

CHAPTER III
THE USE OF OPTIONS BY PROFESSIONAL TRADERS

INTRODUCTION

When listed options trading began in 1973, a new range of trading strategies, utilizing both stocks and options, became commonly available to persons who wished to purchase or sell exchange traded securities. Many market participants, including retail customers, institutions and professional traders, began using options along with stocks to try to improve their investment performance, or to hedge their investments against market price movements. Unfortunately, along with the new trading opportunities offered by options, came new opportunities for abuse. In instituting the Options Study in October 1977, the Commission noted that certain abuses had occurred in the trading of listed options (alone or in conjunction with trading in underlying stocks) and expressed concern whether the self-regulatory organizations' surveillance and compliance systems could detect and prevent these abuses. ^{1/}

As part of its task, therefore, the Options Study undertook a review of options trading practices used by certain professional traders. More than 100 persons actively involved in, or affected by, listed options trading were interviewed, including market professionals and the staff members of the self-regulatory organizations responsible for the oversight of options trading practices. Options

^{1/} Securities Exchange Act Release No. 14056 (October 17, 1977). ("October Release").

Study staff members visited the floor of each options exchange and the options trading desks of several broker-dealers. Trading records were obtained from selected broker-dealers, options specialists, and marketmakers in order to document the details of activities discussed during the interviews and observed during trading. In addition, the Options Study reviewed sworn testimony and exhibits from numerous options trading investigations conducted by self-regulatory organizations and by the Commission's staff. The Options Study, however, did not conduct independent investigations of particular trading situations. Nor was the Options Study able to review and analyze trading data or investigations that the self-regulatory organizations initiated in sufficient detail to form the basis for regulatory recommendations. As a result, further study will be required to determine whether specific trading patterns can be identified which should be the subjects of proscriptive rules and to formulate appropriate rules where necessary. ^{2/}

In reviewing options trading practices, the Options Study focused primarily on the activities of "market professionals," -- that is, persons or entities:

- (1) who trade on the floors of the exchanges, such as marketmakers (CBOE) (MSE) (PSE); options specialists and registered options traders (AMEX) (PHLX); and stock

^{2/} See p. 58. infra.

specialists and registered traders (NYSE); (collectively referred to as "marketmakers"), or

- (2) who are exchange members and initiate orders for their own account from their offices ("upstairs firms"); or
- (3) who effect a large volume of securities transactions as customers of exchange members ("institutions" including so-called "hedge funds").

Accordingly, the chapter is a survey of the manner in which market professionals use options in the course of their activities and should not be considered a complete description or analysis of the manner in which all market participants use, or might use, options. In addition, the chapter summarizes various trading practices identified in the October Release and which may have involved violations of the Securities Exchange Act and Commission rules adopted thereunder, as well as rules of the self-regulatory organizations.

All market professionals have two privileges which distinguish them from, and give them advantages over, other market participants. First, they have quicker access to exchange trading facilities - because as members they are permitted to trade on the floor of an exchange or otherwise have preferred access to the floor of an exchange through telecommunication systems or messengers. This access to the trading floors enables market professionals to respond quickly to information likely to affect the price of a security, such as unusual supply or demand for a security, wire service news about a particular issue, or general economic news. Second, market professionals

generally do not incur transaction costs (e.g., commissions) or trade in such volume that the costs they incur are significantly reduced. Additional advantages, such as favorable margin treatment or access to customers' margin securities, are available to some, but not all, market professionals.

These advantages allow market professionals to engage in certain options trading strategies - such as arbitrage - which are not feasible for retail customers. The advantages also present market professionals with greater opportunities to engage in trading practices which violate the securities laws than are afforded other market participants.

While market professionals, as a general rule, use their advantages to maximize their own trading profits, they also perform useful functions in the market place. Their most significant contribution to the market occurs when their participation makes the pricing of securities more efficient, and makes the markets for both stock and options more liquid. By making these contributions, the trading of market professionals helps assure that the prices public customers pay for securities are fair and that these prices quickly reflect the most current and relevant information available about the securities. In addition, marketmakers assume certain obligations to the marketplace which upstairs firms and institutions do not.

The sections below will first describe the functions and legitimate trading activities of market professionals. Next, questionable options trading practices will be examined. Finally,

certain trading rules will be discussed which are of particular relevance to options trading by market professionals.

1. ON FLOOR MARKET PARTICIPANTS

a. Obligations

Market professionals who trade on the floors of options exchanges ("marketmakers") either trade for their own accounts, act as agents for others, or, in some cases, do both. In 1977, 1,153 registered broker-dealers reported options marketmaking activities on national securities exchanges. Their combined gross profit from these activities was \$38.1 million, although almost 40 percent (413) of the dealers reported losses, which in the aggregate amounted to \$15.9 million.

There are two basic marketmaking systems used by options exchanges. The options specialist system of the AMEX and PHLX, (similar to the system used on most stock exchanges), uses an options specialist, who is assigned an options class or classes for which he is obligated to make a market. The specialist is permitted to act both as broker (agent) and dealer (principal) in the options classes to which he is assigned. As broker, he holds and executes orders for other members; as dealer he trades as principal for his own account. The specialist system also relies upon registered options traders ("ROTs") to act as dealers and to perform a marketmaking function. A ROT is not assigned to or re-

quired to limit his trading to a single location or "trading post" and he performs a marketmaking role when trading for his own account. 3/ Unlike a specialist, however, a ROT may not act as both a broker and as a dealer in the same options class during the same day.

The other options exchange system for making markets, used by the CBOE, MSE, and PSE, is the competing marketmaker system. This system, as its name suggests, uses marketmakers to compete with each other to make markets in the various options classes traded on the exchange. The competing marketmaker system is characterized by a separation of the broker and dealer functions. The broker (agency) function for each options class is assigned to a "board broker" on the CBOE 4/ and to an "order book official" on the MSE and PSE. The marketmakers perform the dealer function, although they may also, under certain circumstances, act as brokers. Unlike options specialists, the marketmakers may trade at any post on the exchange floor. Under the rules of the exchanges, marketmakers may not act as dealers and as brokers in the same options class on the same day. 5/

3/ See, e.g., AMEX rule 958. In practice, a ROT's marketmaking obligation has not been extended beyond the requirement to purchase or sell one options contract.

4/ The Commission recently approved a rule proposal of the CBOE to abolish its current board broker system and replace its board brokers with order book officials who would be salaried employees of the CBOE. See, Securities Exchange Act Release No. 15490 (January 11, 1979).

5/ See, e.g., CBOE rule 8.8.

Under Commission and options exchange rules, specialists, ROTs and competing marketmakers have an obligation to trade for their own accounts so as to maintain a fair and orderly market (referred to as their "affirmative obligation") and not to engage in trading which is inconsistent with this obligation (referred to as their "negative obligation"). 6/ This generally includes an obligation to engage in dealings for their own account in order to maintain price continuity and to minimize effects of a temporary disparity between supply and demand, immediate or reasonably anticipated. 7/

Exchanges using both the specialist and the competing marketmaker systems permit members called "floor brokers" to execute agency trades on the exchange floors. Many floor brokers are employees of member firms

6/ See, e.g., 17 CFR 240.11b-1, CBOE rule 8.7.

7/ The Options Study did not evaluate the performance of options specialists or marketmakers in meeting their affirmative and negative obligations under the Exchange Act or options exchange rules. Inasmuch as many significant regulatory decisions (such as the availability of favorable margin treatment and the ability to effect transactions on an exchange for one's own account) are predicated upon these obligations, the Options Study believes that a thorough review should be undertaken to define these obligations more precisely and to determine whether options specialists and marketmakers are meeting these obligations.

who primarily or exclusively execute orders for their firms' proprietary trading accounts and for public customers of the firm. Other floor brokers, sometimes called "two dollar brokers", are self-employed and execute orders on behalf of marketmakers and member firms which either do not employ their own floor brokers or which, on occasion, need to supplement their existing personnel. Floor brokers, unlike specialists, ROTs and marketmakers, have no marketmaking responsibilities.

b. Privileges

In exchange for their marketmaking obligations, marketmakers enjoy certain advantages. First, they have access to information regarding the market which is unavailable to persons not physically present on the floor. They may, for example, be able to gauge the supply and demand for a particular security by observing the flow of orders at that security's trading post. On the CBOE, MSE and PSE, traders can also obtain information concerning prospective transactions by observing, on a television-like screen at each trading post, the best public bid and asked quotations for an options series that the limit order book contains. 8/ More subtle pieces of information are also available to marketmakers. Because of their familiarity

8/ On the AMEX and PHLX, however, the options specialist is generally the only person who is aware of the limit orders which he holds in his "book." AMEX has recently begun to experiment with the feasibility of exposing portions of its options specialists' books to other market participants.

with floor personnel, the traders may recognize a certain floor broker who is known to represent certain large institutional customers, and may thereby anticipate, as he moves into the trading crowd, a large order which may be effected in one or several transactions. They may also be able to identify and interpret the significance of specific trading techniques employed by a particular floor broker or marketmaker. Perhaps most significantly, the marketmaker can know of, and react to, changing quotations and executed transactions as soon as they occur. Most off-floor market participants do not have access to this "floor-related" information until it is publicly disseminated; as a result, this information is useful only to those on the exchange floor.

Second, options marketmakers receive special margin treatment for their options and stock transactions to permit them to provide liquidity when necessary. 9/ Their options transactions are not subject to any margin restrictions but are subject to financial responsibility requirements. 10/ With respect to their stock transactions, options marketmakers are given relaxed margin treatment. 11/ For example, if an options

9/ See Chapter VII.

10/ Id.

11/ Marketmakers and other traders affecting transactions as dealers on the exchange floor are designated by the options exchanges as "specialists" for purposes of the Exchange Act. See, e.g., CBOE rule 8.1. This designation permits these traders to receive the favorable treatment accorded all specialists under Federal Reserve Board margin regulations, adopted under Section 7 of the Exchange Act.

marketmaker hedges his options positions with stock, and then liquidates the stock position within five days, he, unlike a public customer, is not required to make any margin deposit with his clearing firm. This advantageous margin treatment has permitted options marketmakers and specialists to assume and liquidate stock positions within five days without meeting initial margin requirements. ^{12/} In addition, like all exchange members, they do not generally pay commissions on their options transactions. They are therefore able to trade frequently, to profit from small price changes, and to assume securities positions at lower costs than non-members.

Finally, like other professional traders, marketmakers often have access to computers which use various pricing models to compute theoretical values for options. ^{13/} This information helps traders to identify trading opportunities, analyze alternative strategies, and monitor their existing securities positions. Marketmakers are able to study computerized pricing models in their offices (or the offices of their clearing firms) both before the trading day begins and at any time during the day, although they have to leave the exchange floor to do so. The computerized pricing models also

^{12/} A description of this practice, and the Options Study's recommendations on this subject, are contained in Chapter VII.

^{13/} For a more complete discussion of the theoretical value of an option and the use of delta analysis, see Chapter II.

provide information on the "delta" of an options series, which is a mathematical relationship between underlying stock and options prices based on relatively small short-term price movements in the underlying stock. ^{14/} Delta factors are used by traders to calculate the exposure to market risk inherent in their options and stock positions, and to adjust their positions to avoid unacceptable risk. ^{15/}

c. Options trading strategies

The marketmaker uses his advantages in the marketplace to earn trading profits for his own account. In accomplishing this end, he may employ a variety of trading strategies designed to maximize profits and to enable him to minimize or control the risks of his options positions.

Although each marketmaker's method of trading is, to a certain extent, unique, three general approaches to options marketmaking are common. These are categorized as "scalping", "spreading" and "position trading."

The term "scalping" describes a trading strategy in which a trader tries to buy options at the bid price (e.g., 1-1/2) and sell them at the asked price (e.g., 1-5/8) in order to profit from the differ-

^{14/} Id.

^{15/} Delta analysis is also used by some clearing firms as a measure of the risk exposure of the marketmakers for whom they clear transactions. For a description of the delta formula, and its use as a risk measuring device by clearing firms, see Chapter VII.

ential, (in this case, 1/8 of a point). This trading strategy requires a rapid turnover of positions, both to limit risk and to achieve meaningful profits from the narrow spread between the bid and asked quotations. The term "spreading" describes the simultaneous or nearly simultaneous purchase and sale of two different options series of the same class in order to reduce the risk associated with a simple long or short options position. Frequently, options perceived as relatively undervalued are bought and those perceived as relatively overvalued are sold. This assessment of each option's value is derived either from a computerized pricing model or from the marketmaker's subjective analysis. "Neutral spreaders" attempt to maintain offsetting options positions in order to minimize the impact of price movements of the underlying stock on their spread positions. Profit is earned as market forces "correct" the relative valuations of the options. Position trading refers to several trading strategies in which the marketmaker acquires longer term options positions, generally by spreading or call writing against long stock, which are based upon his opinion of the anticipated future price movements of the underlying stock.

The fundamental elements of scalping, spreading and position trading are summarized in Table 1.

TABLE 1

	<u>SCALPING</u>	<u>SPREADING</u>	<u>POSITION TRADING</u>
Basic Strategy	- Buy/sell all as- - signed classes at - bid/offer to earn - differential	Buy relatively undervalued op- tions; sell re- latively over- valued options. Reduce risk associated with simple long or short options positions	Speculation on market movements
Use of Options Pricing Model	- No	Inherent part of strategy	Occasionally
Opinion on Underlying Stock	- No	Not necessarily	Inherent part of strategy
Time Position Held	- As briefly as - possible - rarely - overnight - for - this reason - scalpers are - often called - "day traders"	Makes adjustments and constantly changes positions	Frequently until expiration
Use of Stock	- No	Occasionally when options cannot be used or are not an economical hedge	Inherent part of some strategies
Capital Needed	- Minimal	Moderate	Substantial
Vulnerability to price movement in underlying stock	- Relatively little - vulnerability be- - cause of rapid - turnover of - small positions	Vulnerable to large price fluctuations in underlying security; neutrally hedged for small move- ments	Substantial

While individual marketmakers generally favor one approach to trading, most remain flexible in responding to market conditions. A scalper may become a spreader if he is unable to close out a position at a reasonable price. A spreader may become a scalper by closing out one side of a spread in response to an attractive bid or offer or upon receipt of an exercise notice for the underlying stock. An options marketmaker may begin the day with a planned approach and then be forced to reevaluate his trading strategies in response to order flow, his marketmaking obligations, or the price movement of the underlying stock.

d. Stock/options trading strategies

The Commission has prohibited stock specialists and registered stock marketmakers on the NYSE and AMEX from trading options in their specialty stocks or stocks in which they hold positions ^{16/} because, among other reasons, of the potential for manipulative and other improper activity inherent in such an arrangement. ^{17/} Marketmakers, specialists and ROTs on the options exchanges, however, have been permitted to trade the equity securities underlying the options in which they make markets.

^{16/} In 1977, the Commission determined to permit specialists and odd-lot dealers on the floors of the regional stock exchanges to trade listed options on their specialty stocks and to allow marketmakers on those exchanges to trade listed options with respect to underlying securities in which they held a position because "the manipulative potential inherent in [permitting such trading] appears relatively insignificant." See, e.g., Securities Exchange Act Release No. 13269 (February 16, 1977), No. 13270 (February 16, 1977), and No. 13272 (February 16, 1977).

^{17/} See discussion at Chapter VII.

Several economic factors, however, would seem to discourage the use of stock by options marketmakers in devising strategies. First, when an options marketmaker wishes to buy or sell stock, the transaction must be effected through a stock exchange member firm who charges the options marketmaker a commission for the service. ^{18/} While these charges are generally lower for options marketmakers than for market participants who are not exchange members, they are still higher than the minimal clearing charges which these traders incur for their options transactions. Second, if the options marketmaker purchases the stock on credit - and he almost always does - the amount of interest he must pay his creditor (usually his clearing firm) is higher than interest he would pay for an equivalent options position, since the corresponding stock position will cost more and the amount borrowed is obviously greater than for the equivalent options position. Third, while an options marketmaker's options transactions are exempt from margin requirements, his equity positions, used to hedge his options positions, are subject to a minimum 25 percent margin requirement under Regulation T if not sold within five business days after purchase. Fourth, a marketmaker's stock sales (but not purchases) are subject to the New York State transfer tax if the sales are executed on the NYSE or AMEX, which are the primary markets for all stocks underlying listed options. Fifth, the options

^{18/} If the options marketmaker is also a member of the stock exchange where the transaction was executed, commission charges, with the exception of floor brokerage, may not be incurred.

floor trader has immediate access to stock options quotation and transaction information but, because the stock transaction and quotation information available on the options exchange floor may be stale or unreliable, he may have to use personnel on the stock exchange floor employed by his clearing firm or the firm through which he executes stock transactions to obtain reports of stock quotations and transactions at a particular moment. This results in delay in the marketmaker's receipt of pricing information and is a service for which the marketmaker must ultimately pay, either directly or indirectly. Finally, to place a stock order, a marketmaker must leave the options trading crowd (or at least momentarily divert his attention from options trading activity), and, as a result, may lose the opportunity to make an advantageous options trade.

Although these economic considerations would seem to make stock transactions somewhat unattractive for options marketmakers, some marketmakers nonetheless appear to use stock extensively in their trading strategies.

A marketmaker may use stock to hedge an options position when an options hedge might not be available. For example, if a trader purchased a large number of soon-to-expire call options in the only near term in-the-money ^{19/} series available for that options class, he

^{19/} A call option is said to be "in-the-money" if the underlying security's price is greater than the option's exercise price. A put option is "in-the-money" if the underlying security's price is lower than the option's exercise price.

might be unable to hedge that position through the sale of options in another series of that class (an "options hedge") because a very large number of contracts would be necessary to offset the risk of the initial options position. Such a large sale transaction might be undesirable because of the market impact of buying or the liquidity costs of selling the position. Moreover, if the options hedge could only be accomplished through the writing of more than 1,000 contracts, the trader would be precluded from making such a sale because of position limit rules which prevent him from holding more than 1,000 options contracts on one side of the market. 20/

Options hedges are most likely to be unavailable in options classes that are not actively traded or in which a limited number of series exist. This may be more true if listed puts are not available for a particular stock. In such instances, options traders may be more likely to use hedging strategies involving the underlying stock.

In order to assess the extent to which marketmakers engage in stock trading, the Options Study reviewed summaries of CBOE marketmaker activity in NYSE stocks underlying CBOE options. 21/ The review covered six weeks of trading activity beginning in June 1978. This

20/ For a discussion of these position limit rules, see infra at 65-68.

21/ These summaries were prepared by the CBOE and did not cover stock transactions by non-CBOE options marketmakers. Additionally, the period under review included an expiration week and accordingly may not be representative of the volume of stock transactions by marketmakers at other times.

review showed that stock trading by CBOE marketmakers as a group exceeded 15 percent of the reported stock volume in an average of four NYSE listed stocks each day. On each day reviewed, CBOE marketmakers purchased or sold more than 20 percent of the shares traded on the NYSE in at least one issue. On occasion, the options marketmaker activity exceeded 50 percent of the trading in a particular underlying stock. In several instances, the marketmakers had no options position in the stock in which they had been trading and thus the transactions appear to have been unrelated to their marketmaking obligations. 22/

As a general rule, options marketmakers who are well capitalized tend to trade more shares of stock than traders with less capital because they can afford the costs associated with maintaining a stock position (including margin, if necessary), and because they can afford to assume large options positions for which an options hedge may not be available. The following tables, based on data analyzed by the Options Study, suggest that well-capitalized marketmakers and specialists tend to have larger stock positions relative to their options positions than those who are less well-capitalized.

22/ These summaries indicate that stock transactions by CBOE marketmakers constituted a substantial amount of the transactions in the underlying stock for the period under review. The subject of stock transactions by options professionals, and particularly the impact such transactions have on stock prices, would appear to be an appropriate subject for further study by the Division of Market Regulation. The relationship between the stock trading by options marketmakers and the margin regulations is discussed in Chapter VII.

Table 2 As of September 30, 1977

<u>Account Equity (\$)</u>	<u>Number of Marketmakers</u>	<u>Aggregate Long and Short Options Positions</u>	<u>Aggregate Long and Short Stock Positions</u>	<u>Percentage of Stock Positions to Options Positions</u>
less than 0	34 <u>23/</u>	\$ 795,952	\$ 194,575	24%
0 - 4,999	272	2,728,885	275,861	10%
5,000 - 24,999	219	11,746,773	3,711,484	32%
25,000 - 99 999	197	31,313,658	0,325,927	33%
100,000 and over	141	92,928,614	2,110,035	77%

Table 3 As of December 30, 1977

<u>Account Equity (\$)</u>	<u>Number of Marketmakers</u>	<u>Aggregate Long and Short Options Positions</u>	<u>Aggregate Long and Short Stock Positions</u>	<u>Percentage of Stock Positions to Options Positions</u>
less than 0	39 <u>24/</u>	\$ 5,983,646	\$ 422,937	7%
0 - 4,999	272	4,047,942	219,128	6%
5,000 - 24,999	219	18,414,193	1,609,157	9%
25,000 - 99 999	214	45,655,782	9,234,243	21%
100,000 and over	154	144,495,299	88,740,095	62%

23/ This does not include five MSE market makers who reported no stock or options positions.

24/ This does not include six MSE marketmakers who reported no stock or options positions.

2. UPSTAIRS FIRMS

Broker-dealers who initiate their proprietary trading off exchange floors ("upstairs firms") principally use options to generate arbitrage and trading profits. They can profit from such transactions primarily because of certain advantages these firms enjoy over the public at large, and even, in some instances, over options marketmakers.

a. Advantages enjoyed by upstairs firms

The advantages enjoyed by upstairs firms in trading listed options are similar in many respects to those enjoyed by marketmakers. Upstairs traders can quickly obtain information from the trading floor (through the floor brokers employed by their firms) concerning such matters as order flow, executed transactions and changes in quotations. Like marketmakers, upstairs firms have information systems which provide immediate last sale and quotation information. Because traders at upstairs firms have a direct "wire" i.e., telephone line, to the floor, they can react quickly to information by entering or canceling orders through their floor brokers. In addition, because they are exchange members, upstairs firms generally incur no commission costs on their transactions. Finally, like marketmakers, upstairs firms use computer models as an integral part of their trading, and most brokerage firms actively involved in options trading have developed proprietary computer programs or modified existing options pricing models to satisfy their particular needs or to reflect their specific economic or trading theories.

In some respects, upstairs traders enjoy substantial advantages over marketmakers. The last sale and quotation information available to them is not limited to the relatively small number of options traded at one post or the related underlying stocks. Display screens in their trading rooms allow them to monitor transaction and quotation information for all listed options and underlying securities. Moreover, upstairs traders have immediate access to news developments and to input from their firm's research department regarding fundamental and technical factors.

In other respects, upstairs firms are at a disadvantage compared to marketmakers. First, there is a timing disadvantage. The upstairs firm's instructions must be transmitted to an agent or employee (the floor broker) who must then try to execute or cancel the order in the trading crowd. While this process may take only minutes (or less), in an active market every delay may significantly alter the profitability of a transaction. ^{25/}

Second, because they carry customer accounts, the net capital requirements imposed on upstairs firms by the Commission are substantially different from those imposed on marketmakers by the clearing firms which

^{25/} The timing disadvantage is substantially reduced when the upstairs firm gives its floor broker certain flexibility to "work" an order, thereby reducing the need for the upstairs firm to transmit specific instructions to the trading floor when market conditions change.

carry their accounts. This difference has affected the manner in which upstairs firms trade options, at least to the extent of causing such firms to forego certain proprietary options trading strategies if the capital charges are unfavorable. For example, under the existing net capital rule, certain well-hedged spread transactions (with predefined risks) result in relatively high capital charges for upstairs traders compared with the capital charges that would be imposed on marketmakers with the same positions. Further, the essentially riskless nature of certain arbitrage transactions is not fully recognized by existing net capital rules. 26/

Unlike marketmakers, upstairs firms are not given preferred margin treatment either for their stock or options transactions. Generally they must meet the full margin requirements for any stock or options positions they acquire. 27/

In a manner similar to other traders, upstairs firms engage in spreading and covered and ratio writing strategies although, generally speaking, such trading is not a function of their particular advantages. As is true

26/ Examples of the impact of the net capital rule on upstairs dealers employing certain spreading and arbitrage transactions and the Options Study's recommendations on this subject are contained in Chapter VII.

27/ Exemptions from Federal Reserve Board margin requirements are available for upstairs firms when they perform certain dealer functions such as block positioning and third marketmaking, which are deemed to be beneficial to the overall depth or liquidity of the market. Dealers who effect transactions in listed securities as principal off the exchange floor are called third marketmakers. For a description of block positioners, see infra at 35-39.

of marketmakers, however, upstairs firms try to use their advantages to make money for their proprietary accounts. As discussed below, upstairs firms are uniquely situated to employ two types of trading - arbitrage and block trading - and listed options are often an integral part of that trading.

b. Arbitrage trading

Arbitrage transactions involve the simultaneous or nearly simultaneous purchase and sale of the same or equivalent securities at different prices to take advantage of generally small price disparities. These disparities may arise in the prices quoted for related securities in different markets on which those securities are traded.

Arbitrageurs do not base their transactions on their opinion of the underlying stock or the related options class. Since the pricing inefficiencies are usually very small, only traders who pay little or no transaction costs will find arbitrage opportunities attractive. Moreover, these price differences frequently exist only briefly before they are recognized by market professionals whose transactions tend to eliminate these differences. ^{28/} Arbitrage profits can thus be captured only by those persons who are able to recognize these disparities, respond instantly, execute orders in different markets, and are not subject to commission charges.

^{28/} Upstairs firms frequently utilize computers to monitor, on a real time basis, last sale and quotation information for all option stocks and options in order to identify arbitrage opportunities in options and related underlying stocks.

An arbitrage transaction is subject to market risk if all components of the transaction cannot be effected almost simultaneously, or if the particular market is not sufficiently liquid to permit execution of the component parts of the transaction before the price disparity vanishes. Once effected, however, many of these transactions allow the firm to earn a profit without any market risk. 29/

Securities arbitrage adds to the overall liquidity and efficiency of the marketplace by introducing additional supply and demand and by narrowing or eliminating pricing inefficiencies. The Commission has stated that it views arbitrage as "performing a worthwhile economic role since it seems to equalize the price of a different security or its equivalent when traded in different markets." 30/

Upstairs firms use listed options in connection with several different proprietary arbitrage trading strategies.

(1) Conversion and reverse conversion arbitrage

Arbitrage techniques used by upstairs firms to take advantage of pricing inefficiencies between the premium of a call option and the premium of a put option with an identical strike price and expiration date ("corresponding put") are called conversions and reverse

29/ These so-called riskless arbitrage transactions should be compared with risk arbitrage transactions, involving mergers or exchange offers. See infra at 31-33.

30/ Securities Exchange Act Release No. 9950 (January 16, 1973) (adoption of Rule 19b-2).

conversions. Upstairs firms are almost alone in being able to effect these strategies because they pay no commissions 31/ on stock or options transactions, and because they are ideally situated to monitor the entire options and stock marketplace to identify conversion and reverse conversion opportunities and to act upon them quickly. Moreover, as will be discussed below, in reverse conversion transactions, access to stock at little or no cost to satisfy short sale delivery obligations 32/ is a further significant advantage enjoyed by many upstairs firms (particularly those firms with retail customers) which cannot be duplicated by other market professionals.

(a) Conversion arbitrage If a call option is overvalued relative to its corresponding put, conversion arbitrage is used as a riskless method of capturing the amount by which the premiums are out of line. The conversion equation is as follows:

$$\text{LONG STOCK} + \text{SHORT CALL} + \text{LONG PUT} = \text{NO MARKET RISK}$$

If a firm establishes this position (short one call, long one corresponding put, long 100 shares of underlying stock) and holds the position to the expiration of the options involved, the position presents no market risk to the firm and at expiration, regardless of the direction of movement in the price of the underlying stock, the entire position

31/ The term commission in this context does not include floor brokerage.

32/ When a seller effects a short sale he must deliver the stock to the purchaser's broker within the time required for settlement of the transaction, i.e., five business days.