

CHAPTER I

INTRODUCTION

Listed options are complex securities. To those who understand how they work, they may offer an alternative to short term stock trading at lower commission costs and a smaller commitment of capital. They also provide a means for shifting the risk of unfavorable short term stock price movements from owners of stock who have, but do not wish to bear, those risks, to others who are willing to assume such risks in anticipation of possible rewards from favorable price movements.

But, both the purchasing and writing (selling) of options involve a high degree of financial risk. Only investors who understand those risks, and who are able to sustain the costs and financial losses that may be associated with options trading should participate in the listed options markets. Too often, public investors have been encouraged to use listed options without regard to the suitability of options for their investment needs.

A. The Growth of Listed Options Trading

The volume of trading in listed options has grown substantially since February, 1973 when the Commission authorized the Chicago Board Options Exchange ("CBOE") to inaugurate such trading as a pilot program. 1/

1/ Securities Exchange Act Release No. 9985 (February 1, 1973).

The CBOE's pilot program, designed to "test the market" for listed options, was initially limited to call options on only 16 underlying stocks. As listed options gained in popularity, the options markets expanded sharply over the next four years:

- The number of exchanges trading options grew from one, in 1973, to five in 1977 (see Figure 1).
- By mid-1977 the number of stocks on which call options were traded had increased from 16 to 219, and put options had been added for 25 of those stocks causing a surge in open interest and volume (see Figure 2).
- The volume of listed options trades, measured by the number of shares receivable on exercise of an options contract, expanded from the equivalent of 2.6 percent to the NYSE's total share volume in 1973 to almost 75 percent of that volume during the first six months of 1978 (see Figure 3).
- Premiums paid for options contracts increased in the aggregate from .3 percent of the dollar value of shares traded on the New York Stock Exchange ("NYSE") in 1973 to 8.2 percent during the first six months of 1978 (see Figure 4).

The addition of new optionable stocks to those already traded was one element in the rapid expansion of listed options volume. However, an examination of volume trends for CBOE listed calls (excluding those also traded on other exchanges) based on when each class was introduced, as shown in Figure 5, indicates that the opportunity to rapidly expand volume by adding new listings, while extremely important in the early

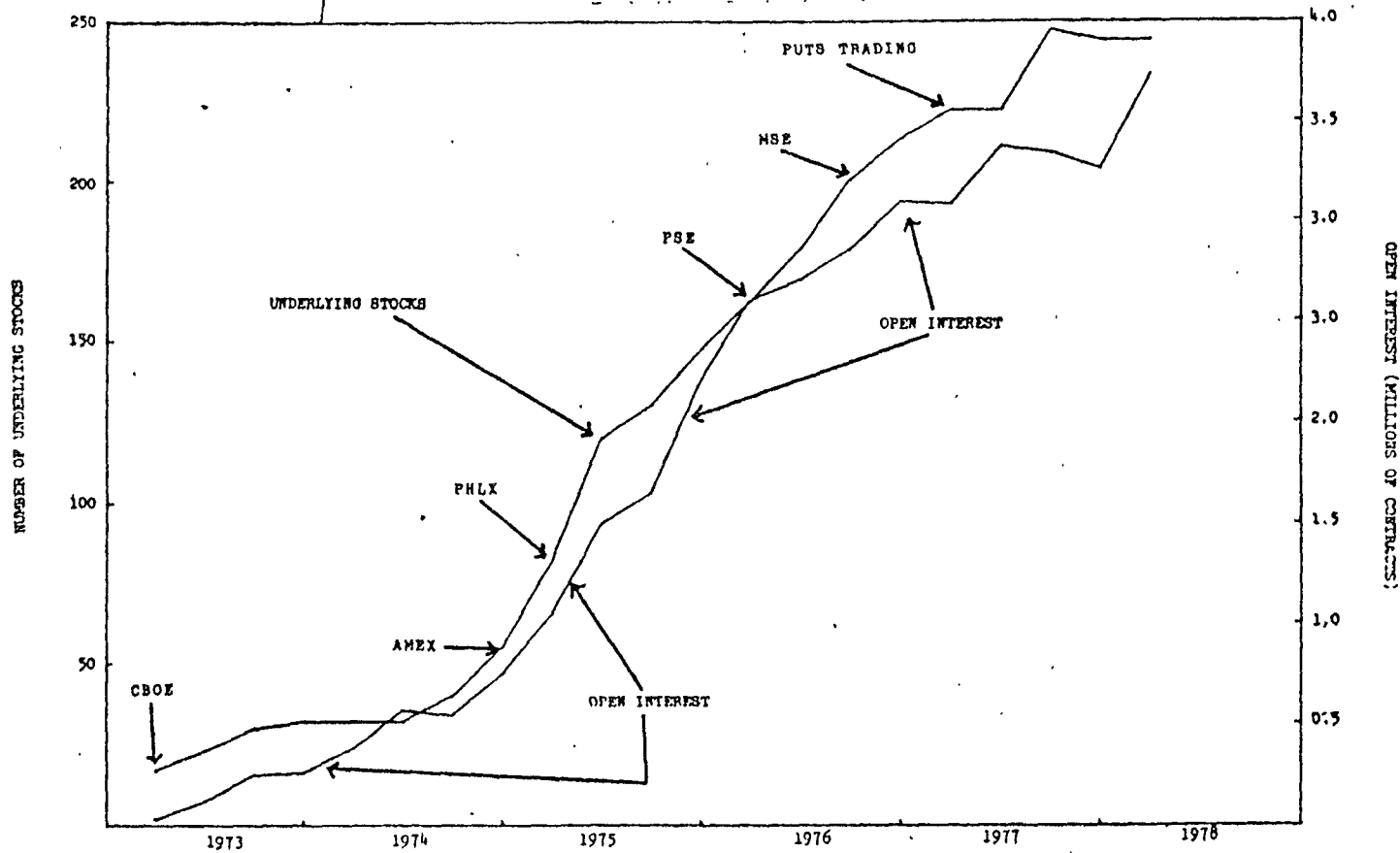
Figure 1

THE EXCHANGES ON WHICH LISTED OPTIONS ARE OFFERED

Trading in listed calls began on the:

April 1973	:	Chicago Board Options Exchange
January 1975	:	American Stock Exchange
June 1975	:	Philadelphia Stock Exchange
April 1976	:	Pacific Stock Exchange
December 1976	:	Midwest Stock Exchange
June 1977	:	Trading in listed puts began on all exchanges which traded listed calls.

FIGURE 2
 OPTIONED STOCKS AND OPEN INTEREST
 1973-1978



SOURCES: Chicago Board Options Exchange
 and Options Clearing Corporation

FIGURE 3

OPTION TRADING VOLUME AND NEW YORK STOCK
EXCHANGE VOLUME: 1940-1978

(Option Volume in Thousands of Shares of Underlying Stocks)

Year	Conventional Option Volume	As a Percent of NYSE Volume	Exchange Traded Option Volume	As a Percent of NYSE Volume	Exchange Traded Option Volume by Exchange				
					CBOE	AMEX	PHILX	PSE	NYSE
1940	1,205	.58	--	--	--	--	--	--	--
1945	2,108	.56	--	--	--	--	--	--	--
1950	2,631	.50	--	--	--	--	--	--	--
1955	6,012	.93	--	--	--	--	--	--	--
1960	8,561	1.12	--	--	--	--	--	--	--
1965	15,256	.98	--	--	--	--	--	--	--
1970	19,681	.67	--	--	--	--	--	--	--
1971	29,516	.76	--	--	--	--	--	--	--
1972	32,851	.79	--	--	--	--	--	--	--
1973	18,920	.47	112,127 ^{1/}	2.60	112,127	--	--	--	--
1974	n.a.	n.a.	568,291	14.90	568,291	--	--	--	--
1975	n.a.	n.a.	1,809,767	35.80	1,442,612	353,056	14,098	--	--
1976	n.a.	n.a.	3,237,393	57.30	2,149,803	903,577	127,470	35,019	1,324
1977	n.a.	n.a.	3,963,733 ^{2/}	70.60	2,483,863	1,007,758	219,531	192,503	60,078
<u>Jan.-June</u>									
1977	n.a.	n.a.	1,912,887 ^{2/}	68.10	1,212,441	506,990	105,061	64,969	23,425
1978	n.a.	n.a.	2,686,717	74.60	1,627,228	667,397	155,052	158,053	78,988

^{1/} The CBOE did not commence operation until April 26, 1973.

^{2/} Trading in Puts starting in June 1977.

SOURCE: Conventional option volume data are based on reports from members of the Put and Call Brokers and Dealers Association. These data include only sales of original options by writers and do not include sales by one dealer to another. Options not processed by members of the Association are excluded; down-and-out calls and up-and-out puts all of which were processed by nonmembers of the Association are therefore excluded. Data for 1974 and beyond have not been compiled.

Data on exchange traded options were provided by the Options Clearing Corporation. These data are not comparable with data for conventional options because they include each trade of an option between the opening transaction, which is the sale by the options writer, and the closing transaction or expiration of the option, whichever comes first.

FIGURE 11

RELATIONSHIP OF LISTED OPTION TRADING TO NYSE TRADING

(Volume in Thousands of Shares; Value in \$ Millions)

	<u>Option.</u>		<u>NYSE Stock</u>		<u>Option Volume as a Percent of NYSE Trading</u>	<u>Option Premium as a Percent of NYSE Value</u>
	<u>Volume</u>	<u>Premium Value</u>	<u>Volume</u>	<u>Value</u>		
1973	112,127	\$ 449	4,336,581	\$146,451	2.6	.3
1974	568,291	1,653	3,822,021	99,181	14.9	1.7
1975	1,809,767	8,325	5,056,450	133,819	35.8	6.2
1976	3,237,393	12,010	5,649,152	164,545	57.3	7.3
1977	3,963,733	10,894	5,613,331	157,250	70.6	6.9
1st. half of 1977	1,912,887	5,260	2,806,961	80,555	68.1	6.5
1st. half of 1978	2,686,717	7,957	3,600,453	96,972	74.6	8.2

FIGURE 5

CBOE CALL OPTION VOLUME BY YEAR CLASSES WERE INTRODUCED: 1973-1978

(In Thousands of Contracts)

A. Total Volume

<u>of</u> <u>tion</u>	<u>Number</u>	<u>1973**</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1977</u> <u>Jan.-June</u>	<u>1978</u> <u>Jan.-June</u>
	30	1,023	4,891	8,501	9,277	8,202	4,205	5,454
	8	--	g**	1,198	1,590	1,551	759	1,140
	37	--	--	2,237	6,187	5,353	2,840	3,494
	6	--	--	--	338	675	289	471

B. Volume Per Class

	30	34	163	283	309	273	140	182
	8	--	g**	150	199	194	95	143
	37	--	--	60	167	145	77	94
	6	--	--	--	56	112	48	79

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Includes 14 dually listed options.
Trading commenced on April 26, 1973.
Eight classes were introduced in December 1974.

Chicago Board Options Exchange.

years of options exchange development, has now substantially diminished for call options. The options exchanges themselves had an incentive to list those issues which they thought would have consistently high trading activity. The statistics show that even if no additional classes had been listed after 1973, trading volume on the CBOE by the end of 1977 would have expanded about eight fold over 1973's total as compared to the 16 fold growth recorded when the trading volume for the classes listed after 1973 is included. When the volume in multiply listed call options and puts is also included, 1977 trading volume is shown to be 22 times greater than volume in 1973. The criteria established by the options exchanges, and approved by the Commission, for stock selection were designed to assure that options were written only on issues of large, well capitalized firms with a large number of shares outstanding and substantial volume of activity. The remaining pool of eligible underlying stocks on which call options classes could profitably be introduced under the listing standards of the options exchanges appears to be increasingly limited.

The addition of puts to all underlying stocks on which calls are currently traded could be expected to increase total options volume significantly. Here again, however, the historical record does not suggest that volume growth from this puts trading should be as dramatic as the volume growth was in the call market, in particular, because

"synthetic" puts are now being created to substitute for listed put options. 2/ Moreover, put options were never as popular as call options in the over-the-counter ("OTC") options market, rarely capturing 40 percent of the total options volume of OTC options and more often accounting for between one-fourth and one-third of such volume.

B. Effect of Listed Options Trading on the Securities Industry

The growth of listed options trading has resulted in a substantial increase in options-related commission revenues earned by broker-dealer firms. Stanford Research Institute has estimated that commissions on listed options received by New York Stock Exchange ("NYSE") members more than tripled from 1973 to 1974, increasing from \$12 million to \$45 million. 3/ In 1975, when registered broker-dealer firms first reported their options commission revenue separately from other commission revenues in their reports to the Commission, 853 registered broker-dealers reported receiving \$257 million in options commissions. By 1976, listed options commissions received by broker-dealers had increased to \$367 million, accounting for about ten percent of total commission revenues related to the securities

2/ See infra, Chapter III.

3/ SRI International, Chapter Ten, "Options," excerpted from, Outlook for the U.S. Securities Industry - 1981, p. 13.

business. The first year-to-year decline in options commission revenues occurred in 1977 when those revenues fell by about 13 percent to \$319 million.

The importance of listed options commissions to broker-dealers has varied greatly among firms as shown in Figure 6. For example, of the 1039 firms reporting options commission income in 1977, fourteen firms received over fifty percent of the industry's total listed options commissions and 78 percent of total listed options commissions were received by 51 firms. On the other hand, over 75 percent of the members of the brokerage community received less than \$100,000 in listed options commissions and 40 percent of the 1039 firms received less than \$10,000 from this source.

Besides earning direct commission revenues from options transactions, broker-dealer firms also earned significant revenues from "options-related" agency transactions. These transactions occur when a customer acquires or sells stock in connection with an options strategy, as, for example, when a customer sells stock short to write a covered put. Firms do not separately report the amount of options-related agency business they do, and, accordingly, the amount of revenues they earn is not known.

In addition to the agency business done by broker-dealers, a substantial number of firms and individuals engage in marketmaking activities

FIGURE 6

LISTED OPTION COMMISSIONS EARNED BY SIZE AND IMPORTANCE
OF THIS SOURCE OF REVENUE: 1977

A. Number of Firms

Listed Option Commissions

Options Commission as Percent of Gross Revenue Related to Securities Business	Less than \$10,000	Listed Option Commissions									Total
		\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$4,999,999	\$5,000,000 and Over		
90% and Over	9	10	36	34	27	4	2	1	--	123	
75.0 to 89.99	1	3	1	5	1	1	--	3	1	16	
50.0 to 74.99	4	3	8	4	4	1	--	1	1	25	
25.0 to 49.99	15	11	6	10	5	3	1	1	--	52	
15.0 to 24.99	19	11	7	8	4	1	2	2	--	54	
10.0 to 14.99	7	14	6	3	5	--	3	1	--	39	
7.5 to 9.99	11	8	5	2	3	5	3	2	--	39	
5.0 to 7.49	22	13	15	7	9	3	8	12	8	97	
2.5 to 4.99	42	25	16	19	33	16	13	11	4	179	
1.0 to 2.49	86	24	21	18	11	7	--	4	--	171	
Less than 1.0	202	22	8	7	4	1	--	--	--	244	
Total	418	144	129	117	106	42	32	37	14	1,039	

B. Commissions Earned

(\$ Thousands)

90% and Over	44	194	1,329	2,353	3,888	1,413	1,068	1,592	--	11,881
75.0 to 89.9	5	57	35	348	110	384	--	6,542	5,852	13,333
50.0 to 74.9	17	42	278	319	754	293	--	--	10,531	12,234
25.0 to 49.9	70	172	196	785	894	1,295	628	2,850	--	6,890
15.0 to 24.9	87	170	243	566	527	273	1,249	2,528	--	5,643
10.0 to 14.9	36	264	225	215	850	--	1,785	1,196	--	4,571
7.5 to 9.9	34	128	191	141	450	2,243	1,901	2,835	--	7,923
5.0 to 7.4	85	217	535	503	1,344	1,303	5,503	23,889	119,454	152,833
2.5 to 4.9	150	431	643	1,324	5,296	6,188	9,318	29,945	32,175	85,470
1.0 to 2.4	235	364	748	1,295	1,950	2,405	--	9,044	--	16,041
Less than 1.0	360	371	279	473	502	375	--	--	--	2,360
Total	\$1,122	\$2,412	\$4,704	\$8,323	\$16,565	\$16,172	\$21,453	\$80,420	\$168,011	\$319,183
Average Percent	.5	1.9	2.9	3.7	2.3	4.1	5.6	4.8	6.1	4.8

on the floors of the options exchanges. In 1977, 1153 dealers engaged in such activities. As is the case concerning broker-dealer firms doing an agency business, the financial benefits of options marketmaking activities have not been evenly enjoyed among marketmaking firms. Among the 1153 specialist/marketmakers, 122 reported profits of \$100,000 or more from options trading in 1977, receiving over two-thirds of the aggregate \$54 million in gross marketmaking profits reported by the marketmakers whose activities were profitable. On the other hand, aggregate losses of \$15.9 million were reported by 413 specialist/marketmakers and, as shown in Figure 7, 89 percent of all specialist/marketmakers either reported losses or showed profits of less than \$100,000. Only 12 specialist/marketmaker firms reported profits of \$500,000 or more.

C. Studies of Economic Effects of Listed Options Trading

The most comprehensive review of the effect of options trading on the underlying stock is the Robert R. Nathan Associates Inc. study concerning the first nine months of trading on the CBOE. This study was updated by the CBOE in July 1975 and again in February 1976. ^{4/} The study concluded that options trading had little discernible effect on:

^{4/} Review of Initial Trading Experience at the Chicago Board Options Exchange, prepared for Chicago Board Options Exchange by Robert R. Nathan Associates Inc., Washington, D. C., December 1974;

(footnote continued on next page)

FIGURE 7

BROKER-DEALERS REPORTING GAINS (LOSSES) FROM MARKET
 MAKING IN OPTIONS ON A NATIONAL SECURITIES EXCHANGE: 1977

(\$ In Thousands)

	<u>Number</u>	<u>Gains, (Losses)</u>
Firms With Losses	413	(\$15,935)
Firms With Gains of:		
Less than \$10,000	188	733
\$ 10,000 - \$24,999	150	2,502
\$ 25,000 - \$49,999	157	5,801
\$ 50,000 - \$99,999	123	8,547
\$ 100,000 - \$249,999	84	13,268
\$ 250,000 - \$499,999	26	9,280
\$ 500,000 - \$999,999	9	5,706
\$1,000,000 - and over	<u>3</u>	<u>8,176</u>
Total	1,153	38,078

- 1) The liquidity or operational efficiency of the stock market;
- 2) Volume of trading relative to NYSE volume; or
- 3) Price changes or price performance relative to the NYSE market as a whole.

The Nathan study also concluded that:

- 1) Exercise of options during expiration week had no systematic effect on the daily price behavior of the underlying stock;
- 2) No regular or consistent pattern could be found between the daily open interest for expiring options exercisable below or at the current stock price (in-the-money or at-the-money options) and the price movements of the underlying stocks;
- 3) The average closing bid/ask spreads of options stocks was somewhat narrower than the spreads of a sample of other stocks; and
- 4) The volatility of the price of the sixteen underlying stocks on which options trading first started was less after options trading began.

More recent studies, however, have concluded that there are important interactions between options prices and stock prices around expiration dates. The price effects observed are generally smaller in size than

(footnote continued)

Analysis of Volume and Price Patterns in Stocks Underlying CBOE Options from December 30, 1974 to April 30, 1975, Chicago Board Options Exchange, July 1975; Analysis of Volume and Price Patterns in Stocks Underlying CBOE Options from December 31, 1975 to January 16, 1976, Chicago Board Options Exchange, February 1976.

the transaction costs paid by the public, 5/ possibly because of the effects of professional arbitrage. In addition, CBOE volatility data for 1977 and a recent independent study of volatility 6/ indicate that the decline in the volatility of CBOE stocks relative to the market in 1974 was due to cyclical market movements, not options trading. In 1977, the relative volatility in the market for stocks underlying CBOE options was not much different from what it was at the beginning of the 1970's.

Other analyses have attempted to determine the economic significance of listed options trading on the raising of capital by business. For example, a study was sponsored by the CBOE to assess the impact of listed options on the market for new issues of common stocks of small companies. That CBOE study developed statistics on the overlapping involvement of investors in options and new issues of

5/ See Kopprasch, Robert W., "The Impact of CBOE Option Exercises Upon The Prices of the Underlying Common Shares," Ph. D. thesis, Rensselaer Polytechnic Institute, Troy, New York, April 1977, and Klemkosky, Robert C., "The Impact of Option Expirations on Stock Prices," Journal of Financial and Quantitative Analysis, September, 1978, pp. 514-517. Kopprasch points out that analysis of the effect of expiration activity on stock prices is severely handicapped by the absence of published uncovered position data.

6/ Naidu, G.N. "The Effect of Option Trading on Variability of Common Stock Returns," Presented at the Annual Meeting of the Southern Finance Association, 1977. Naidu finds evidence of increased relative volatility of CBOE stocks in the post-CBOE period.

Studies of the economic efficiency of options trading have been undertaken which conclude that listed options trading has resulted in increased transaction efficiency of the options market. These studies are based upon the fact that a put can be converted into a call and vice versa and on the presumption that a parity should exist between put and call premiums if the market is efficient. Systematic deviations from parity of put and call prices provide opportunities for professionals to take hedged positions which are profitable and indicate market inefficiencies.

Following up earlier work by Gould and Galai in OTC options 10/ Klemkosky and Resnick examined data on the securities for which both puts and calls were available in the listed market. 11/ Gould and Galai found persistent large variations in relative put-call prices in conventional options. Klemkosky and

10/ Relying on the principle of put and call parity, Gould and Galai analyzed 159 pairs of closely matched options from the transactions recorded by an options broker. They found that the parity model is frequently violated in that there were many instances in which riskless conversion activities could have been profitably undertaken. Divergences from theoretical expected values were large, even larger than transactions costs. Gould, J. P. and Galai, D., "Transactions Costs and the Relationship Between Put and Call Prices," Journal of Financial Economics, July 1974, pp. 106, 117, 112.

11/ Klemkosky, Robert C. and Resnick, Bruce G., "Put-Call Parity and Market Efficiency" presented to Southern Finance Association Annual Conference, November 1978, Washington, D. C., pp. 21-22.

small companies and other comparative information on the opinions, attitudes and activities of investors. Among the conclusions of the CBOE study are the following:

- 1) The frequently expressed belief that exchange trading of options has caused a negative impact on the market for small new issues is based on conjecture, mostly of an uninformed nature.
- 2) There was no significant evidence that exchange trading of options has had a negative effect on the market for small new issues. 7/

In the CBOE study, 40 percent of options buyers who invested in both options and new issues claimed that the availability of listed options was one of the reasons for reduced purchases of new issues. These investors also indicated that if listed options were not available, the percentage of their portfolio typically going to small, new equity issues would rise from 1.3 percent to 1.7 percent. 8/ This CBOE study concentrated on the impact of options trading as opposed to the ultimate effects of options transactions. There has been no study of the secondary effects on the flow of funds between the options market and other investments. 9/

7/ Robbins, Sydney M., Lough, Robert E., Sterling, Francis L. and Howe, Thomas J., Impact of Exchange-Traded Options on the Market for New Issues of Common Stock of Small Companies, Management Analysis Center, Cambridge, Massachusetts, June 1977, pp. 3-4.

8/ Robbins, et al, p. A-12.

9/ As noted earlier, commissions on options transactions amounted to about \$367 million in 1976 and \$319 million in 1977.

Resnick found a lower incidence of such divergences in the listed out-call market.

D. Summary and Conclusions of the Options Study

The rapid growth in options volume and the appearance of abuses resulted in the Commission initiating an investigation and study of the standardized listed options markets on October 17, 1977. The Commission stated its concern about:

(1) the present ability of the self-regulatory organizations' surveillance systems to detect and prevent fraudulent, deceptive, and manipulative activity, both in options and in underlying securities, in a manner which is consistent with the maintenance of fair and orderly markets and the protection of investors and that complies with the requirements of the [Securities Exchange] Act; (2) the adequacy of existing Commission and self-regulatory organization rules to prevent fraudulent, deceptive and manipulative acts, practices, devices and contrivances in connection with options trading; (3) the development of the standardized options markets in a manner which is consistent with the public interest in perfection of the mechanisms of a national market system for securities and prevention of securities trading which adversely affects the financing of trade, industry and transportation in interstate commerce; and (4) the development of appropriate standards, formulated with reference to the purposes of the Act, by which to measure the appropriateness of particular programs which would have the effect of expanding or altering existing pilot options trading programs. 12/

12/ Securities Exchange Act Release No. 14056 (October 17, 1977) ("October Release") pp. 3-4.

As a direct result of these concerns, the Special Study of the Options Markets ("Options Study") was established to determine whether standardized options trading is occurring in a manner and in an environment which is consistent with fair and orderly markets, the public interest, the protection of investors, and other objectives of the [Securities Exchange] Act, and to ascertain what, if any, additional action is necessary and proper to aid in the enforcement of the provisions of the Act and the rules thereunder to protect investors and to insure fair dealing in the trading of standardized options and their underlying securities.

The Options Study has addressed many of the concerns expressed by the Commission in the October Release. The findings and conclusions of the Options Study will be discussed in detail in the various chapters to this report. The Options Study's principal conclusions and the steps that the Options Study recommends the brokerage community, the self-regulatory organizations, and the Commission should take to improve the regulatory framework for the listed options markets to assure that these markets are fair and orderly are summarized below.

1. Self-Regulatory Organization Systems

a. Market Surveillance

Market surveillance is the process of detecting trading practices that may be inconsistent with Securities Exchange Act of 1934 ("Exchange

Act"), the rules and regulations thereunder, and the rules of self-regulatory organizations. Self-regulatory organizations engage in surveillance activities because, among other reasons, the Exchange Act assigns them responsibility, subject to Commission oversight, for assuring that their markets are fair, honest, and orderly and that their members comply with the federal securities laws.

An effective market surveillance system must be able to produce essential trading information quickly and accurately. It must be able to identify the brokers participating in each trade, the firms clearing the trade, the time that the trade occurred, the price to which the parties have agreed, the number of shares or contracts bought and sold, and whether the trade was executed for a customer, firm, or marketmaker account. Ultimately, the system must be able to identify, where appropriate, the customer that effected a transaction. In addition, the system must be able to identify bids, offers, and orders that were present in the trading crowd to obtain a complete picture of the trading environment at a particular time. To the extent that this information is readily available, the ease of performing surveillance functions and designing surveillance programs is increased.

A surveillance system must also provide its user with a physical record of the trading and other market activity that the system monitors. Such a record, often referred to as an audit trail, is necessary to verify the information that the system produces. In particular, documentary evidence

must be maintained either in or by the system if potentially improper trading practices are to be successfully investigated and resolved.

The Options Study reviewed the techniques that the self-regulatory organizations have developed to detect manipulative conduct involving related stock and options trading, manipulative conduct that may be effected using only options, misuse of nonpublic information in connection with options trading, and violations of the position and exercise limit and restricted option rules. This review included inspections of the options exchanges and the NYSE and an examination of their investigative and enforcement files. The Options Study found that while the best of the techniques that have been developed would provide a self-regulatory organization with a general ability to detect such trading practices, improvements must be made to maximize the effectiveness of self-regulatory organization market surveillance.

1) American Stock Exchange Surveillance
Information and Audit Trail

Each of the exchanges that permits the trading of standardized options has some ability to identify the parties, reporting time, and terms of trades that take place on their trading floor. In addition, each of these exchanges has some ability to obtain a physical record of those trades. The extent of these abilities, however, varies significantly.

The CBOE, Pacific Stock Exchange ("PSE"), Midwest Stock Exchange ("MSE"), and Philadelphia Stock Exchange ("PHLX") can identify the buying and selling brokers, the firms that will clear the trade, the time that the transaction was entered into the price reporting system, the price, the number of contracts for each trade, and whether the trade was reported as executed for a customer, firm or market maker account. This information is available on an automated basis the day after the trades occur. It is customarily obtained from order tickets or transaction reporting slips that these exchanges collect when trades are executed and is key punched into exchange computers from the trading floor. The order and transaction reporting tickets are kept in case they are needed for surveillance purposes at some later date.

The American Stock Exchange ("AMEX"), on the other hand, does not maintain as complete a record of each options trade that occurs on its floor. As a result, it cannot verify trade information by using its own records. Moreover, the AMEX cannot identify, on a regular, automated basis, the brokers that execute each options trade or the firms that will clear the trade. Consequently, the AMEX must resort to the slow and costly process of manually reconstructing trading from specialist and registered option trader ("ROT") reports and from order tickets obtained from member firms to detect and investigate questionable trading practices that may take place on its floor. The need to use manual processes to reconstruct options trading

makes this reconstruction at best costly and time consuming, and at worst impossible, for the AMEX to perform many of the surveillance procedures that other options exchanges perform routinely.

The AMEX has recognized that its surveillance system does not routinely provide information that is essential to an effective detection program. It has also recognized that a computer could perform more efficiently and more completely many of the functions that the exchange now performs manually. As a result, the AMEX has undertaken to improve the surveillance information that the exchange regularly obtains. Specifically, the AMEX intends to establish systems that would allow the exchange to identify the parties, terms, and reporting time for each trade, and would provide a physical record, or "audit trail," of the trade for investigation and verification purposes. The exchange has represented that it will seek to implement this system during the first quarter of 1979, and began a "pilot test" of this new system on October 2, 1978.

Accordingly, the Options Study recommends:

THE AMEX SHOULD ESTABLISH A COMPLETE AUDIT TRAIL FOR EACH OPTIONS TRANSACTION THAT TAKES PLACE ON THE AMEX FLOOR IN ACCORDANCE WITH THE SCHEDULE THAT THE EXCHANGE PRESENTED. THE COMMISSION SHOULD REQUIRE THAT THE AMEX SUBMIT A COMPLETE REPORT ON THE RESULTS OF ITS "PILOT TEST" AS SOON AS THEY ARE AVAILABLE. THE DIVISION OF MARKET REGULATION SHOULD FOLLOW THE PROGRESS OF THE AMEX CLOSELY TO ASSURE THAT THE EXCHANGE ENHANCES THE CAPABILITIES OF ITS SURVEILLANCE SYSTEMS AND ESTABLISHES A PROPER AUDIT TRAIL AS QUICKLY AS POSSIBLE.

2) New York Stock Exchange Surveillance Information
and Audit Trail

The NYSE does not have the ability to identify, on a routine, automated basis, the participants in each stock trade on its floor. Nor does the NYSE maintain a record, collected at the time that orders are executed, which indicates the parties, the reporting time, and the terms of each NYSE stock trade. While the Options Study has not examined or analyzed the NYSE stock surveillance system as a whole, the lack of such essential surveillance information raises a substantial concern regarding whether the exchange has the ability to fulfill its statutory responsibilities on a daily basis for each stock that is traded on the NYSE floor, including those on which options are traded. Moreover, despite the NYSE's recent initiation of a multi-million dollar "trading facilities upgrade project," the exchange has not yet committed itself to obtain regularly the surveillance information that it lacks. 13/

Accordingly, the Options Study recommends:

THE COMMISSION SHOULD CONDUCT A COMPLETE INSPECTION OF THE NYSE MARKET SURVEILLANCE SYSTEM TO DETERMINE WHETHER THE EXCHANGE HAS THE ABILITY TO CARRY OUT THE PURPOSES OF THE ACT AND TO COMPLY, AND ENFORCE COMPLIANCE BY ITS MEMBERS, WITH THE ACT, THE RULES AND REGULATIONS THEREUNDER, AND NYSE RULES.

13/ Letter to Harold M. Williams, Chairman, Securities and Exchange Commission, from William M. Batten, Chairman, New York Stock Exchange, dated October 16, 1978.

SPECIFICALLY, THE INSPECTION SHOULD CONSIDER WHETHER THE NYSE CAN DETECT, ON A DAILY BASIS AND FOR EACH STOCK TRADED ON THE NYSE, TRADING PRACTICES THAT MAY BE INCONSISTENT WITH THE ACT, THE RULES AND REGULATIONS THEREUNDER, OR EXCHANGE RULES. THE INSPECTION SHOULD BE CONDUCTED AND COMPLETED AS EXPEDITIOUSLY AS POSSIBLE AND A COMPLETE REPORT SHOULD BE PRESENTED TO THE COMMISSION WITHIN SIXTY DAYS AFTER THE COMPLETION OF THE REVIEW.

IN THE EVENT THAT THE INSPECTION REVEALS THAT THE NYSE CANNOT FULFILL ITS STATUTORY RESPONSIBILITIES ON A DAILY BASIS, THE COMMISSION SHOULD TAKE APPROPRIATE REMEDIAL ACTION AND SHOULD SPECIFICALLY CONSIDER REQUIRING, BY COMMISSION RULE, THAT THE EXCHANGE COLLECT AND MAINTAIN ESSENTIAL SURVEILLANCE INFORMATION WITH REGARD TO EACH NYSE TRADE.

3) Firm Proprietary and Customer Trading Information

Certain surveillance information that is essential to effective market surveillance is not readily available to any self-regulatory organization. Specifically, the stock clearing process does not distinguish between firm proprietary and customer stock positions, and the identity of customers who effect stock or options trades cannot be determined using surveillance information that is easily accessible to the self-regulatory organizations. Self-regulatory organizations must seek this information from the firms that entered the orders on behalf of the customers. As a result, investigations into firm proprietary stock trading, and into customer trading generally,