Japanese bank interviewed by the staff, which also increased its interest rates significantly relative to previous levels, indicated that its senior management expressed grave reservations about its lending relationships with top-tier brokerage firms during the week of October 19th. At one point, the bank requested that its customers provide government securities as collateral for their loans. When the firms refused, the bank maintained existing lending levels, but did not accommodate additional loan requests.

In contrast to most of the other foreign banks interviewed, one Japanese bank significantly expanded its loan volume to the securities industry during the same period. The bank stated that it made a commitment early on October 20th to support the securities industry. Consequently, the bank, which had lending relationships with a wide diversity of firms, including top-tier and regional broker-dealers, almost doubled its loans to broker-dealers, accommodating all of its customers within existing guidance limits.

The differences in the reactions among the banks may be attributable to the confidence of the parent bank in the Wall Street lending expertise of its U.S. affiliate or branch, and its understanding of the U.S. securities markets. In some instances, senior officials of the foreign banks located overseas, who were unfamiliar with activities of U.S. broker-dealers, responded to the falling markets by assuming responsibility for key lending decisions, with the result that credit was not increased despite the additional demand of their customers. Officials at one Japanese bank that did not increase its lending during the market break also cited an inability to obtain information about the financial condition of its borrowers as another factor that influenced its decision not to expand credit lines.

In addition to the unfamiliarity of foreign banks with U.S. markets, there was some indication that the lower interest rates traditionally charged by foreign banks may have accounted for some hesitancy on the part of those banks to expand lines of credit. Specifically, bank management may have decided that the smaller returns received by their banks did not justify the additional credit risk that they would have encountered on loans to broker-dealers during the week of the break. This factor alone, however, does not explain why some foreign banks after raising their rates did not expand their loans to meet the increased demand.

While many of the foreign banks may have intentionally increased rates to their customers during the market break in an effort to reduce demand, some banks have indicated that they did so as a result of an increase in the so-called "foreign bank premium" (i.e., the additional premium charged foreign banks by New York City and regional banks in the Fed Funds market). While this premium normally ranges from 1/16% to 1/8%, the foreign banks indicated that it increased to 3/8% and sometimes to 1/2% during the week of the October 19th. Some foreign banks may have raised their rates solely to pass this additional cost on to their customers, and not to restrict credit. 42/

b. Other Sources of Credit Exposure

(1) Foreign Exchange

Banks also faced potential exposure in connection with foreign exchange transactions and the clearance and settlement of options transactions. During the week of the 19th, problems connected with broker-dealer trading and settlement of foreign exchange became particularly acute. Many of the banks that normally trade with broker-dealers through the broker market determined that broker-dealers were no longer acceptable counterparties in that market. Nevertheless, broker-dealers reportedly were able to cover positions by dealing directly with counterparties or effecting transactions in foreign currencies through the facilities of organized futures exchanges.

One major New York City bank refused to settle a foreign exchange transaction with an investment bank in accordance with convention, a reaction that was potentially disruptive to the system. Rather than make payment to the broker-dealer in foreign currency before receiving payment later in the day from the investment bank, as is customary, the bank asked for payment in dollars, which would be followed the next day

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42/ See letter from John Valentino, Vice President & Manager, Bank of Tokyo, to Joseph F. Morley, Vice President, Securities Industry Association (December 2, 1987).

by its own payment in foreign currency. Other banks eventually stepped forward to advance overnight funds necessary to finance the broker-dealer's position until payment was made the next day.

Although the bank agreed to compensate the broker-dealer for the use of its overnight funds, the bank's actions appeared to have created a negative reaction among other participants in the foreign exchange market. Because the settlement of foreign exchange trades involves interrelated transactions, any significant departure from convention could have frozen the foreign exchange market and precipitated a widespread credit constriction that would have worsened the difficulties experienced by the financial community during the break.

(ii) Lending to Options Clearing Firms

Banks also were forced to make credit decisions as a result of their function as OCC clearing banks. As discussed in more detail in Chapter Ten, numerous problems developed in the OCC morning settlement process. Senior managers in the Wall Street lending groups were charged with the responsibility for determining whether to transfer funds to the OCC in connection with the settlement process. Where sufficient funds were not available in the broker-dealers' accounts, the banks attempted to acquire additional collateral from the firms that would permit them to advance funds on a secured basis to honor the settlement. Thus, at the same time loan officers were reacting to declines in the market and making margin calls against dealers' positions, OCC settlement presented an additional source of exposure.

4. Analysis

During the period following the market break banks continued to provide liquidity to the brokerage community. Banks appear to have made independent credit decisions on a client-by-client basis, taking into account the perceived creditworthiness of their customers and the value of securities pledged as collateral. The Division was unable to identify any generalized liquidity problem following the break caused by the withdrawal or constriction of bank credit. In fact, most banks reported that many of their customers did not request credit exceeding their internal guidance limits. To the extent that broker-dealers, and particularly specialists, experienced difficulty in borrowing, these difficulties appear to have arisen from concerns by the banks about the capitalization of the firms and their ability to repay loans.

Communication played an important part in the response of the banks to the credit needs of their customers. Most banks reported that they had access to senior management within the brokerage firms, through which they were able to check rumors and acquire information necessary to make positive credit evaluations. In addition, banks praised particular brokerage firms, including some specialists perceived as possessing greater degrees of credit risk, that maintained close contact with the banks on October 19th, 20th and 21st. The staff also believes that the actions of the FRB and the FRBNY had a positive, stabilizing effect on bank lending.

Communication problems played a factor in the decision of some foreign banks to constrict lending during the market break. The apparent inability of some foreign banks to acquire information from their borrowers, coupled with slim margins, delays in communication with foreign headquarters and lack of familiarity with lending to U.S. securities firms may have contributed to the problems encountered by broker-dealers

who borrowed from foreign banks. The reactions of foreign banks appears not to have been uniform, however, and those banks that appeared to have the greatest familiarity and commitment to the broker loan market continued to supply liquidity.

A major potential for disruption appeared in the context of bank global exposure to broker-dealers and, in particular, in foreign exchange trading. Banks recognized that they had high exposures to broker-dealers in other than traditional lending capacities, but as a general matter lacked systems to quantify these exposures. Some exposures, such as the foreign exchange trades discussed earlier, involve significant short term risks. The effect of these unquantified exposures is to make banks wary of increasing their lending to broker-dealers in times of crisis. Further attention needs to be given to the extent of global credit exposure of banks to broker-dealers and the impact of this exposure on their lending to broker-dealers.

Finally, in reviewing the lending performance of banks in the wake of the October 19th market break, it must be kept in mind that banks made many of their crucial lending decisions during and after the market rebound on Tuesday, October 20th. The delay of some banks in settling with the OCC on Tuesday morning and the decision by one bank to stop new stock lending on Tuesday morning suggest that the initial reaction of at least certain major banks to Monday's market drop was to tighten credit. Thus, it is not certain that credit would have remained as readily available had the market continued to fall sharply on Tuesday. In order to mitigate the impact of a single lender's decision during difficult times, the Division believes that it may be appropriate for the designated examining authorities to review with broker-dealers the desirability of establishing diverse lending relationships with a number of banks, as well as the feasibility of obtaining more committed lines of credit than now exist.

D. Options Market Makers' Financial Responsibility

1. Regulatory Capital Requirements

Options market makers on the floor of the various options exchanges that do not conduct other securities business and that clear their transactions through other broker-dealers ("clearing firms") are exempt from the Commission's net capital rule. 43/ However, the market makers are required to obtain and file with their respective exchanges letters of guarantee from their clearing firms. In the letter of guarantee, the clearing firm accepts financial responsibility for all options transactions made by the guaranteed market maker. 44/

While options market makers are exempt from the Commission's net capital rule, their clearing firms are subject to the rule. A clearing firm may compute its net capital pursuant to the basic or alternative method. 45/ In addition to the deductions required of other firms, the net capital rule also requires the clearing firm to reduce its

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43/ Rule 15c3-1(b)(1).

44/ See CBOE Rule 8.5, NYSE Rule 758, AMEX Rule 961, Phlx Rule 703(a)(vii), PSE Rule VI, Section 77.

45/ For a basic description of the net capital rule, see Section A of this chapter supra at pp. 5-1 - 5-3.

net capital to the extent that the haircuts or deductions required under the rule relating to a particular market maker's account exceed the equity in the market maker's account. 46/ If a market maker's account liquidates to an equity that is in excess of the market maker's haircuts, the clearing firm would not be required to take any deductions for that market maker's account. 47/

If the haircuts for a particular market maker's account exceed the equity in the account, the rule as written provides that the clearing firm may not extend further credit to the market maker unless the clearing firm requires the market maker to add sufficient equity to the account to eliminate the net capital charge. However, the Division, in a no-action letter approved by the Commission, permits the clearing firm to take the charge without requesting margin from the market maker, notwithstanding the literal language of the rule. 48/

If a market maker's account liquidates to a deficit, the market maker must cease doing business until such time as the deficit is eliminated. The clearing firm is required to issue a call for additional equity which must be met by noon of the following business day. If a market maker fails to meet the call for additional equity, the clearing firm must take steps to liquidate the market maker's account promptly and give telegraphic notice of the market maker's failure to meet the call to the Commission and the self regulatory organization responsible for examining the financial condition of the clearing firm and market maker.

Furthermore, the net capital rule limits the volume of market maker business a clearing firm can carry in relation to its net capital. The rule requires that the aggregate gross haircuts with respect to all the market maker accounts carried by the clearing firm (regardless of equity in the accounts) not exceed ten times the clearing firm's net capital for a period exceeding five consecutive business days ("ten to one ratio standard"). 49/ During these five business days, the clearing firm can increase its capital, or call upon its market makers either to reduce their positions, and thus the haircuts or charges associated with the positions, or deposit additional equity to reduce the direct deductions against the clearing firm's net capital.

Some options market makers are not exempt from the net capital rule because they do not limit their securities business to options market making. For these options market makers, the rule provides an optional financial responsibility standard 50/ which subjects them to the net capital rule but does not require them to take haircuts on

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46/ The equity in the market maker's account is determined by taking the market value of all long positions in the account less the market value of the short positions adjusted by the amount of money due to or from the clearing firm.

47/ Each market maker account must be computed separately; a deficit in one market maker account cannot be offset with excess equity in another market maker account

48/ See Division's No-action Letter to Mr. Joseph W. Sullivan of the Chicago Board Options Exchange, dated April 8, 1977.

49/ Rule 15c3-1(c)(2)(x)(B)(1).

50/ Rule 15c3-1(a)(6).

their proprietary options positions. This optional standard is available to an options market maker that (1) only effects transactions with other broker-dealers, (2) carries no customer accounts, (3) effects no transactions in unlisted options, and (4) effects its options market maker transactions through and carries those transactions in a market maker account cleared by a clearing firm. This optional standard is predicated on the maintenance of specific levels of equity in the market maker's account. It also imposes upon the clearing firm control and early warning obligations intended to ensure daily surveillance over the account's financial condition.

The rule also provides an optional financial responsibility standard for self-clearing options specialists or market makers. 51/ The rule provides that a self-clearing options specialist or market maker can take the same deductions for its proprietary positions that the clearing firms take for their independent options market makers. This standard is available to a broker-dealer that clears its own options market making and related transactions and those of other independent market makers and generally does no other securities business.

2. Financial Condition of Options Markets

There are nineteen broker-dealers clearing the accounts of substantially all options market makers. Sixteen of the firms are designated to the CBOE for financial examination purposes. 52/ The net capital computations and market maker deductions of these firms are monitored daily by the CBOE for compliance with the financial responsibility rules. The remaining three firms (Bears, Stearns & Co. Inc., Wagner Stott Clearing Corp., and Spear, Leeds & Kellogg) are designated to the NYSE.

Because of the record volume on the CBOE on October 19th, the large number of uncompared trades, and other processing problems, particularly problems in obtaining accurate options pricing information, 53/ the sixteen clearing firms designated to the CBOE experienced difficulties providing the CBOE with accurate capital computations for October 19th. Eventually, all of the clearing firms, with the exception of First Options of Chicago, Inc. ("First Options"), submitted to the CBOE completed capital computations. One clearing firm, Fossett Corporation ("Fossett"), operated on October 19th and 20th while in violation of the Commission's net capital rule. The CBOE is unable to confirm at this time that First Options was operating in compliance with the net capital rule on October 19th, even though it had increased its capital by $102

51/ Rule 15c3-1(a)(7).

52/ If the broker-dealer is a member of more than one self regulatory organization, the Commission designates one of the SROs as the Examining Authority for the broker-dealer. The Designated Examining Authority ("DEA") is responsible for examining the member for compliance with applicable financial responsibility rules.

53/ See infra Chapter Eight for a more detailed description of the problems that occurred in pricing options for capital and clearing purposes during the October market break.

million by drawing on its revolving subordinated loan agreements. 54/ No other clearing firms were close to violating the net capital rule.

On October 19th, the ratio of aggregate gross haircuts to net capital for three clearing firms exceeded the prescribed ten to one standard. The ratios for each firm were, respectively: 40.5 to 1, 48.7 to 1 and 138 to 1. By the close of business on October 20th, the ratio of aggregate gross deductions to haircuts of two of these firms had been reduced to within the ten to one standard. The other firm's ratio increased to 43.6 to 1 from 40.5 to 1, but its ratio problem was corrected by the close of business on Wednesday, October 21st. One of the clearing firms designated to the NYSE slightly exceeded the prescribed ten to one standard. The ratio of the firm was 10.97 to 1. On the following day, the ratio problem was corrected by the firm.

a. Options Market Makers

The total market maker deficits at all options exchanges for those market makers that clear through any of the sixteen clearing firms designated to the CBOE increased from approximately $6.2 million on October 14th to approximately $137 million on October 23rd, a net increase of approximately $130.8 million (see Table 5-5). The number of market makers' accounts in deficit increased from sixty on October 14th to 130 on October 30th. The bulk of the deficits in the market makers' accounts were isolated to a few accounts, even though the losses of equity in all accounts during the period were substantial.

More individual market makers were in deficit on October 19th and 20th than at any other time during this period. For instance, on October 20th there were 164 market makers whose accounts were in deficit with an aggregate total deficit of approximately $217 million. Eighty-one market makers whose accounts are carried by First Options, the largest clearing firm, accounted for approximately 86% of the total deficits of October 20th. On October 19th, 15 clearing firms 55/ had 114 market makers go into deficit with an aggregate deficit of approximately $31.4 million.

The three NYSE member firms that engage in options clearing also had market makers go into deficit during this period. The majority of these market maker deficits occurred on October 19th. For example, one clearing firm had eighteen market makers go into deficit with an aggregate deficit of $90.1 million. 56/ The other two firms'

54/ See footnote 15, supra for a general description of subordination agreements. In 1982, Appendix D was amended to permit the use of "revolving" subordination agreements which allow broker-dealers meeting certain conditions to prepay amounts borrowed under a "revolving" subordination agreement before the expiration of one year from the effective date of the subordination agreement only with the approval of the firm's DEA. A revolving subordinated loan agreement may not be prepaid if the effect of such prepayment would be to endanger the firm's net capital position.

55/ The aggregate figure does not include the information for First Options since First Options was unable to provide the CBOE with a completed capital computation for October 19th.

56/ This firm absorbed the positions of ten market makers into its inventory.

TABLE 5-5 */

	10/14	10/23	10/30	Increase/ (Decrease)
Market Maker Equity at All Options Exchanges	$835,885,475	$584,708,991	$548,413,808	($287,471,667)
Market Maker Deficits at All Options Exchanges	$ 6,202,967	$137,832,633	$132,002,966	$125,799,999
Market Makers in Deficit	60	127	130	70
Deficit Range	$663--$2,381,299	$641--$52,534,585	$13--$52,374,682	--
Clearing Firm Adjusted Net Capital	$121,992,273	$216,861,152	$300,072,862	$178,080,589

*/ These data represent a composite of all the options market makers which clear through the sixteen clearing firms designated to the CBOE. The information for those market makers that clear through the integrated firms designated to NYSE is not included. In addition, self-clearing market maker data are not included. Deficits resolved in one business day also are not included.

aggregate market makers deficits were not substantial. One of the firms had eight market makers go into deficit with an aggregate deficit of approximately $4.8 million, and the other had seven market makers go into deficit with an aggregate deficit of only $1.8 million.

During the October 14th-30th period, the market maker equity at all options exchanges for market makers carried by the sixteen clearing firms designated to the CBOE decreased by approximately $287.5 million, from approximately $835.9 million on October 14th to approximately $548.4 million on October 30th. Approximately 44 percent ($125.8 million) of the decrease in total market maker equity was attributable to market maker deficits. The remaining difference resulted from market value declines in the accounts of other market makers and from withdrawal of equity by market makers, apparently troubled by numerous rumors regarding the financial health of their clearing firms. During this period, net market makers' withdrawals totalled approximately $364.5 million.

b. Clearing Firms

The aggregate net capital of the clearing firms designated to the CBOE increased by approximately $178 million, from approximately $121.9 million on October 14th, to approximately $300 million on October 30th. This increase in net capital was due not only to various capital infusions that occurred during this period, but also to the dramatic reduction in options market maker positions (and therefore in the haircuts required to be taken by the clearing firms).

Although the clearing firms, as a whole, substantially increased their net capital during this period, they still experienced liquidity problems. A number of factors caused the liquidity problems of these firms, including: (1) intra-day margin calls by OCC and the commodity clearing corporations; (2) difficulties in financing stock and options positions through banks; (3) problems with returned stock loans; and (4) market makers' withdrawals of equity from their accounts, as noted above.

The clearing firms had to meet several intra-day variation margin calls made by OCC and the various futures clearinghouses. In addition, the lack of an adequate cross-margining system among futures and options aggravated the liquidity problems encountered by the firms. 57/ Consequently, OCC and the futures clearing corporations were requesting intra-day variation margins based solely upon the positions carried by the particular clearing corporation without recognizing the risk reduction posed by offsetting positions carried at other clearing corporations. For example, an intermarket spread consisting of an OEX option traded on the CBOE and an S&P 500 future traded on the Chicago Mercantile Exchange would be independently margined by each of the clearing corporations involved without recognizing the reduced risk of the combined position. Thus, intra-day margin calls by OCC due to a loss on an options position could not be immediately offset by gains on the futures positions and vice-versa.

A second factor contributing to the liquidity crisis experienced by the clearing firms was the difficulty encountered by these firms in securing adequate financing for stock and options positions through banks. During the week of October 19th, clearing

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57/ The merits of a cross-margining system are discussed in Chapter Ten.

firms were financing a large quantity of stock and options positions for market makers. With the severe decline in the market, the loan value of the positions (other than long puts) pledged as collateral was significantly reduced. Accordingly, many of the bank loans became undermargined which required the clearing firms to deposit additional collateral to secure them. Some banks reduced the loan value percentage those positions would receive. In addition, at least one of the few banks that had accepted long put options in the past refused to accept these positions, requiring what the bank considered "more secure" collateral, to finance clearing firms. Thus, some banks effectively reduced their lines of credit to several clearing firms by reducing the amount clearing firms were able to draw against the collateral the firms provided. Finally, a number of clearing firms' borrowing needs exceeded their existing bank lines of credit, and some banks refused to extend additional credit to accommodate the financing needs of the clearing firms. Nevertheless, several of the banks indicated that once their borrowers reached the advance rate limits generally extended to them, the banks, after some consideration, extended advance rates as much as 100% in some instances in order to ensure that their clearing firm customers were able to meet their settlement obligations. 58/

Another factor contributing to the liquidity concerns of the clearing firms was the return of significant quantities of stock loans 59/ to the clearing firms. The stock loan returns forced the clearing firms to seek financing to settle with the broker-dealers returning the stock. Because of the market decline, however, the loan value of the returned stock was worth much less than the funds required to be remitted to the borrowing broker-dealers. Thus, the clearing firms were forced to search for additional acceptable collateral to pledge to the financing banks.

The last significant factor that contributed to the liquidity problems of the clearing firms was the market makers' withdrawals of excess funds. As noted above, the net market maker cash withdrawal during the October 14th-30th period was approximately $364.5 million. Many market makers usually leave excess equity beyond the haircuts in their market maker accounts. During this period, however, the market makers requested cash as they liquidated their positions. The clearing firms apparently honored all requests for withdrawal of funds in excess of haircut or house requirements. The effect of these cash drains was to exacerbate an already tight cash flow situation at the clearing firms, further inhibiting their ability to meet their settlement and other financing obligations.

3. Stresses on Firm Resources

The particular exposures and stresses on options clearing firms can be illustrated by the experiences of the following three clearing firms.

58/ The advance rates were also extended to ensure that margin calls could be met.

59/ In a standard stock loan transaction, one broker-dealer lends stock to another broker-dealer which the borrowing broker-dealer needs to cover short sales or to satisfy fails to deliver. Normally, the lending broker-dealer receives collateral in the form of cash or government securities equal to at least 100% of the market value of the loaned securities. Upon the return of the stock loan, the lending broker-dealer must return the collateral to the borrowing broker-dealer.

a. First Options

First Options is the largest clearing firm (in terms of the number of options market makers it clears); it presently clears the accounts of approximately 1,200 options market makers. First Options is a wholly-owned subsidiary of Continental Illinois National Bank and Trust Company of Chicago ("Continental Bank"); it was purchased by the bank for $125 million from Spear, Leeds & Kellogg in 1986. The acquisition of First Options by Continental Bank was approved by the Office of the Comptroller of the Currency ("Comptroller"), subject to certain restrictions in an "approval letter." The approval letter limited First Options' activities to those in which national banks are allowed to participate. These include taking positions in some options and futures contracts on bank eligible securities (e.g., Treasury and municipal bonds). The approval letter also restricted Continental Bank's capital infusion and extension of credit to First Options to the same legal limitations applied to non-affiliated customers (25% of the bank's capital, of which at least 10% of the capital must be secured).

On Tuesday, October 20th the Division learned that First Options was experiencing liquidity problems. First Options' liquidity problems were attributed to (1) large losses in certain market maker accounts, (2) restrictions imposed by the Comptroller on Continental Bank's ability to infuse additional capital into First Options, (3) extensive market makers' withdrawals of equity from their accounts, (4) intra-day variation margin calls by OCC and the commodity clearinghouses, and (5) difficulties in obtaining bank financing for stock and options positions held by market makers.

i. Market Maker Losses

In October 1987, First Options incurred a one month loss of approximately $79.5 million. First Options' loss was primarily attributable to the establishment of reserves for bad debts associated with market makers' deficits of approximately $91.6 million. The majority of First Options' write-offs was attributable to the accounts of nine market makers that went into deficit. As Table 5-6 below indicates, as of October 30th, the deficits in these accounts ranged from $1.9 million to $52.3 million.

The majority of the losses in these accounts was related to long securities or short options positions in the Standard & Poor's 100 Index ("OEX"), General Electric ("GE"), International Business Machines ("IBM") and Southland Corporation ("SLC"). Generally, the losses in these accounts resulted from "short straddle" 60/ and "covered call" 61/ positions in the above issues.

60/ A short straddle is a short call/short put combination which profits from the sale of options which may expire worthless or be bought back at lower prices as the time premium erodes. The maximum profit is the sale proceeds (premiums). The maximum loss potential is unlimited on the upside (because of the short call), and on the downside it equals the exercise price on the short put less the premium received. This particular strategy is best suited for a neutral market and can result in severe losses in a rapidly rising or falling market.

61/ A covered call position is defined as a short call position offset by a long stock position. This particular strategy is neutral with respect to a bullish strategy with the short call providing only limited protection in a declining market. The maximum profit of this position is the out of the money amount of the option plus the time value. The maximum loss is the stock price minus the call premium.

Table 5-6
Equity or Deficits of First Options' Market Makers
with Largest Losses 62/

	10/14	10/15	10/16	10/19	10/20
1	5,987,023	2,971,101	(5,656,800)	(45,166,334)	(47,679,685)
2	2,245,262	2,126,825	(5,984,324)	(5,995,632)	(6,052,617)
3	1,338,749	(87,806)	(3,290,194)	(17,671,052)	(16,969,381)
4	3,668,988	3,139,142	501,305	(6,482,906)	(6,282,876)
5	3,533,880	2,862,894	(1,211,816)	(12,624,942)	(12,019,798)
6	1,559,996	1,465,942	1,135,175	(274,280)	(1,758,322)
7	10,568,861	10,644,758	8,004,952	(2,118,922)	(8,068,794)
8	37,132	(136,661)	(66,672)	(1,605,840)	(3,646,107)
9	414,437	506,250	(29,366)	(643,224)	(805,264)

	10/21	10/22	10/23	10/26	10/27
1	(51,468,578)	(52,158,408)	(52,534,585)	(54,410,494)	(52,939,167)
2	(5,986,565)	(5,979,980)	(5,970,930)	(5,986,935)	(6,000,376)
3	(16,440,073)	(16,782,867)	(16,818,269)	(16,983,949)	(16,997,211)
4	(6,383,517)	(6,348,158)	(6,347,180)	(6,376,213)	(6,364,627)
5	(12,049,384)	(12,039,429)	(12,054,904)	(12,063,537)	(12,076,916)
6	(1,600,060)	(1,723,035)	(1,578,747)	(1,483,750)	(1,564,737)
7	(3,149,680)	(4,106,899)	(3,721,467)	(7,722,462)	(4,836,660)
8	(3,209,722)	(3,795,059)	(3,347,067)	(3,485,046)	(3,198,604)
9	(1,781,035)	(2,152,051)	(2,027,847)	(2,146,212)	(2,017,268)

	10/28	10/29	10/30
1	(52,575,567)	(52,330,034)	(52,374,682)
2	(6,007,173)	(6,004,709)	(5,998,032)
3	(17,170,557)	(16,998,022)	(16,693,466)
4	(6,375,272)	(6,376,742)	(6,376,779)
5	(12,062,173)	(12,057,622)	(12,057,813)
6	(1,719,810)	(1,747,890)	(1,899,772)
7	(5,750,465)	(3,898,157)	(3,500,043)
8	(2,663,748)	(2,435,735)	(2,160,360)
9	(2,091,896)	(2,166,255)	(2,225,524)

62/ Market Makers 1-5 were primarily OEX Options Market Makers. Market Makers 6-9 were primarily Equity Options Market Makers.

a. OEX Market Makers

Five of the nine market maker accounts had significant positions in OEX Options. These accounts sustained tremendous losses as the Standard & Poor's 100 Index fell from 297.06 to 216.12 between October 14th and October 19th. For example, on October 14th, the market maker which incurred the largest deficit had a short straddle position in over 7000 OEX contracts. As the market declined on October 15th and October 16th, losses were incurred as the short puts in the straddle increased in value. On these two days, the account sustained a loss of approximately $10.2 million and had a deficit of approximately $5.6 million as of the close of business on Friday, October 16th.

On October 19th, even though the market maker's overall short position had been substantially reduced by the expiration of a number of the contracts on the previous Friday, the market maker still had 4,214 naked short OEX puts in his account. When the market collapsed on October 19th, the put prices increased dramatically and created huge losses in the account. The loss to the market maker on October 19th caused by his OEX position was approximately $36 million. The market maker lost $10.7 million in just one series of the OEX because the price of the puts increased from $17 at the close on October 16th to $101 at the close on October 19th.

On October 20th, all short puts, except those within a spread, were liquidated generating an additional loss of approximately $1.3 million. Thus, the aggregate loss during the October 15th to October 20th period in OEXs for this market maker totalled approximately $46.5 million.

This market maker also had a significant position in IBM stock and options. His IBM position consisted primarily of covered calls, short straddles and naked short calls. From October 14th to October 19th, the market value of IBM stock declined from 145 1/4 to 103 1/4, generating losses in the account of $2.7 million. On October 20th, when IBM posted a gain of 11 3/4 points, some short puts in the straddles were liquidated, and a profit of approximately $1.2 million was realized. However, the aggregate losses incurred because of the IBM position during the October 15th to October 20th period, were approximately $1.5 million. In sum, between October 16th and October 20th, this market maker sustained an aggregate loss of approximately $53.6 million; approximately $48 million of the loss was attributable to the OEX and IBM positions.

The other four market makers with substantial OEX positions sustained losses ranging from approximately $6.9 million to $15 million. The losses in those accounts also were attributable to short straddles and naked short put positions. Three of these accounts went into deficit on October 16th. The deficits ranged from approximately $1.2 million to $5.9 million on that day. The other market maker went into a deficit of approximately $6.4 million on October 19th.

b. Equity Options Market Makers

Four other market makers experienced substantial losses from equity options positions. For example, two of the market makers' losses were caused by their short put positions in Southland Corporation ("SLC"). From October 14th to October 20th, the market value of SLC stock fell from 72 5/8 to 47. The market value of the short put options increased from 2 1/8 to 29. One market maker that had 1500 naked short puts in SLC sustained a loss of approximately $4 million because of its SLC position. On October 15th, 19 of these contracts were assigned, and on October 16th, another 46

contracts were assigned. 63/ As a result of the declining market and the assignment of the contracts, which meant that the market maker was long the actual securities, equity in the account decreased from $37,132 on October 14th to a deficit of approximately $3.6 million on October 20th.

During this period, another market maker sustained losses of approximately $10 million because of its SLC position. This market maker's position consisted of covered call writings, naked puts, conversions 64/ and hedged puts. 65/ Its covered calls and naked puts were adversely affected by the steady decline of SLC stock that occurred between October 14th and October 20th. Although the market maker sustained losses in its SLC position of approximately $10 million, it had a deficit of only approximately $1.8 million on October 20th.

ii. **Comptroller's Restrictions on Continental Bank's Ability to Infuse Capital**

On October 20th, the Office of the Comptroller informed the Division that Continental Bank had requested the Comptroller to relax its limit on the amount of capital that Continental Bank could infuse into First Options (i.e., extend the 25% of Bank's capital limitation). Prior to the opening of business on October 19th, First Options had drawn $42 million pursuant to its revolving subordination loan agreement ("revolver") with Continental. That same day, First Options drew an additional $60 million from its revolver. The Comptroller, however, determined that the $60 million draw on the revolver caused Continental to violate its covenant that Continental's investment in and loans to First Options should not exceed 25% of its capital. Despite the above covenant, Continental, on October 20th, lent an additional $138 million to First Options through the revolver. On October 21st, after being informed by the Comptroller that it would not waive the 25% restriction, First Options entered into a revolver with the holding company of Continental Bank ("Holding Company"). The Holding Company lent First Options $130 million through a revolver, which enabled First Options to repay $130 million to Continental Bank. This plus payments of unrelated secured loans from the Bank placed Continental Bank back into compliance with the provisions of the Comptroller's "approval letter."

As a result of the unprecedented high volume of trading and the losses incurred by market makers for which First Options cleared, during the month of October Continental Bank and the Holding Company infused into First Options approximately $312.5 million of subordinated capital. Most (approximately $277 million) of the capital infusion was made between October 14th and October 21st. The staff was assured that the Holding Company had substantial liquid assets in excess of $200 million that could

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63/ An assignment of a position occurs when the person holding a long option position has exercised his right to buy or sell the underlying security at the exercise price and the obligation to buy or sell becomes the duty of the person who sold the option.

64/ A conversion is defined as a long security position hedged by a short call option position and a long put option position for the same number of units of the same underlying security, each option having the same expiration date and exercise price.

65/ A hedged put consists of a long security position and a long put position on the same underlying security.

have been made available if needed to keep First Options in business and in compliance with the Commission's net capital rule.

iii. Withdrawal of Equity by Market Makers

First Options' cash flow situation was further exacerbated because market makers whose accounts it carried were withdrawing all excess funds or equity from their accounts. As market makers liquidated their stock and options positions, they requested cash from First Options. Although these withdrawals were a widespread problem for all the clearing firms, First Options was most severely affected. The total net market maker cash withdrawal from First Options during the period from October 14th to October 30th was $201.1 million, which accounted for approximately 55 percent of all net market makers' cash withdrawals from CBOE designated clearing firms.

TABLE 5-7

FIRST OPTIONS DAILY MARKET DEPOSITS AND WITHDRAWALS

DATE	Market Maker Deposits and (Withdrawals)
10/14/87	$ 341,312
10/15/87	13,767,989
10/16/87	7,657,400
10/19/87	(51,687,744)
10/20/87	2,628,020
10/21/87	(157,441,171)
10/22/87	2,471,771
10/23/87	(38,791,837)
10/24/87	(8,802,872)
10/27/87	14,843,786
10/28/87	6,287,960
10/29/87	9,821,741
10/30/87	(2,248,315)
TOTAL	($201,151,960)
Total Net Market Maker Cash Withdrawals for the 16 CBOE clearing firms	($364,495,941)

As the above table indicates, the bulk of the market makers' withdrawals occurred during the week of October 19th. The net cash withdrawals by market makers during the week of October 19th totalled approximately $242.8 million. Apparently, many market makers withdrew the excess equity in their accounts because they were troubled by rumors regarding the impending collapse of First Options because Continental Bank could not infuse additional capital into the firm.

iv. Intra-day Variation Margin Calls by OCC

On October 19th, OCC called for a total of approximately $31 million of intra-day variation margin from First Options through four separate calls. Three calls were met by First Options on October 19th. The fourth, a late afternoon call, could not be processed before First Options' bank closed for the day and was met on October 20th. On October 20th, First Options met an intra-day variation margin call of approximately $1.2 million. On October 21st, OCC issued an intra-day variation margin call of approximately $50 million. The Division was informed that First Options was unable to meet the call and that OCC relieved First Options from its obligation to meet the call. 66/

v. Bank Financing

First Options had established lines of credit with approximately twelve banks with which it normally maintains bank credit lines in excess of $650 million. First Options advised the Division that, during the week of October 19th, its lines of credit were not reduced. In fact, several of the banks provided First Options with financing beyond the established lines of credit to accommodate its financing needs. For instance, on October 22nd, the day following net market maker withdrawals of approximately $157.4 million, First Options had approximately $1 billion in total bank loans outstanding.

On October 22nd, the staff was informed that one of First Options' lenders had became uncomfortable with accepting long put options as collateral although such positions had been accepted in the past. The lender requested a substitution of collateral in the form of equity securities or $100 million in cash. First Options had pledged $250 million in long put options positions along with $110 million in securities positions to collateralize a $250 million letter of credit from the bank. First Options had pledged the letter of credit with OCC to meet its margin requirements. The bank's request was prompted by its decision not to accept deep in the money long put options as collateral, despite the protection such a pledge afforded it. Given First Options' liquidity constraints during the week of October 19th, it did not have the additional collateral readily available. First Options was able to satisfy the bank by reducing the pledged letter of credit by $110 million. The bank released approximately $200 million in long put options, which First Options pledged with OCC to satisfy its margin requirements.

b. Fossett Corporation

Fossett is a self-clearing options market maker 67/ which clears the accounts of 160 independent options market makers, including that of its subsidiary Fossett Trading Corporation ("FTC"). Fossett experienced financial difficulties on Monday, October 19th, primarily because of an unhedged position in excess of 700,000 shares of Ceasar's World stock carried in the accounts of Fossett and FTC. The price of the stock precipitously

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66/ See Chapter Ten for a more detailed description of the problems encountered by First Options in meeting its margin and settlement obligations.

67/ Fossett, as a self clearing options market maker, elected to compute its net capital pursuant to Rule 15c3-1(a)(7). See discussion of Rule 15c3-1(a)(7) supra at p. 5-34.

dropped on October 19th. The losses on its Ceasar's World holdings caused the firm to incur a net capital deficiency of $10.9 million as of the close of business on October 19th.

The CBOE, the DEA for Fossett, directed the firm to liquidate all proprietary positions in the Fossett and FTC accounts. Furthermore, the CBOE and Fossett instructed all independent market makers to reduce their options positions in order to reduce the haircuts assessed to Fossett's net capital. The market makers also were instructed to maintain equity in their accounts equal to the haircuts on their options positions. On Tuesday, October 20th, Fossett, by reducing its proprietary and market makers' positions, reduced its net capital deficiency by approximately $5.7 million and by the close of business October 20th had a net capital deficiency of $5.2 million.

On Wednesday, October 21st, Fossett sold the remainder of its Ceasar's World stock position. The sales brought the firm back into compliance with the net capital rule. As of the close of business on October 21st, Fossett had total net capital of $1.3 million which exceeded its net capital requirement of $100,000 by $1.2 million. The firm still was experiencing some cash flow difficulties, however, and was unable to meet a variation margin call of $3.1 million. OCC released the firm from this obligation. 68/

Fossett's liquidity problem was further exacerbated on Wednesday, October 21st, by the return of stock loaned by Fossett to another broker-dealer. Initially, Fossett's bank was unwilling to finance Fossett's $30 million obligation. After negotiations with Fossett and OCC, the bank agreed to finance the $30 million obligation. As part of the agreement, OCC agreed to pledge long puts of about $3 million to the bank and utilized its discretionary authority to reduce required margin to 100% from 130%. Fossett, in turn, agreed to liquidate enough securities to pay back the $30 million by the following Friday. Furthermore, Fossett agreed that it would cure its other under-collateralized obligations to the banks within a month. Lastly, the bank received a personal guarantee to repay all loans from Stephen Fossett, the firm's principal owner.

Once Fossett's financial condition stabilized, the CBOE and OCC imposed upon it a number of restrictions. For instance, OCC, effective October 26th, placed the firm on 150% margin status. The CBOE, effective November 2nd, placed the following restrictions, among others on Fossett: (1) the firm must maintain net capital in excess of $3 million and must maintain a ratio of gross market maker haircuts to net capital below 5 to 1; (2) no new accounts may be opened by Fossett without the prior approval of the CBOE; (3) no capital withdrawals may be made without the consent of the CBOE; and (4) Fossett and FTC may not maintain any significant unhedged positions in their respective trading accounts. As of January 12, 1988, the CBOE restrictions were still in effect.

c. Self-clearing Market Maker

One self-clearing market maker firm that carried no other market maker accounts experienced unusual liquidity problems as a result of the October market break. The firm was actively involved in both the securities index options and the financial futures markets and had accumulated large options and futures positions in a variety of index

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68/ For a discussion of OCC's variation margin call and its decision to relieve Fossett from its margin call, see Chapter Ten.

products. The firm experienced severe liquidity problems when OCC and the futures clearing corporations significantly increased the margin requirements after October 19th.

On October 26th, the firm apparently went into net capital violation because the haircuts on its futures related positions substantially increased as the margin requirements on the futures positions increased. 69/ Furthermore, the firm faced a margin deficit of $10 million at OCC and its subsidiary, the Intermarket Clearing Corporation ("ICC"), which clears the FMCI Index Futures. OCC relieved the firm from its margin obligation and instructed the firm to reduce its positions to attain net capital compliance. 70/ The firm achieved net capital compliance by reducing some of its futures related positions.

4. Analysis

The liquidity problems experienced by the options clearing firms during the October market break suggest certain weaknesses in the Commission's net capital rule. Specifically, the staff believes that a number of issues should be explored further.

a. Financing of Market Maker Haircuts by Clearing Firms

Clearing firms are required to reduce their net capital to the extent that the haircuts on an individual market maker's position exceed the equity in its accounts. The Division issued a no-action letter on April 8, 1977 to the CBOE in which the Division acquiesced in allowing clearing firms, in effect, to finance the haircuts of their market makers. It is possible that some market makers would perform more conservatively if they were required to maintain equity equal to the haircuts at all times. It also is clear that the clearing firms would have greater liquidity if trading exposure from market makers was more limited. On the other hand, such a requirement might decrease to some extent the market making liquidity on the floor of the options exchanges. The staff plans to study whether the Division's no action position should be withdrawn. Absent this no-action position, market makers would be required to have minimum equity equal to the perceived risk in their positions.

b. Revision of Haircuts on Short Options Positions

The substantial losses of market makers cleared by First Options demonstrate that the present net capital treatment accorded to short options positions is inadequate to insure against the risks of major market movements. We believe that consideration should be given to whether there should be concentration haircuts for short options positions, either on a market maker by market maker basis or on a total clearing firm basis.

69/ The haircuts on futures positions are dependent on margin requirements of the various commodities boards of trade and clearing corporations. In this case, since the firm is a clearing member of Intermarket Clearing Corporation, the haircut the firm must take with respect to its proprietary futures positions is equal to its margin requirement.

70/ See infra at Chapter Ten for a discussion of OCC's and ICC's cross-margining proposal and their decision to relieve the firm from its margin requirement.

In late 1985, the Division issued a no-action letter ("Minikes Letter") allowing broker-dealers to compute deductions with respect to their options positions based on the market value of the options rather than the value of the underlying security.71/ Unlike those provisions of the rule for options market makers on the floor (paragraph (c)(2)(x) and paragraph (a)(6)), that letter includes concentration limitations on the amount that broker-dealers can hold with respect to a particular short options position.

c. Reduction of Five Business Day Period

As explained above, the rule provides that the aggregate gross market maker haircuts with respect to all market maker accounts carried by the clearing firm cannot exceed ten times the clearing firm's net capital for a period exceeding five consecutive business days. We believe that the ratio is an appropriate measurement of how much business a clearing firm should undertake given its net capital. However, we believe that the 5 business day grace period for the clearing firm to reduce positions or increase its capital may be overly generous. Thus, consideration should be given to reducing the five business day grace period.

d. Elimination of Paragraph (a)(6)

Under the current net capital rule, market makers that are not exempt under paragraph (b) may elect to compute net capital pursuant to paragraph (a)(6). Although paragraph (a)(6) applies to market makers in equity securities and options, the Commission adopted it in 1976 with a view toward equalizing disparities between broker-dealers that were solely options market-makers and those firms that combined options market making with other securities activities. Prior to the adoption of paragraph (a)(6), those nonexempt options market makers had to compute deductions for their market maker options positions under Appendix A to the rule. Appendix A prescribes deductions based on the value of the underlying security.

Paragraph (a)(6) allows broker-dealers that conduct both market making activities cleared by another firm and other activities not to incur deductions with respect to those market making positions. Other proprietary positions not carried in a market maker account are haircut under the general rule.

The amount of leverage that can be obtained by broker-dealers computing under paragraph (a)(6) is significant. During the market break, at least three paragraph (a)(6) broker-dealers failed as a result of leverage arising from options positions that they could not have entered into if they did not compute under paragraph (a)(6). This leverage is achieved by the availability of the equity in their market maker accounts for meeting capital requirements. We will consider whether the provisions of the Minikes letter, or provisions closely approximating it, are more appropriate measures of capital adequacy for those broker-dealers currently operating under paragraph (a)(6).

71/ See letter from Michael Macchiaroli, Assistant Director, Division of Market Regulation, to Michael Minikes, Chairman, Capital Committee of the Securities Industry Association (October 23, 1985).

e. Self Clearing Options Market Makers Clearing for Independent Market Makers

The staff believes that serious consideration should be given to whether self-clearing options market makers should be permitted to carry the accounts of independent market makers without having the net capital requirements of other firms. As illustrated by the Fossett situation, a clearing firm for market makers may experience financial difficulty because of its own proprietary trading without regard to the risks of carrying market maker accounts. To the extent it engages in proprietary trading, the clearing firm should account for those risks as other broker-dealers do. Hence, consideration should be given to restricting availability of paragraph (a)(7) of the net capital rule to those firms which are sole options market makers and do not *carry independent market maker accounts.

f. Limitation on Withdrawal of Equity

The withdrawal of market maker equity caused liquidity problems for several clearing firms. There is no easy solution to this problem. The staff believes the problem should be explored to seek solutions in the event of further large market declines.

g. Bank Lending Practices

The DEA for an options clearing firm should review carefully the bank financing arrangements which that clearing firm has in place. In particular, the Division is concerned about the unwillingness of many major banks to accept in-the-money options positions as collateral. Such refusals could substantially reduce the ability of an options clearing firm to obtain necessary financing during volatile market conditions. We believe that the DEA, OCC and the options clearing firms should enter into conversations with those banks to encourage them to develop guidelines that would allow them to extend credit on in-the-money options positions. These guidelines could include the ability to monitor and adjust collateral value on an intra-day basis as well as to monitor expiration dates. It also would be necessary to develop reasonable lending ratios in which both parties have confidence. OCC also should consider requiring all options clearing firms to establish their primary financing relationships with banks that have the ability and willingness to provide liquidity based on options positions.

TABLE 5-8

FIRMS THAT CEASED OPERATIONS AS A RESULT OF THE OCTOBER MARKET BREAK

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	OTHER COMMENTS
Firm 1	Self-clearing; market maker in 37 NASDAQ stocks	Could not satisfy an approximately $5 million margin call from OCC related to customer OEX index options transactions	10/19	Liquidation under SIPA
Firm 2	Self-clearing	Underwriting problems not related to market break	11/13	SIPC 5(a) referral 11/13;
Firm 3	Self-clearing	Inventory losses of approximately $80,000	10/20	Re-opened 10/22
Firm 4	Self-clearing; market maker in 4 NASDAQ stocks; trades primarily for its own account; only one customer	Trading losses	10/28	Re-opened 11/9; B/D satisfied customer's claim from inventory
Firm 5	Introduces options market maker transactions; arbitrage firm; no customers	Suspended by NYSE; $40.2 million in trading losses	10/21	
Firm 6	Introduces customer transactions	$2.5 million in unsecured debits due to sale of OEX naked puts	10/22	
Firm 7	Introduces customer transactions	$500,000 in unsecured debits	10/26	Re-opened 11/2

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	OTHER COMMENTS
Firm 8	Introduces customer transactions	$93,000 in unsecured debits	10/28	
Firm 9	Introduces customer transactions; market maker in 18 NASDAQ stocks	Loss in Value of proprietary securities	10/20	No customer exposure
Firm 10	Introduces customer transactions; arbitrage firm; no customers	Approximately $100 million in trading losses	10/20	Re-opened 10/22; infusion of $35 million in capital
Firm 11	Introduces customer transactions	$60,000 in unsecured debits	11/18	Re-opened 11/21
Firm 12	Introduces customer transactions	Steady losses	11/11	
Firm 13	Introduces customer transactions	$50,000 in unsecured debits	11/4	
Firm 14	Introduces customer transactions; market maker in approximately 230 NASDAQ stocks and 100 pink sheet stocks; arbitrage firm	$2.2 million in unsecured debits; lost $1 million inventory value	10/22	
Firm 15	Introduces customer transactions; market maker in 2 NASDAQ stocks	$200,000 unsecured debits; $30,000 in inventory losses	10/30	

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	OTHER COMMENTS
Firm 16	Introduces customer transactions	Assets seized by its parent's clearing broker-dealer because its parent, also a broker-dealer, had unsatisfied liabilities to its clearing broker-dealer related to the market break	10/20	
Firm 17	Introduces customer transactions	$40,000 in unsecured debits	10/28	
Firm 18	Introduces customer transactions	$50,000 loss on options in trading account	10/21	
Firm 19	Introduces customer transactions	Loss of value in proprietary securities	10/30	Re-opened 11/2
Firm 20	Introduces customer transactions	$250,000 in unsecured debits	12/2	
Firm 21	Introduces customer transactions	Unsecured debits	10/28	Re-opened 11/5
Firm 22	Introduces customer transactions	$47,000 in unsecured debits	11/6	Re-opened 11/9
Firm 23	Introduces customer transactions; market maker in 8 NASDAQ stocks	$146,000 in unsecured debits	10/30	
Firm 24	Introduces customer transactions	Loss in value of proprietary	11/16	Re-opened 11/17
Firm 25	Introduces customer transactions	$33,000 in unsecured debits	11/5	Re-opened 11/6

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	OTHER COMMENTS
Firm 26	Introduces commodity transactions and equity trades; market maker in 5 NASDAQ stocks	Approximately $3.2 million in unsecured debits; 1.5 million margin call on commodities transactions; $1.7 million loss on stock transactions	10/23	Originally closed 10/20; re-opened 10/22; closed again 10/23
Firm 27	Introduces customer transactions	$190,000 in trading losses	10/28	
Firm 28	Introduces customer transactions; market maker in 21 NASDAQ stocks	$200,000 in unsecured debits and trading losses	11/9	
Firm 29	Introduces customer transactions	$200,000 in unsecured debits	10/20	One margin account
Firm 30	Introduces customer transactions	$65,000 in unsecured debits	10/20	Re-opened 10/23
Firm 31	Introduces customer transactions; market maker in 11 NASDAQ stocks	$15 to $20 million net capital deficiency due to unsecured debits and trading losses	10/28	
Firm 32	Introduces customer transactions	$300,000 in unsecured debits	10/29	Re-opened 11/2
Firm 33	Introduces customer transactions	$400,000 in unsecured debits	10/26	
Firm 34	Introduces customer transactions	$96,000 in unsecured debits due to 25 customer trades	10/5	

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	COMMENTS
Firm 35	Introduces customer transactions; market maker in 33 NASDAQ stocks	Unsecured debits	10/28	
Firm 36	Introduces customer transactions	$60,000 in unsecured debits; customers sold naked puts	10/23	
Firm 37	Introduces customer transactions	$800,000 in unsecured debits from 2 customer accounts due to OEX index options transactions	10/26	
Firm 38	Introduces customer transactions; market maker in 57 NASDAQ Stocks	Trading losses	10/20	Re-opened 11/2
Firm 39	Options trading firm that introduces options market maker transactions	Trading losses resulting in a $38 million net capital deficit	10/21	See also broker-dealer #16
Firm 40	Introduces options transactions; no customers	$20,000 options trading losses	10/21	
Firm 41	Introduces customer transactions	$150,000 payment from foreign customer failed to clear	11/4	Re-opened 11/6; funds cleared
Firm 42	Introduces customer transactions	$1 million in unsecured debits	-	Re-opened 10/28; Subordinated loan from clearing broker-dealer
Firm 43	Introduces customer transactions	$4.6 million in unsecured debits due to customer transactions in OTC stocks	11/2	Re-opened 11/12; Subordinated loan from clearing broker-dealer

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	OTHER COMMENTS
Firm 44	Introduces customer transactions	$320,000 in trading losses due to index options	11/10	
Firm 45	Introduces customer transactions	Approximately $500,000 in unsecured debits due to OEX index option transactions	10/27	Re-opened 10/28; infusion of capital
Firm 46	Introduces customer transactions	"Steady losses"; unsecured debits	11/16	
Firm 47	Introduces customer transactions	$50,000 in unsecured debits	10/28	Re-opened 11/23
Firm 48	Introduces customer transactions	$2 million in unsecured debits due to OEX index option transactions tions	10/23	Acquired as branch office of another broker-dealer
Firm 49	Introduces customer transactions	Three (3) customers sold naked put options worth $650,000; unsecured debits	10/21	Re-opened 10/27; Subordinated loan from clearing broker-dealer
Firm 50	Introduces customer transactions	$50,000 in unsecured debits	10/28	Re-opened 10/28
Firm 51	Introduces customer transactions; market maker in 43 NASDAQ stocks	$895,000 in unsecured debits and decline in value of inventory	11/20	
Firm 52	Introduces customer transactions	Unsecured debits	11/7	Re-opened 11/10
Firm 53	Introduces customer transactions	$300,000 in unsecured debits due to options trading	10/29	

FIRM	TYPE OF FIRM	REASON CLOSED	DATE CLOSED	OTHER COMMENTS
Firm 54	Introduces customer transactions	$289,000 in unsecured debits due to customer transactions in index options	10/31	Re-opened 11/2
Firm 55	Introduces customer transactions	$785,000 in unsecured debits due to sales of naked puts	10/28	
Firm 56	Introduces customer transactions	$180,000 in unsecured debits	10/20	Re-opened 10/22
Firm 57	Introduces customer transactions	$180,000 in unsecured debits	10/28	Re-opened 10/28
Firm 58	Introduces options market maker transactions; arbitrage firm; no customers	$13 million in options market making losses; $7.8 million decline in value of investment securities	10/21	