

Chapter Eleven

THE INTERNATIONAL CAPITAL MARKETS

A. The Trend Toward Internationalization of the Securities Markets 1/

In the last ten years the world's securities markets have become increasingly linked, both psychologically and through improved communications technology that has made possible both trading and information sharing arrangements. Regulatory barriers to participation in foreign markets are steadily being lowered and increasingly money managers and institutional investors are looking to the world's markets for alternative investment opportunities. 2/

Generally, this trend has been positive, providing new sources of capital to issuers worldwide. More liquid capital markets mean more buyers and sellers and, ordinarily, greater stability and efficiency. Moreover, investment in foreign markets can provide investors needed diversification. 3/ The events of the latter part of October, however, also demonstrate how easily price volatility can spread among globalized markets. Clearly, the ability of investors to shift capital from one market to another almost instantaneously can have dramatic consequences. The interdependency of the world's markets has led investors to look internationally for alternative vehicles to adjust relative debt, equity and currency exposure. The result has been that events in each individual market increasingly exert an influence over the course of trading in other markets. The first part of this section analyzes this trend and the extent to which events in domestic markets triggered events in foreign markets in October, and vice versa.

Although the markets are increasingly interdependent, they also have retained their individuality and have resisted complete integration. Globalized markets continue to have different structures and operating rules. The second part of this section briefly discusses the London, Tokyo and Hong Kong markets and analyzes how those markets

1/ The Division would like to express its gratitude to the staffs of the International Stock Exchange of the United Kingdom and Republic of Ireland, Ltd. ("ISE"), the Tokyo Stock Exchange ("TKE") and the Hong Kong Office of the Commissioner for Securities and Commodities Trading, without whose patient assistance this chapter would have been considerably briefer. The Division also greatly appreciates the support and assistance the Directorate of Economic and Policy Analysis ("DEPA"), the Office of the Chief Economist ("OCE") and the Division of Investment Management ("IM") provided the Division.

2/ See Staff of the U.S. SEC, Report on the Internationalization of the Securities Markets, (July 27, 1987) ("Internationalization Study").

3/ It has been reported that some institutional investors believe that investments in foreign markets helped cushion the steep drop in U.S. equities in October. For example, money managers that attempt to match the Morgan Stanley Capital International European, Australian, and Far East ("EAFE") index found their portfolios declined 10.9%, compared with a 22.9% drop in the Standard & Poor's 500 stock index through October 22. See Givant, Foreign Diversity Pays Off, Pensions and Investment Age, Nov. 2, 1987, at 3, 49.

performed under the extraordinary market conditions in the latter part of October. Finally, the third part of this section discusses the effect the dramatic drop in prices worldwide in October had on new issue activity.

B. Interrelationships of the World's Securities Markets

1. Volume of International Trading in October

It has become commonplace to speak of the development of 24-hour markets in which world-class securities are traded around the clock and around the globe. Indeed, the staff's analysis indicates that international trading in U.S. securities, at least for institutional accounts, did occur during the market break. Nevertheless, as discussed below, the importance of this trading can be overemphasized. First, preliminary evidence suggests that foreign investor participation in U.S. markets was not a disproportionate factor in U.S. market moves. Second, much of the foreign market volume in U.S. securities involves special purpose trades already negotiated in the United States and executed, for convenience, abroad.

a. Level of Foreign Investor Participation in U.S. Markets

During the market break, particularly on October 19 and 20, rumors were circulating that foreign investors were "dumping" U.S. stocks and perhaps substantially contributing to the massive price declines. Information from market participants interviewed by the Division indicates that this probably was not the case. ^{4/} Of the thirteen major firms interviewed, six indicated that European investors were selling more than usual, but none of those firms characterized that selling as extraordinarily heavy. ^{5/} One of the firms noted that European investors had been selling, in fact, for some time. Only one firm seemed to believe that selling by these investors had a significant effect on U.S. markets. That firm believed that a large influx of pre-opening sell orders from foreign investors on October 19 may have been a significant factor in pre-opening price declines.

Although much was made of Japanese investors' activity during the market break, the information collected from the firms interviewed seems to indicate that Japanese investors were not directly a significant factor in the U.S. market decline. A few firms found Japanese investors increased their selling activity but the majority of firms believed that their major Japanese clients were not big sellers. The latter group also stated, however, that Japanese investors were not big buyers during this period and that their noticeable absence and the loss of liquidity that resulted had an effect on the market.

Although this anecdotal evidence is far from conclusive, it is supported by preliminary data obtained by the Commission. Its data show that the trend toward increased foreign investor interest in U.S. equities has continued during recent periods

^{4/} One firm, however, stated that foreign mutual funds were among its heaviest customers during the market break.

^{5/} Several firms noted that these sellers opted to send orders to U.S. markets because they are the primary markets for U.S. securities, where, at least in theory, the most liquidity could be found.

despite the global decline in stock prices. For the past eleven months foreign investors have been increasing their holdings of U.S. stocks and preliminary data indicate that foreign investors were net purchasers of U.S. stocks during October, 6/ increasing their investment positions in U.S. equities by \$2.4 billion.7/ Of that amount, \$2.3 billion is attributed to net buying by Japanese investors.

b. Trading Volume in U.S. Stocks in London and Tokyo

Volume in foreign stocks in London was up substantially for the week of October 19, 1987. Daily exchange volume for the approximately 650 blue-chip foreign issues traded was 60% higher and, on October 21, was twice the daily average. 8/ The ISE reported that foreign equity volume increased from 510 million pounds (U.S. \$944 million) 9/ per day to over 800 million (U.S. \$1,481 million), largely attributable to trading in European and Japanese stocks. Volume in U.K. American depositary receipts ("ADRs") also was substantially higher: approximately 2.5 million ADRs were traded per day compared with one million per day on average. 10/ The ISE believes that the ADR volume suggests that there was a relatively high degree of U.S. participation in the London market. 11/

The ISE's volume statistics show that reported trades in U.S. stocks listed on the ISE from the week of October 19 increased 65% over a representative week, October 5, 1987. 12/ Similarly, share volume was up 54.7% from 23,803,234 shares for the week of October 5 to 36,832,344 shares during the week of October 19. Dollar volume for the week of October 19, however, was \$253.45 million, a 47% decrease over the week of October 5, during which dollar volume was \$480.82 million.

6/ See Chart 11-1, which indicates that for the first ten months of 1987 foreign investors were net purchasers of more than \$31 billion of U.S. stocks, a 63% increase over total net purchases for 1986.

7/ See *id.*

8/ See Forman, London Market for Non-British Stocks Is Growing Rapidly in Time of Turmoil, Wall St. J., Nov. 2, 1987, at 39, col. 2.

9/ Exchange rate: U.S. \$1.00 = .54 pounds

10/ An ADR is a receipt evidencing ownership in a pool of foreign securities held on deposit by a U.S. financial institution. Certain institutional investors, and many retail investors, whose ability to purchase foreign shares directly is limited use ADRs as surrogate investment vehicles. While ADRs are primarily traded in the United States, they are also actively traded in, among other markets, the U.K.

11/ As discussed in Chapter Two, a substantial percentage of this volume involved futures-related transactions.

12/ The ISE's volume statistics underreport the actual trading volume in U.S. stocks in London because a significant amount of trading in those stocks occurs between non-ISE members, who are not required to report trades to the ISE.

Share volume for the week of October 19 peaked on October 19 at 9,517,212 shares, or 26% of the weekly total. An analysis of the volume figures reveals that the average number of trades per issue increased 65% from 6.6 trades per issue during the week of October 5, 1987, to 10.9 trades per issue for the week of October 19, 1987. Of the 404 U.S. securities listed on the ISE, 201 issues showed an increase in the number of trades reported during October 19-23 (compared with the week of October 5). There was a decrease in trade volume in 119 issues and 84 issues' trade volume remained the same. The average number of shares per trade for the week of October 19 was only 6.4% less than the earlier period. ^{13/} This seems to indicate that the ratio of proprietary and institutional trades to retail trades remained roughly the same.

Because the ISE's rules do not require that all trades in foreign stocks be reported, the staff also requested trade data from a sampling of firms who trade in London. ^{14/} Based on both share and dollar volume, the trade information received shows that, with the exception of two firms, all firms increased significantly their trading activity in U.S. stocks in London during the break. The increases in purchase and sale volume on October 19 and 20 ranged from 1.2 times the firm's average daily volume for October to as much as 25 times the firm's average daily volume.

While trading in U.S. securities increased consistently with trading on the ISE generally it should be kept in mind that volume in U.S. securities remained relatively small. Indeed, total ISE volume in U.S. securities during the week of October 19 was less than 1.6% of total share volume on the NYSE and approximately 0.3% of total dollar volume on the NYSE. Additionally, a significant number of these trades were what can be generically referred to as special purpose trades. Trade information submitted indicates that firms may have effected a number of trades as part of program trading strategies. On October 20, 1987, the NYSE formally requested that firms refrain from routing program trades automatically to the floor for execution. As a result, the Division believes some of these strategies were accomplished in the London market. ^{15/}

In addition, other futures-related strategies contributed to the increase in volume. In particular, a strategy referred to as "exchange of futures for physicals" or "EFPs" played a part in the increased volume during the break. In an EFP, the two sides to the trade swap stock index futures for a basket of stocks and cash, the value of which roughly equals the futures' value. ^{16/}

The Division also believes, based on the information submitted by the firms, that a large percentage of the trades executed by U.S. firms in London are prenegotiated crosses involving U.S. parties in which the firm acts as agent for both the buyer and seller. This information from the firms is supported by trade reports from the ISE. On October 19 and 20, the trade reports submitted to the ISE that were identified as

^{13/} For the week of October 5, the average number of shares per trade was 8,935 and for the week of October 19, was 8,365

^{14/} The Division solicited foreign market trade data from firms who were the largest net sellers on the NYSE during the market break.

^{15/} See discussion in Chapter Two.

^{16/} See discussion of EFPs executed in London in Chapter Two.

crosses outnumbered the trades designated as buys and sells by 40% and 36%, respectively. ^{17/}

Unlike London, where volume was sharply higher after October 19, liquidity appeared to evaporate in U.S. stocks traded on the TKE. For the first half of October, average daily share volume in the 42 U.S. stocks listed on the exchange was 993,681 shares. ^{18/} From October 19 through the end of the month, average daily share volume dropped nearly 70% to 301,564 shares. Further, the number of stocks in which there was no volume increased dramatically after October 19. From October 1 through October 16, the average number of stocks with no volume was 3.7 per day. From October 19, however, that figure increased to 9.7 per day, a 162% increase. On October 31, there was no volume in 15 U.S. stocks, nearly one third of all the U.S. stocks listed on the TKE. These statistics seem to reflect the fact that Japanese and foreign investors who ordinarily look to the TKE as a source of liquidity in certain U.S. stocks were not trading in those stocks, or alternatively, that those investors preferred United States or other markets.

2. Analysis of Market Triggering Effects

An attempt to evaluate the impact and causes of the October market break would not be complete without an evaluation of the interrelationships of the world's major equity trading markets. Indeed, at least one study of the October events pointed to the price declines in foreign markets that do not have actively traded stock index futures as some evidence that derivative market trading did not contribute to the depth or speed of the October market break in the United States. ^{19/} Thus, the Division examined intra-day stock price movements in several international markets and found that price movements before and after the October, 1987 market break, particularly in London, Tokyo and the United States, illustrate the strong ties between the world's equity markets.

During the week of October 12, the Dow Jones Industrial Average ("DJIA") declined by a total of 9.6% from the opening on Monday, October 12. Tokyo reacted quickly on Monday, October 19, when heavy selling pressure forced the market down steadily throughout the day to close down 2.3%. Trading opened in London later that day down 7.8% from the previous week. Throughout early trading in London, the market steadily declined. After staging a brief rally in the afternoon, London closed down 12.6% for the day. The U.S. market followed, opening down 10.9% from Friday's close. At the time, the London market was down approximately 13% from the previous week's

^{17/} As discussed in Chapter Two, certain firms also executed short sales in U.S. stocks in London, for both proprietary and agency accounts, in what may have been an attempt to avoid U.S. regulatory restrictions.

^{18/} Volume for the month peaked on October 1 at 2,511,590 shares. On October 19, share volume in these stocks was 268,960, which was below average for that period, and on October 20, was 462,480 shares.

^{19/} See Chicago Mercantile Exchange Committee of Inquiry, Preliminary Report to Examine the Events Surrounding October 19, 1987, at 6-7 (December 22, 1987) ("CME Report").

close and 6% from its October 19 opening. The DJIA closed down a record 22.6% for the day.

When the trading day began in Tokyo on October 20, 95% of the stocks were unable to open because of an order imbalance on the sell-side. Consequently, the Nikkei Dow Jones Industrial Index ("Nikkei"), an index of 225 leading TKE stocks, fell 7.5% during the morning session and dropped further during the afternoon session, for a record one-day decline of 14.7%.

When trading commenced in London later on October 20, the market immediately dropped 19.3% from its previous close and fell even further over the course of the morning. In afternoon trading, London staged a rally; the rally faltered, however, and the market closed down 12.2% for the day.

New York opened with the DJIA up 211 points. Although the Dow gained 5.9% for the day, the rally was not broad-based: On the New York Stock Exchange ("NYSE"), the advance/decline ratio was only 7 to 6 and the American Stock Exchange ("AMEX") and NASDAQ indexes also were both down.

A reversal seemed likely, as the rise in the DJIA carried over to the Tokyo market. The Nikkei climbed steadily throughout the day on October 21, closing up 9.3%. By the opening in New York, buy orders were pouring in from investors.

To measure the degree to which U.S. markets led or followed other markets, the Division and the staff of the Office of the Chief Economist ("OCE") examined the correlation of movements in several international stock indexes. As discussed below, the data reviewed indicated that the United States markets did influence price movements in other markets. OCE calculated partial correlation coefficients for the percentage changes among several foreign indexes and the DJIA. ^{20/} Partial correlation coefficients measure the degree to which two variables (for example, two stock indexes) move together. When two variables change entirely independently of one another (in other words, they exhibit no correlation) they are assigned a partial correlation coefficient of 0. When changes in two variables are always of the same magnitude and in the same direction (for example, if a 1% rise in the DJIA is always accompanied by a 1% rise in the Nikkei) the coefficient is 1. On the other hand, if two variables always exhibit changes of equal magnitude but in opposite directions, their partial correlation coefficient is -1. (For example, if a 1% rise in the DJIA is always accompanied by a 1% drop in the Nikkei, the coefficient is -1.)

OCE examined correlation coefficients between intra-day percentage changes in the S&P 500 and subsequent opening values, early trading and closing values of the TKE Composite, a broad-based index calculated by the TKE, and the Financial Times-Stock Exchange ("FT-SE") 100, an index of 100 of the most actively traded ISE stocks, during the period from October 12 through October 23, 1987. OCE found that during the weeks of October 12 and October 19 the percentage change in the S&P 500 index had a significant effect on the next day's opening value and early trading value of both the TKE Composite and the FT-SE 100. The correlation coefficient between the S&P 500 and the percentage change at the opening from the previous day's close was 0.4183 for

^{20/} See Chart 11-2 for accompanying tables prepared by OCE.

the TKE Composite ^{21/} and was 0.8200 for the FT-SE 100. ^{22/} Further, the correlation coefficients increased when the previous day's change in the S&P 500 was compared with the percentage change in the foreign index after the first hour of trading from the previous day's close. For the TKE Composite, the correlation coefficient jumped to 0.8473 and for the FT-SE 100, the coefficient increased to 0.8747.

OCE also examined the effect of intra-day changes in the S&P 500 on the close-to-close movements in the London and Tokyo markets and found in both instances a significant effect. For the FT-SE 100, the correlation coefficient was 0.6664 ^{23/} and for the TKE Composite, 0.8929.

Finally, OCE compared the correlation coefficients assuming the foreign market led the United States. OCE concluded that during the weeks of October 12 and October 19, movements in the TKE Composite had a relatively small effect on the same-day opening value, early trading value and closing value of the S&P 500 index. The correlation coefficient between the TKE Composite and the percentage change in the S&P 500 at the open from the close the day before was 0.2220; after one hour of trading, was -0.1440; and at the close, 0.0744. Thus, the U.S. market appeared to have a much larger effect on the TKE than vice versa.

Although changes in the FT-SE 100 immediately before U.S. markets opened appeared to have had a greater effect on the U.S. opening, this effect was considerably smaller than the corresponding effects of the S&P 500 on the FT-SE 100. OCE's data showed that the correlation between the percentage change at 8:00 a.m. E.S.T. (1:00 p.m. London time) from the previous day's close and the percentage change in the S&P 500 at the opening from the close the day before was 0.5602. After one half hour of trading in the United States, however, the coefficient dropped to 0.3329. This suggests that U.S. markets were much less affected by London than London was influenced by U.S. markets.

The correlation coefficient between the change in the S&P 500 and the change in FT-SE 100 at the close increased to 0.5435. As noted above, however, London and New York trading days overlap and it is difficult to tell the degree to which this correlation reflects the effects of the U.S. markets on London.

Caution should be used in drawing conclusions from this correlation data. As noted above, it has been only in recent months that significant correlations between U.S. and foreign stock price movements can be identified. Nevertheless, it does appear

^{21/} See Chart 11-2, Table 1.

^{22/} See Chart 11-2, Table 2.

^{23/} See Chart 11-2, Table 2. Because London's trading day partially overlaps with the start of trading in the United States, this coefficient also may reflect partially the effect of this trading on the London market, rather than exclusively reflecting the prior day's S&P 500 movement. Thus, OCE believes that the correlation between the intra-day S&P 500 percentage change and the opening value and early trading value of the FT-SE 100 are better measures of the inter-market correlations.

that a cataclysmic market event such as that which occurred on October 19 can be expected to have world-wide repercussions.

C. Market Performance -- London, Tokyo and Hong Kong

While the discussion of market correlation indicates the substantial impact the U.S. market has on other markets, it is instructive to focus more closely on trading in certain major foreign markets. In particular, the United Kingdom and Japan deserve analysis because, along with the United States, they are by far the most active trading markets. Moreover, recent loosening of restrictions on access have led U.S. broker-dealers recently to make substantial capital investments, enabling them to become active participants in both those markets. Finally, U.S. institutions are active purchasers of both U.K. and Japanese securities. Accordingly, the operation of those markets directly affects a large number of U.S. participants. In addition, trading in London and Japan is of interest because their trading systems and regulatory provisions differ somewhat from those in the United States and therefore offer useful models to measure the performance of our own markets. ^{24/} Finally, this section also includes a discussion of trading on the Hong Kong exchanges because of the attention and concerns raised by the closure of that market for four days.

I. London

The London securities market was transformed radically on October 27, 1986, generally referred to as "Big Bang Day." The Big Bang heralded a wholesale restructuring of London's capital markets, including changing the name of the stock exchange to the International Stock Exchange of the United Kingdom and the Republic of Ireland. Among the most significant changes was the introduction of a new system of trading, referred to as "dealing," -- using the Stock Exchange Automated Quotations System ("SEAQ"). Under the new system, trading is very similar to over-the-counter ("OTC") trading in the United States. The screen-based system provides competitive market makers the ability to input "firm" quotations into SEAQ terminals. ^{25/} Trades, referred to as "bargains," are negotiated and finalized over the phone between market makers or between a market maker and his customer. The ISE has not yet developed automatic routing or execution systems.

During the October market break, the ISE experienced many of the same problems as the U.S. OTC market. On Monday, October 19, the FT-SE 100 dropped 249.6 points, losing nearly 10.1% of its value. ^{26/} Tuesday saw that record eclipsed with a 250.7 point

^{24/} Much of the information provided in the sections on London and Tokyo has been drawn from preliminary data provided to the Division by the ISE and TKE.

^{25/} The ISE generally requires that market makers deal at their posted quotes for at least the number of shares posted. Quotations subject to this requirement are referred to as "firm quotations."

^{26/} The London market effectively was closed on Friday, October 16 because of a severe wind storm that paralyzed the city. Thus, the greater than 200-point drop in the FT-SE 100 is partly explained as pent-up selling demand from Friday in response to the 109-point drop in the DJIA.

drop in the index, or 11.6%. 27/ More than 2,000 stocks declined while only 75 stocks rose on October 20. Volume of 798 million shares was 250% greater than a year earlier and 31% over the previous week's volume.28/

Staff discussions with ISE members revealed that instances of market makers' phones going unanswered, locked and crossed markets, widened spreads and inaccurate quotes occurred in London as they did in the U.S. OTC market. Despite the strain of the unprecedented volume, however, 29/ the ISE's quotation system operated smoothly. 30/ Systems modifications and increases in capacity since Big Bang Day

The London press reported that on October 19, most of the trading was between market makers for their own accounts and by foreign investors, primarily from the United States, rather than domestic retail investors. Market makers reportedly had large inventory positions before October 19. See Wolman, Bears Catch British Market-Makers in a Vulnerable Position, Fin. Times, Oct. 22, 1987, at 2, col. 2.

27/ This compares with an 11% drop in the value of the NASDAQ Composite Index (a broad-based index of U.S. OTC stocks) on Monday, October 19, and a 9% drop on Tuesday, October 20.

28/ Despite the heavy processing burden the increased volume caused, ISE's settlement systems functioned well. The New York Times reported that settlements appeared to have been conducted normally and no significant liquidity problems appeared on November 2, the first settlement day since the October market break. The article also reported that approximately 85% of settlements are normally concluded on settlement day and that that level appeared to have been achieved. See Trades Settled in London, N.Y.T., Nov. 3, 1987, at D22.

29/ The ISE reported that on both October 21 and 22, the ISE experienced all-time highs of over 100,000 bargains. Volume has dropped to 20,000-25,000 bargains per day since the break, which is still a significant increase over "pre-break" volume. Prior to the break, the ISE only had tested the automated system's capability, in fact, to handle a maximum of 60,000 trades per day.

30/ SEAQ's computer system suffered few failures and processed the unprecedented volume of activity with relatively few problems. The ISE's systems handled on October 22 and 23 over 100,000 trade reports and 100,000 quote changes each day. Additionally, SEAQ accommodated over 8 million inquiries for price information, twice the weekly volume of 4 million inquiries in the week following Big Bang. As discussed below, however, the ISE instituted fast market procedures in several instances, partly because of systems overloads, and, at one point on Wednesday, October 22, was forced to stop computing the FT-SE 100 index for approximately three hours. Heavy volume caused technical problems, which the ISE preliminarily believes was the result of a software fault. The problem apparently involved the link between the computers that calculate the FT-SE 100 index and the SEAQ computers that process market data. During this period, the ISE halted trading on options and futures on the index. Subscribers were deprived of the page of information containing data on the 100 stocks that comprise the FT-SE 100, in addition to the value of the index itself. Subscribers could retrieve data on all the 100 stocks individually, however.

proved adequate under the extraordinary market conditions. Although the FT-SE 100 index fell by more than 10% on October 19 and again on October 20, the SEAQ dealer market, at least as measured by the operation of the quotation system, technically never ceased trading.

This is not to say, however, that market participants did not encounter obstacles in transacting business on October 19 and 20. Because of the non-centralized nature of an OTC market (compared with an auction market), participants are able to effectively cease trading to avoid their responsibility to provide a continuous two-way market simply by refusing to answer their phones. ^{31/} Reports in the financial press and interviews with market participants indicate, for example, that there were numerous instances in London of market makers not answering their phones. ^{32/} The ISE believes that, as was the case in the NASDAQ market, the primary problem was that firms did not have the capacity to handle the deluge of in-coming calls. On October 19 and 20, ISE members' customer business was 60% greater than during an average period in September and intra-market trades (i.e., between market makers) were up 45% over the same period. Firms estimated that the volume of calls they were receiving was four to five times higher than average. ^{33/}

Market makers also may limit their exposure without formally withdrawing from the market by reducing quote size. ^{34/} The ISE's examination of quote size indicated that market makers reduced their quote size drastically during the break. In this way, they were able to limit their exposure. The ISE's rules specify that the minimum bargain size dealers may post is 1,000 shares; before the break, however, dealers frequently were quoting bargain sizes of up to 100,000 shares. The ISE found that since October 19, such liquidity has been greatly reduced and brokers continue to find that to fill customer orders, they frequently have to call several market-makers.

^{31/} The ISE prohibits a market maker who withdraws from making a market in a stock from re-entering quotes in that security for 90 days. There is only one exception -- if to continue would force the market maker to violate other rules or laws (e.g., rules governing conflicts of interest). The ISE's withdrawal prohibition is referred to as a prohibition against "fair-weather market making." This is a much narrower exception than the U.S. OTC market now affords its market makers who may withdraw for such reasons as illness or vacations. The National Association of Securities Dealers, however, recently proposed an amendment to this rule that would allow market makers an excused absence only for certain physical circumstances (e.g., equipment malfunction or relocation) or legal considerations.

^{32/} See, e.g., Economist, Nov. 14, 1987, at 83, 84; and Waters, Market-Makers Not Ignoring Phones, Says SE, Fin. Times, Oct. 23, 1987, at 2, col. 4.

^{33/} Id. The Economist reported one incident, however, of a head dealer of one firm instructing his staff not to trade.

^{34/} See Chapters Four and Nine for a comparable discussion of NYSE and NASDAQ quotation size.

Statistics provided by the ISE confirm that quote size has indeed declined. For alpha stocks, ^{35/} the average maximum quote size ("AMQS") for September was 289,000 shares and was as high as 304,000 shares by October 14. By October 21, however, the AMQS had dropped 52% to 145,000 shares and dropped an additional 19% by October 28 to 117,000 shares. The trend reversed slightly by November 4, increasing 4% to 122,000 shares. Similar patterns were observed in beta and gamma stock quotes. For beta stocks the AMQS dropped 52% by October 21, declining from 54,000 shares to 22,000. A further 36% drop to 14,000 shares was only slightly offset by a 12.5% increase to 16,000 shares by November 4. The most striking reduction in quote size, however, occurred in the gamma stock quotes. From October 14 to October 21 average maximum quote size dropped from 11,000 shares to 3,000 shares, a 73% reduction, and has remained at that level since. While these reductions are substantial, it is important to emphasize that the quote sizes continued to be at least comparable to quote sizes on the NYSE. ^{36/}

Another problem faced by both the U.S. OTC market and the ISE was a dramatic widening of spreads. The ISE analyzes spreads by examining the "touches," the spread between the best bid and ask quotation. The ISE found that touches widened most on alpha stocks, the most liquid stocks traded through its facilities, roughly tripling. In addition, the touches appear to be continuing to increase. On October 14, 1987, touches on alpha stocks were .84%; on October 21, 1.37%, 2.1% on October 28, and as high as 2.17% on November 4. The same trend was observed for beta and gamma stocks. Betas increased 255% from 1.35% on October 14 to 3.45% on November 4. Similarly, touches on gamma stocks increased from 2.57% to 5.37% for the same period. ^{37/} As of November 27, 1987, the ISE noticed no significant narrowing of spreads.

Interviews with firms active in London also revealed that market makers indirectly withdrew from the market by not honoring their posted quotes. Market makers in London are required to deal in stocks at the price and in the size they post on their screens. On several occasions, however, market makers were unable to change their quotes quickly enough. Reportedly this was in part due to SEAQ's inability at certain times to process the enormous number of quote updates market makers were attempting simultaneously. During these periods, the ISE instituted "fast market procedures," which, while in effect, suspend the requirement that market maker quotes

^{35/} Stocks are divided into several categories, based primarily on the volume of trading. The most heavily traded are referred to as alpha stocks and comprise approximately 60-70% of the market capitalization traded through ISE facilities. ISE rules require market makers in these stocks to publish firm, continuous, two-way quotations. Trade data is reported through SEAQ and disseminated on TOPIC terminals. The next tier of 500 stocks are referred to as beta stocks, for which market makers also must publish firm, continuous, two-way quotes. Trade data on these stocks is not immediately disseminated on TOPIC terminals. Gamma stocks are the next tier of stocks, for which the quotes are not required to be firm and generally are indicative. The final tier is composed of delta stocks. Only an approximate middle price is disseminated by SEAQ for delta stocks.

^{36/} See Chapter Four.

^{37/} See Chapters Four and Nine for a comparable discussion of NYSE and NASDAQ quotation spreads.

be firm.^{38/} During fast markets, SEAQ informs all participants through their terminals that all quotes are merely indicative. In one sense, the declaration of fast markets on October 19 and 20 was akin to official recognition that market maker quotes actually were not firm and could not be expected to be firm, given the extreme market conditions. Although the institution of fast market procedures clearly eased the burden for market makers, the effect on their customers may not have been as positive. During periods when the procedures were in effect, institutions and agency brokers could not ascertain whether their executions represented the best price available, particularly as quotes were rapidly changing.

The October market break was the first time the ISE instituted fast market procedures and, since that time, the ISE has polled its membership to determine whether market makers believed the procedures were of benefit to the market. The ISE informally reported that market makers almost uniformly supported the fast market procedures, stating that without them, the market would have been far more chaotic. The Division also understands that, as part of its market review, the ISE also will study execution quality by assessing how close a correlation existed between the dealing price (i.e., trade price) and the quote posted for a security at the time of execution.

Our interviews with firms elicited significant anecdotal evidence that the ISE experienced, as did the U.S. OTC market, locked (referred to as "choice") and crossed markets. The ISE may analyze the number of such occurrences, although specific statistics on the number of these instances are not yet available. Choice and crossed markets added to confusion about where the markets for securities were at any given moment. Instances of choice and crossed markets, however, did not have quite the same paralyzing effect on the London market as they did in the United States because the ISE has not yet developed automatic order routing and execution systems, which in the U.S. OTC market are not programmed to operate when the market for a security is locked or crossed.

Although various program trading strategies appear to have had a significant impact on the U.S. markets during the market break, program trading does not appear to have been a significant factor in the U.K.^{39/} Computer trading techniques involving U.K. stock index futures and options do not play much of a role in the London market.^{40/} In fact, the ISE noted trading in index futures and options was moderate during the break. In response to wide-spread discussion in the United States on whether derivative markets had a substantial destabilizing effect on the markets, however, the ISE has stated that it intends to study the issue carefully in the coming months.

^{38/} The ISE instituted fast market procedures on October 19 from 9:10 a.m. - 9:23 a.m. (London time) and 11:00 a.m. - 12:00 p.m.; October 20 from 9:00 a.m. - 11:00 a.m. and 2:32 p.m. - 4:00 p.m.; October 21 from 9:00 a.m. - 9:30 a.m.; October 22 from 9:08 a.m. - 10:00 a.m. and 11:47 a.m. - 12:40 p.m.

^{39/} See Chapter Two for a discussion of program trading techniques involving the sale of U.S. stocks in the London market.

^{40/} Although volume on the ISE is approximately 25% of the volume on the NYSE, volume in the recently created London International Financial Futures Exchange stock index futures contract is only 1.7% of U.S. stock index futures volume. CME Report, supra note 19, at 6-7

2. Tokyo

The Tokyo Stock Exchange is an auction market that operates similarly to U.S. stock exchanges. ^{41/} Stocks that are traded on the TKE are assigned to special TKE members called "saitori" who perform functions much like U.S. exchange specialists, with one important distinction: although saitori are responsible for matching buy and sell orders in their stocks, they are prohibited from trading for their own account. Thus, unlike U.S. exchange specialists, saitori do not have an affirmative obligation to provide liquidity to ensure a fair and orderly market. Another difference between the U.S. exchange markets and the TKE is that there are pre-established daily price limits for each stock, as well as the stock index future. Once the limits are reached, the TKE halts trading in the issues until the next trading session. ^{42/}

Like the U.S. exchange markets, the TKE experienced a lack of liquidity on October 20 and 21. On Tuesday, October 20, the Nikkei dropped 620 points to 25,745, a 2.4% decline. On Wednesday the Nikkei suffered an additional 14.9% loss in its value, by far the worst one-day drop in the TKE's history. By November 19, the Nikkei had fallen a total of 19% from its pre-market break high. On October 20, the sell orders so overwhelmed the buy orders that some 80 stocks never opened. ^{43/} In addition, the TKE informed the staff that during the day trading in 700 stocks (nearly half the 1,500 that are listed on the exchange) was halted because prices in those stocks plunged at

^{41/} One potentially significant difference between the markets is that the TKE does not have a well-developed stock index futures market. In fact, the first stock index future in Japan was only recently introduced on the Osaka Stock Exchange. Although there is also a stock index futures contract on the Nikkei stock index that is traded on the Singapore International Monetary Exchange, or Simex, the combined volume on both these contracts has been 60 times less than the volume of stock index futures on U.S. stocks. CME Report, *supra* note 19, at 6. The Japanese Ministry of Finance ("MOF") believes trading in the Osaka futures contract, as well as the SIMEX contract, did not appear to have accelerated the decline during October. See letter from Toshimi Konno, Director, Co-ordination Division, Securities Bureau, MOF, to Richard G. Ketchum, Director, Division of Market Regulation, dated December 28, 1987. On October 20, in fact, trading was halted in the future before the trading session opened because the price already had dropped to its pre-established price limit.

^{42/} A stock's price limit is determined on the basis of the previous day's closing price. For example, Sony Corporation closed on the TKE at 4950 yen (U.S. \$39.60) on Monday, October 19. Its daily price limit for October 20, based on that closing price, was 500 yen (U.S. \$4.20). See also note 43, *infra*. Thus, because the price decline in Sony in the United States on October 19 was greater than 500 yen, it, along with many other stocks, was not opened on Tuesday. See Tokyo Market is Shaken by New York's Collapse, The Asian Wall St. J. Weekly, Oct. 26, 1987, at 31, col. 1.

^{43/} See Economist, Nov. 14, 1987, at 85. The TKE's rules specify a maximum ratio between buy and sell orders. When that ratio is exceeded, trading is temporarily halted.

an unprecedented rate to their pre-set daily price limits. ^{44/} The intense sell pressure on October 20, which caused prices to collapse, led the exchange to seek ways to attract buy interest and stabilize market conditions. Thus, the TKE lowered its initial margin collateral requirement to 50% from 70% and raised the collateral valuation rate to 70% from 60%. These eased margin requirements were intended to encourage purchases to offset the sell order imbalances.

It was not until the final two hours of trading that any buyers emerged at all. Although four major Japanese firms, Nomura, Daiwa, Nikko and Yamaichi, reportedly entered the market as buyers of industrial stocks, their activity was not enough to turn the tide on October 20 and the Nikkei closed down 14.9%. ^{45/} By Wednesday, October 21, however, a dramatic change in sentiment had occurred. A torrent of buy orders flowed in, causing serious liquidity problems on the sell side. During the first half hour of trading, only three stocks were traded. During the course of the day, trading in 151 stocks was halted because their prices had risen to the level of their daily price limits.

^{44/} Daily price limits are intended to check extreme volatility by stipulating the maximum a stock's price may change during a trading day. Once the limit is reached, trading is halted until the next trading day. The daily price limits are:

<u>Stock Price Range*</u>				<u>Daily Limit</u>	
0	(\$.00) -	100 yen	(\$.80)	30 yen	(\$.24)
100	(\$.80) -	200 yen	(\$ 1.60)	50 yen	(\$.40)
200	(\$ 1.60) -	500 yen	(\$ 4.00)	80 yen	(\$.64)
500	(\$ 4.00) -	1,000 yen	(\$ 8.00)	100 yen	(\$.80)
1,000	(\$ 8.00) -	1,500 yen	(\$ 12.00)	200 yen	(\$ 1.60)
1,500	(\$ 12.00) -	2,000 yen	(\$ 16.00)	300 yen	(\$ 2.40)
2,000	(\$ 16.00) -	3,000 yen	(\$ 24.00)	400 yen	(\$ 3.20)
3,000	(\$ 24.00) -	5,000 yen	(\$ 40.00)	500 yen	(\$ 4.00)
5,000	(\$ 40.00) -	10,000 yen	(\$ 80.00)	1,000 yen	(\$ 8.00)
10,000	(\$ 80.00) -	30,000 yen	(\$ 240.00)	2,000 yen	(\$ 16.00)
30,000	(\$ 240.00) -	50,000 yen	(\$ 400.00)	3,000 yen	(\$ 24.00)
50,000	(\$ 400.00) -	100,000 yen	(\$ 800.00)	5,000 yen	(\$ 40.00)
100,000	(\$ 800.00) -	200,000 yen	(\$ 1,600.00)	50,000 yen	(\$ 400.00)
200,000	(\$ 1,600.00) -	500,000 yen	(\$ 4,000.00)	80,000 yen	(\$ 640.00)
500,000	(\$ 4,000.00) -	1 mill.	(\$ 8,000.00)	100,000 yen	(\$ 800.00)
1 mill.	(\$ 8,000.00) -	1.5 mill.	(\$12,000.00)	200,000 yen	(\$ 1,600.00)
1.5 mill.	(\$12,000.00) -	2 mill.	(\$16,000.00)	300,000 yen	(\$ 2,400.00)
2 mill.	(\$16,000.00) -	3 mill.	(\$24,000.00)	400,000 yen	(\$ 3,200.00)
3 mill.	(\$24,000.00) -	5 mill.	(\$40,000.00)	500,000 yen	(\$ 4,000.00)
5 mill.	(\$40,000.00) -	10 mill.	(\$80,000.00)	1 mill.	(\$ 8,000.00)
above 10 mill.	(\$80,000.00)			2 mill.	(\$16,000.00)

Source: Tokyo Stock Exchange

*Exchange Rate: U.S. \$1.00 = 125 yen.

^{45/} See Fin. Times, Oct. 21, 1987, at 2, col 1

Firms reported that it was nearly impossible to find sellers on that Wednesday. The Nikkei closed up a record 2,037.32.

The MOF's review of investor activity found that the heaviest selling on October 20 came from individual investors who panicked at the drops in markets around the world. ^{46/} These investors also were quick, however, to come back into the market as buyers and ended the week as net buyers of stocks. The MOF also found that Japanese institutional investors opted to wait for the markets to normalize and reduced drastically both purchases and sales: for the week of October 19, institutional investors were net purchasers of 40 billion yen (U.S. \$320 million) of securities. By far the largest sellers in Tokyo during the market break were foreign investors. The MOF believes that foreign mutual fund managers may have sold Japanese securities to meet huge numbers of shareholder redemption requests. During the week of October 19, foreign investors were net sellers of 1.05 trillion yen (U.S. \$8.4 billion). Foreign investors continued to sell Japanese securities through at least mid-December. ^{47/}

It is significantly easier to stabilize the securities markets in Japan because of two unique characteristics of the Japanese markets. First, a large percentage of the float of most Japanese firms is owned by other corporations who wish to cement business relationships and to signify good will. These shares are tightly held and are almost never traded. Second, the securities industry is decidedly dominated by Nomura, Daiwa, Nikko and Yamaichi. Together, they account for roughly 60% of the trading on the TKE and perhaps up to 75% if their affiliates are included. ^{48/} It has been suggested that the four firms also were largely responsible for bringing individual investors back into the market. For the week of October 19, these investors were net purchasers of 650 billion yen (U.S. \$5.2 billion) of Japanese securities. ^{49/} Japanese institutional investors, with reportedly large cash positions, returned to the market later in the week. ^{50/}

Share volume statistics evidence the liquidity problems experienced on October 20 and 21. On October 20 and 21, share volume was approximately 500 million shares and

^{46/} See letter from Toshimi Konno, Director, Co-ordination Division, Securities Bureau, MOF, to Richard G. Ketchum, Director, Division of Market Regulation, dated December 28, 1987.

^{47/} The MOF's figures indicate that foreign investors were net sellers each week from October 19 through December 7 of a total of 2.9 trillion yen (U.S. \$23.2 billion) of securities.

^{48/} *Id.* Reports in the financial press speculate that a meeting between the MOF and these firms on October 20 may have been to encourage the firms to enter the market as buyers to help support stock prices. See, e.g., *Wall St. J.*, Oct. 21, 1987, at 48, col. 1. The MOF, however, consistently has denied these suggestions and the staff cannot substantiate those stories.

^{49/} See *Economist*, Nov. 14, 1987, at 85.

^{50/} Tokyo Market Is Shaken By New York's Collapse, *The Asian Wall St. J. Weekly*, Oct. 26, 1987, at 31, col. 1; and Tokyo's Big Players Escape the Fall-Out, *Far Eastern Economic Review*, Nov. 5, 1987, at 62.

419 million shares, respectively. These figures are half the average daily volume figures for most months in 1987, and are almost one quarter of the two billion share volume the TKE experienced on its heaviest day ever. 51/ Further, pre-market break volume has not yet returned to the exchange -- average daily volume for November was a light 472 million shares.

Volatility on the TKE has been a continuing force in the market since October 19. During each trading day in October after October 19, numerous stocks reached their daily price limits and were closed. 52/ In several instances, order imbalances pushed stock prices to their daily limits before trading opened in the morning and thus no trading was permitted in those stocks until the next day. Although the TKE has no statistics on how frequently stocks reached their daily price limits before the October market break, conversations with TKE officials indicated that such instances were quite rare.

Clearly, on a day like October 20, when trading on the TKE was dominated by concerted selling, the application of daily price limits stopped trading long enough to allow for investor perceptions to change dramatically before trading re-opened on Wednesday, October 21. Had market sentiment not changed, however, halting trading

51/ The TKE reports that average daily share volume on the exchange for 1987 was:

January	-	900 million
February	-	1 billion
March	-	1.4 billion
April	-	1.4 billion
May	-	1 billion
June	-	980 million
July	-	656 million
August	-	918 million
September	-	1 billion
October	-	999 million

52/ As an indication of continuing volatility, the following is a list, by trading day, of the number of stocks that reached their daily price limits and an indication as to whether the stock price rose or fell to the daily limit:

October 20-	780(low)
October 21-	151(high)
October 22-	21(high)
October 23-	1(high)
	- 12(low)
October 24-	0
October 26-	7(low)
October 27-	3(high)
October 28-	4(high)
	- 1(low)
October 29-	2(high)
	- 2(low)
October 30-	10(high)
October 31-	8(high)

early probably would have only delayed the inevitable drop. Moreover, market participants were forced to accept the risk of holding their positions overnight because of the absence of any continuing market.

Since its peak on October 14, 1987, at 26,646, the Nikkei had fallen 20% by year's end to 21,217. It has not come close to matching the 31% drop in the DJIA from its peak in August.

3. Hong Kong

In Hong Kong the decline in stock prices was far more dramatic than in any other market. On October 19, the Hang Seng Index plunged 420 points (or 11.3%); the biggest one-day fall in the market's history. The seriously deteriorating market conditions on October 19 and the probability that conditions were likely to worsen were the impetus for closing the Hong Kong Stock Exchange for the remainder of the week. The unprecedented drop in the index left many futures investors facing losses up to H.K.\$60,000 (U.S. \$7,700) ^{53/} on contracts many purchased on margin for only H.K. \$15,000 (U.S. \$1,925). ^{54/} The steep drop in prices of the underlying securities raised the specter of massive defaults in the futures market and it was feared that a collapse of the futures market would spill over into the stock market, bankrupting many small to medium-sized stockbrokers.

Like the Hong Kong stock market, the futures exchange closed after October 20, leaving brokers and investors without a marketplace to liquidate positions for cash to meet margin calls. Speculators in stock-index futures faced huge losses on 87,400 outstanding contracts, having a value of H.K. \$15.7 billion (U.S. \$2 billion). After the 420-point drop in the Hang Seng index on October 19, many futures buyers already had difficulty meeting margin calls. To meet their liabilities it was widely believed that these futures exchange members would have been forced to sell shares so heavily that the already weakened stock exchange could have been destroyed. Many market observers believed that without a significant upturn in prices, an enormous increase in defaults was likely.

The financial press reported that during the week the exchanges were closed, stock and futures exchange officials considered several options to avert massive defaults. ^{55/} Pressure was mounted by futures buyers (mostly local brokers and their customers) to settle all contracts at a fixed price that would leave them relatively solvent, rather than at a price determined by the market. The sellers of those contracts (mostly banks and some local and foreign brokerage firms) strongly opposed the suggestion, believing it would limit or deprive them entirely of profits on those contracts. This concern was heightened for many firms by the fact that those contracts were hedging stock positions

^{53/} Exchange rate: U.S. \$1.00 = H.K. \$7.79.

^{54/} See *Economist*, Oct. 31, 1987, at 68; Dodwell, Hong Kong Prepares Itself for Double Wave of Defaults on Exchanges, *Fin. Times*, Oct. 28, 1987, at 2, col. 2.

^{55/} See Dodwell, Hong Kong's Secret Bid to Rescue Firms, *Fin. Times*, Oct. 23, 1987, at 2, col. 4.

that had fallen substantially in value. Another proposal called for annulling all outstanding futures contracts.

Over the weekend of October 23, the Hong Kong government devised a rescue plan involving a loan totalling H.K. \$2 billion (U.S. \$256 million) to the Hong Kong Futures Guarantee Corporation, which guarantees all futures contracts executed on the futures exchange. Half the loan was supplied by the Hong Kong government and the other half by a group of twelve brokers and the Guarantee Corporation's shareholders, which are mostly banks, including Hong Kong and Shanghai Banking Corporation and Barclays and Standard Chartered. 56/ An additional one percentage point reduction in the base lending rate to 7.5% also was announced, ensuring easier availability of funds to exchange members to meet margin calls and settlement liabilities. 57/

In spite of the compromise developed over the weekend, however, the Hang Seng Index plunged another 1,120 points, a 33% drop, on Monday October 26. To a large extent the plunge was attributed to pent-up selling demand from investors who faced huge margin calls because of the earlier drop in the index. The loan was designed to cover defaults by all investors sustaining losses on outstanding contracts for roughly a 1,000-point drop in the Hang Seng index. 58/ Much of that cushion was exhausted on October 26. On Wednesday October 28, the government injected an additional H.K. \$2 billion (U.S. \$256 million) into the Hong Kong Futures Guarantee Corporation in response to the collapse in stock prices on Monday and the suspension of 43 members of the futures exchange on Tuesday. 59/ Additionally, the futures exchange raised margin requirements from H.K. \$15,000 (U.S. \$1,900) to H.K. \$50,000 (U.S. \$6,400) on contracts worth approximately H.K. \$180,000 (U.S. \$23,000) or roughly 28% of the

56/ The loan is to be repaid from new levies on transactions in the stock and futures markets. The levies include a new H.K. \$30 (U.S. \$3.90) charge for each futures contract and a charge of H.K. \$3 (U.S. \$.39) for every H.K. \$10,000 (U.S. \$1,300) in stock market transactions.

57/ At least one investor sought a limited exemption from buy-back restrictions to help boost stock prices by buying back shares of companies his holding company controls.

58/ Before the loan, the Guarantee Corporation had only H.K. \$22.5 million (U.S. \$2.9 million) in capital and reserves and would have been unable to meet large defaults.

59/ The People's Republic of China, whose citizens collectively are estimated to own about 10% of the markets' total capitalization, have assisted in the loan program. The Bank of China acceded to Hong Kong's request to lend the Guarantee Corporation H.K. \$333 million (U.S. \$42.7 million) as part of the second cash infusion and made statements that it would continue to honor credit lines extended to Hong Kong securities firms. The latter action was seen as intended to relieve selling pressure on firms increasingly pressed to meet settlement liabilities and margin calls.

contract value. 60/ This was intended to eliminate some of the speculative interest that earlier fueled the market.

As of November 5, market participants reported that there were only 34 instances of firms failing to make payment and in each of those cases, payment was made late. The Office of the Commissioner for Securities in Hong Kong informed the staff that, as a result of the drop in the Hang Seng index, between 30 and 40 of the 100 futures exchange member firms in business in October have been liquidated.

In a move to restore investor confidence, the governor of Hong Kong appointed a special committee to study the events of October and to make recommendations on the operation of stock and futures markets. The committee also will analyze the role of the Securities Commission and the Commodities Trading Commission, governmental authorities charged with regulating the stock and futures markets.

Several U.S. firms informed the Division that the closing of the exchanges locked them into positions they otherwise would have liquidated. Firms also could not roll forward futures hedge positions or initiate new long or short futures positions; nor could they withdraw funds carried on the books of exchange clearing members. Additionally, it was suggested that the closure of the Hong Kong markets fueled fear that spread to other markets. Four firms informed the Commission that while the Hong Kong markets were closed, they lost nearly U.S. \$5.5 million. Despite these losses, however, none of these firms have significantly scaled back their presence in Hong Kong and one firm felt confident enough in the market to participate in the loan arranged for the Hong Kong Futures Guarantee Corporation.

The closure of the Hong Kong markets also affected several U.S. investment companies. Because of the unavailability of prices to value fund assets, two suspended redemptions 61/ and one fund valued its Hong Kong securities at a discount of 20% on October 20 and 30% during the period October 21 through October 23. 62/

60/ This compares with margin requirements for SPZ futures contracts of approximately 8% of contract value for hedged futures positions and 12% for speculative futures positions.

61/ In letters to each of these funds, the Division of Investment Management ("IM") stated that it would not recommend enforcement action to the Commission under Section 22(c) and Rule 22c-1 of the Investment Company Act of 1940 ("Investment Company Act") if the companies suspended redemptions for a limited period because of the Hong Kong closure. See letters from Mary Podesta, Chief Counsel, IM, to Christopher Wells, Esq., Coudert Brothers (GAM Funds, Inc.), dated October 21, 1987; Elliott Cohan, Esq., Federated Investors, dated October 20, 1987; and Michelle Neureuter, G.T. Global Growth Series, dated October 20, 1987. One of the funds suspended redemptions until October 26; the day the Hong Kong Stock Exchange reopened. The second fund resumed redemptions on October 21 and gave all customers who submitted redemption requests on October 20 the option to reinstate them or cancel them.

62/ The fund resumed its normal valuation method on October 26. Section 22(c) and Rule 22c-1 of the Investment Company Act govern pricing with respect to the purchase or redemption of investment company securities. Section 2(a)(41)

The staff of the regional offices inspected these three funds and, among other things, questioned the companies on how shareholders were notified of the changes in the suspension and asset valuation policies. One of the two funds that suspended redemptions stated that it did not notify its shareholders of the suspension. During that week, however, the fund received no redemption requests; nor has the firm received any complaints or inquiries from shareholders on the suspension. The second fund is promoted primarily to institutional clients who were notified of the suspension on October 20 through the fund's computer system. The fund reprogrammed its system to prevent its customers from entering purchase or redemption orders during the period redemptions were suspended. The fund also called several large customers to notify them of the suspension. The fund that altered its valuation method did not inform its customers of the change or its resumption of its normal valuation method. Of these three firms, two stated that the Hong Kong closure has caused them to reduce their Hong Kong holdings.

D. The Aftermath

The world-wide decline in stock prices may have a substantial effect on international capital formation and new issue activity in international markets. To illustrate, the volume of international bond offerings during October, 1987 equaled \$9.6 billion; 29% less than September's \$13.5 billion and 13 times less than the \$120.8 billion raised in January, 1987. Both sections of the international bond market, Eurobonds and foreign bonds, declined substantially from their September, 1987 levels.

Primarily as a result of the world-wide decline in stock prices, the value of new international equity offerings declined 13-fold from an all time record of \$6.6 billion in September, 1987 to \$498 million in October, 1987. Further, the number of new issues declined from 28 to seven during October.

The privatization efforts of many foreign governments also were postponed. France, Germany and the U.K. each cancelled all pending privatizations until at least next year. ^{63/} Since 1980, France and the U.K. have accounted for about 66% of the \$60 billion raised through the sale of shares in state-owned firms ^{64/}

governs the valuation of the current price of an investment company security. That section permits fair value of a security to be determined in good faith by the board of directors if market quotations are not readily available.

The fund stated that, in addition to the difficulty of determining asset value on its Hong Kong securities, it was concerned that the application of daily price limits on the TKE masked the true value of portfolio securities traded on that exchange.

^{63/} One major exception was the British Petroleum Offering. See Chapter Five for a discussion of that offering and its effects on U.S. underwriters.

^{64/} The October, 1987 market break also affected the new issues market in the United States. The number of common stock new issues dropped dramatically in November, 1987. Another measure of the effect of the market break on new issues is the change in their market value. Forbes magazine follows a group of

CHARTS

E. Analysis

The events of October, 1987 compellingly demonstrated that the world's securities markets have become inextricably linked. That trend is irreversible and requires that securities regulators around the globe cooperate to ensure the integrity of our markets, while at the same time remain adaptive to changes that will be needed to accommodate the increasing sophistication of those markets.

In the past the Division has examined the development of the international trading mechanisms and has found much that needs to be accomplished before international markets will be able to operate smoothly in conjunction with one another.^{65/} One of the most pressing needs is the development of compatible, safe and efficient domestic clearance and settlement systems, as well as international linkages among those systems. Without effective systems, all firms engaging in an international securities business will be exposed to greater risk.^{66/}

Another pressing need is the development of international trade and quote reporting mechanisms. The Commission in the past has considered the feasibility of developing an international consolidated reporting system in globally traded securities similar to U.S. consolidated systems. Although development of an international system for the publication of transaction reports would strengthen the operation of the markets, there are obstacles hindering progress toward that goal. Of primary concern is the fact that widely differing domestic systems would have to be integrated.

Perhaps even more crucial is ensuring that adequate financial oversight systems are in place. It may well be that U.S. markets' financial responsibility requirements, including minimum net capital and recordkeeping requirements, customer funds and securities segregation requirements, customer margin requirements, and clearing agency margin and mark-to-the-market systems were an important factor in preventing a total collapse of the U.S. markets during the market break. International markets need to work together to assure that adequate oversight mechanisms are in place and that our current financial responsibility standards are adequate in light of the extraordinary events of October. The failure of a U.S. firm's foreign affiliate could have substantial

551 initial public offerings ("IPOs") issued during 1987. During the market break, Forbes traced the price performance of 497 of those issues and found that they had lost 32.17% of their September 30, 1987 value. These IPOs raised \$13.7 billion and had increased in value to \$15.6 billion by September 30. When Forbes calculated their value on November 5, however, it had dropped to \$10.6 billion. Forbes, Dec. 17, 1987, at 53, 54.

^{65/} See generally Internationalization Study, Chapter V.

^{66/} See id. and Staff of the Division of Market Regulation Summary of February 17, 1987, Internationalization Roundtable (August 1, 1987).

repercussions on the related U.S. firm. Accordingly, the Commission may wish to pursue agreements with the governments of countries with active trading markets to permit the exchange of broker-dealer financial information.

Finally, the need for adequate enforcement and surveillance arrangements has never been more pressing. During periods of severe market stress, such as the October market break, the opportunity and motivation to avoid strict compliance with regulatory requirements may be present.

CHART 11-1

International Transactions in U.S. and Foreign Corporate Stocks

(U.S. \$ Millions)

Year	Foreign Activity in U.S. Stocks			U.S. Activity in Foreign Stocks		
	Purchases	Sales	Net Capital Flow	Purchases	Sales	Net Capital Flow
1978	20,145	17,723	2,422	3,139	3,666	527
1979	22,783	21,104	1,679	5,434	4,617	-817
1980	40,298	34,870	5,428	10,044	7,897	-2,147
1981	40,686	34,856	5,830	9,586	9,339	-247
1982	41,881	37,981	3,900	8,504	7,163	-1,341
1983	69,770	64,360	5,410	17,046	13,281	-3,765
1984	59,834	62,814	-2,980	15,917	14,816	-1,101
1985	81,995	77,054	4,941	24,803	20,861	-3,942
1986	148,101	129,382	18,719	50,699	48,787	-1,912
1987 (P)	\$265,859	\$234,737	\$31,122	\$98,367	\$98,030	\$ 282
1986						
Oct.	\$10,979	\$12,300	\$-1,321	\$ 5,026	\$ 6,011	\$ -985
Nov.	12,033	12,086	-53	3,764	4,095	-331
Dec.	14,100	12,320	1,780	4,507	4,570	-63
1987						
Jan.	17,641	15,964	1,677	5,110	4,906	204
Feb.	20,702	17,598	3,104	7,736	7,175	561
March	23,064	18,001	5,063	7,799	7,015	784
Apr.	20,735	17,390	3,345	8,297	7,124	1,173
May	19,632	15,956	3,676	7,379	8,016	-637
June	18,682	17,054	1,628	9,035	8,778	257
July	23,645	21,883	1,762	8,593	8,583	10
Aug.	24,774	24,554	220	9,047	8,672	375
Sept.	22,468	19,435	3,033	8,204	8,655	-451
Oct.	\$30,206	\$27,779	\$ 2,427	\$10,774	\$12,768	\$-1,994

P = Preliminary, ten months data at annual rates not seasonally adjusted.

SOURCE: U.S. Treasury Bulletin (various issues)

TABLE 1
Correlation Coefficients Between Stock Indexes
in the United States (S&P 500) and Tokyo
(Tokyo Exchange Composite) -- October 12 to October 23, 1987*

All Percentages are Calculated
 from the Prior Trading Day's Close

United States leading Tokyo

United States percentage change the day before and the percentage change in Tokyo at the open.	.4183 (10)
United States percentage change the day before and the percentage change in Tokyo after one hour of trading.	.8473 (10)
United States percentage change the day before and the percentage change in Tokyo at the close.	.8929 (10)

Tokyo leading the United States

Tokyo percentage change at the close and same day United States percentage change at the open.	.2220 (10)
Tokyo percentage change at the close and the same day United States percentage change at 10:00 A.M.	-.1440 (10)
Tokyo percentage change at the close and the same day United States percentage change at the close.	.0744 (10)

* Number of observations in parentheses

TABLE 2

**Correlation Coefficients Between Stock Indexes
in the United States (S&P 500) and London (FTSE)
October 12 to October 23, 1987***

**All Percentages are Calculated
from the Prior Trading Day's Close**

United States leading London

United States percentage change the day before and the percentage change in London at the open.	.8200 (9)
United States percentage change the day before and the percentage change in London after one hour of trading.	.8747 (9)
United States percentage change the day before and the percentage change in London at the close.	.6664 (9)

London leading the United States

London percentage change at 2:00 PM London time and the United States percentage change at the open.	.5602 (9)
London percentage change at 2:00 PM London time and the United States percentage change at 10:00 AM EST.	.3329 (9)
London percentage change at the close and the percentage change in the United States at the close.	.5435 (9)

* Number of observations in parentheses

