After four months of options trading, when the customer withdrew discretionary authority over the account, her account had suffered losses of approximately $50,000, more than half of which were paid to the firm as commissions and margin interest.

e. Conclusions

Options investment programs aggravate the regulatory problems involved in options selling. The Options Study believes that recommendations put foward elsewhere in this chapter of the report will remedy many of these problems. Of particular importance are the recommendations concerninq discretionary options accounts, systematic reviews of account activity and control of performance reports.

H. OPTIONS TRADING IN CUSTOMER ACCOUNTS

1. Introduction

The combination of an option's short life and the complexity of options trading in general has made it apparent to many customers that they have neither sufficient time nor understanding to monitor with adequate diligence the trading activity in their own accounts. As a consequence, many customers rely heavily on their registered representatives for options trading decisions. This reliance, in many cases, is so great that registered representatives can effectively control all trading in these customers' options accounts. Since this control is not always exercised wisely or fairly, problems can arise.

One major problem for the customer is unsatisfactory performance by his registered representative. This less than satisfactory performance may result from the salesman's simple lack of knowledge about options trading, or from the temptation to abuse the customer's account arising from the commission potential of options trading. In some cases, customer losses are the result of both the lack of knowledge and also the self-interested conduct of registered representatives.

Abuses, such as excessive and unauthorized trading, often go unchecked until substantial losses are sustained by the customer. The delay in detecting such problems occurs because supervisory systems are inadequate, or because the customer is so confused by his account statements

- or misled by inaccurate performance reports - that he cannot determine the result of trading in his account. These and other problems that seem to arise often in the accounts of options customers are discussed below.

2. Excessive Trading

As noted earlier in this chapter, the industry's usual commission structure for options makes them an attractive sales product for commission-dependent salesmen. A desire to increase their earnings can tempt registered representatives to effect excessive options trades in customer accounts with the primary purpose of generating commissions.

a. Examples of excessive trading

The temptation for a registered representative to trade an options customer's account excessively is illustrated by the following case concerning a widow for whom some form of options trading may have been suitable. When the customer's husband died, he left her more than $400,000 in securities. Since the widow had never participated in the family's financial affairs, she readily entrusted her entire securities portfolio to a local representative of the firm with which her husband had dealt. Starting in 1970, and for several years, that registered representative primarily traded equities in her account, following the pattern that had been established in her husband's account; an average of 40 trades per year were effected and annual commissions averaged approximately $7,300.

In 1974, however, (the year following commencement of listed options trading) the registered representative began trading listed options in her account. In that single year, he effected more than 200 trades and generated nearly $40,000 in commissions, more than 25 percent of his total gross commissions for the year. While the loss of $200,000 in the account cannot be attributed solely to options trading, options transactions contributed significantly to these losses and provided the vehicle by which this salesman earned extraordinary commissions at the expense of this unknowing client. The following table summarizes the activity in this account:

TABLE II

Year	Number of Trades	Commissions	Commissions as percentage of account equity
1969	1	NA	NA
1970	10	$ 4,519	0.9%
1971	19	3,533	0.7
1972	88	13,567	2.8
1973	45	6,745	1.4
1974*	243	39,693	10.7
1975 (5 months)	83	20,020	6.9 (5 months)

* began trading options

Many other situations involving apparently excessive trading of options accounts have come to the attention of the Options Study. 38/

38/ These cases come from several sources, including: the review of customer complaints submitted by broker/dealers or received directly from customers; Commission enforcement actions; private litigation; the disciplinary proceedings of self-regulatory organizations; and the reports of broker-dealer inspections by self-regulatory organizations and the Commission's staff.

From these cases the Options Study has identified certain factual patterns which seem to be commonly associated with excessive trading problems.

(1) The obvious churning case

Excessive trading of a customer's account is often accompanied by other fraudulent conduct. For example, the Options Study reviewed one case where a national brokerage firm and several of its employees apparently were engaged in concurrent excessive trading, misrepresentation, suitability and supervisory violations. Two registered representatives using a variety of misrepresentations, induced fourteen customers to open discretionary accounts; each was to be managed in accordance with the registered representatives' options trading program. These fourteen customers invested a total of $372,550, suffered losses of $117,122, and were charged commissions of $98,588. Although the average account was open only 12 months, average commission costs exceeded 25 percent of the money invested. The table below summarizes the results of the trading in these accounts:

TABLE III

Customer	Total Investment	Commissions	Commissions as A Percentage Of Investment	Losses After Commissions	Percentage of Investment Lost
A	$ 77,566	$18,401	23.72%	$ 22,494	29.00%
B	144,092	18,177	12.61%	9,191	6.38%
C	5,405	3,820	70.68%	5,391	99.74%
D	14,867	1,212	8.15%	5,303	35.67%
E	28,425	15,706	55.25%	24,753	87.98%
F	16,122	9,993	61.98%	14,487	89.86%
G	3,943	1,655	41.97%	2,228	56.51%
H	9,732	4,018	41.29%	3,634	37.35%
I	10,844	445	4.01%	927	8.92%
J	18,220	7,377	40.49%	5,365	29.45%
K	8,558	4,472	52.27%	4,824	56.37%
L	18,177	3,605	19.83%	8,982	49.42%
M	11,730	4,085	34.83%	5,609	47.82%
N	4,869	5,622	115.47%	3,894	79.98%
Total	$372,550	$98,588	26.26%	$117,122	31.44%

Account "G" belonged to a young serviceman and his wife. This family's total income was $23,000, and their net worth approximately $20,000. Neither the serviceman nor his wife had any prior investment experience in the securities markets. In late 1976, they approached this national brokerage firm to determine if they could find an investment offering a return higher than they were receiving on their $4,000 bank savings account.

The two registered representatives recommended to the couple a "low risk" options program - one which they represented offered returns on investment of up to 35 percent. Enticed by this sales presentation, the couple deposited their entire $4,000 of savings in a discretionary account with the brokerage firm. During one year, the two registered representatives generated commissions of about $1,600 (40 percent of the equity invested), and lost more than $2,000 of the couple's original investment.

As part of the trading in this account, a series of discretionary transactions were effected which had little or no investment merit. For example, one of the registered representatives purchased 300 shares of common stock and wrote three in-the-money calls against that stock. The maximum gain to the couple from the trade, after deducting commissions, would have been $199 if their options had been exercised and the stock called. The couple placed at risk $2,719 (the cost of the stock less the premium received) while the commissions to the brokerage firm, which would be generated if the stock were called, would have been $203. Several other trades in the couple's account appeared to be worthwhile only for the registered representatives and their firm or, at best, were only marginally profitable for the customers.

(2) The retired school teacher

Excessive trading is often associated with inexperienced, unsophisticated customers. A classic example is the experience of a retired school teacher who had only limited experience in the stock market and who had never invested in options. Her primary source of income, the dividends from her portfolio of "blue chip" securities, was barely sufficient to meet her needs. When a registered representative from a national brokerage firm advised her that returns of 40-50 percent were possible from a program he had devised for trading listed options, she thought she had found the answer to her income problem. Indeed, she was so anxious to participate in his program that she permitted the registered representative to misrepresent her net worth on the options account information form. Such falsification was necessary to secure approval of her discretionary options account since her actual net worth did not meet the brokerage firm's minimum standard for the salesman's "aggressive options trading" program.

When the customer's discretionary account was opened, in April 1977, account equity totalled $115,000. At that time, she signed a statement indicating her goal of 35-40 percent appreciation and acknowledging that achievement of this goal "may result in frequent trades and substantial commissions." Despite this statement, she did not appreciate the risk she had assumed, did not understand the trading strategies employed, and could not comprehend her account statement.

When trading was halted, after four months, the equity in the account had declined to $64,000, a loss of $51,000. During this period, the registered representative generated more than $25,000 in commissions, an amount equalling more than 20 percent of the invested equity in the account.

(3) The wealthy executive

Excessive trading problems are not only associated with unsophisticated customers, or customers of limited resources. Another type of excessive trading case involves the customer who possesses a basic understanding of options and is financially able to bear the risk of substantial losses, but who does not have time to make the necessary trading decisions and, accordingly, gives his registered representative discretionary authority to manage his options account. One such investor, a wealthy real estate executive, entrusted more than $500,000 to a registered representative employed by a regional brokerage firm. In less than two years, the account lost nearly 70 percent of the money invested; more than $80,000 of the loss - - 24 percent of the customer's average investment during the period - - was collected by the brokerage firm as commissions. Not only was the trading extraordinarily heavy in this account, but the risks taken were also excessive even for a customer with financial resources.

b. What is excessive trading?

The cases above illustrate instances of "excessive trading", that is, trading in a customer's account which bears little relationship to the customer's needs or objectives.

The antifraud provisions of the Federal securities laws have been held to prohibit excessive trading, or "churning", by a broker-dealer in a customer's account since such conduct violates the broker-dealer's obligation to deal fairly with the public in compliance with the accepted standards and practices of the profession. 39/ In Exchange Act Rule 15cl-7,

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39/ Hecht v. Harris, Upham & Co., 430 F.2d 1202, 1207 (9th Cir. 1970).

an antifraud rule applicable to over-the-counter securities markets, the Commission defined churning as follows:

> [A]ny act of any broker [or] dealer...designed to effect with or for any customer's account in respect to which such broker [or] dealer... or his agent or employee is vested with any discretionary power any transactions or purchase or sale which are excessive in size or frequency in view of the financial resources and character of such account. 40/

By analogy many of the concepts of Rule 15cl-7 have been applied to trading in other securities through the Commission's general antifraud provision, Exchange Act Rule 10b-5. 41/

Proof of excessive trading involves several elements. The first element of excessive trading is control by the registered representative over the customer's account. Under Rule 15cl-7, control clearly exists where the customer has expressly granted to a registered representative the discretionary authority to effect trades for his account. In addition, control can exist even though no formal grant of discretion has been made where the registered representative in fact exercises discretion over the account. Therefore, trading which is either unknown to or unauthorized by the customer is "controlled" by the registered representative. Control can also be inferred if the registered representative significantly influences the size and frequency of transactions in an account by

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40/ Exchange Act Rule 15cl-7(a), 17 C.F.R. 240.15cl-7(a).

41/ Exchange Act Rule 10b-5, 17 C.F.R. 240.10b-5.

reason of the trust and confidence placed in him by the customer. 42/ Such control has been found frequently in cases involving active trading in equity accounts where the customer was naive, unsophisticated, or inexperienced in the workings of the securities markets. In other cases, the accounts even of experienced investors who have consistently accepted all recommendations from their registered representatives have been found to be controlled by the registered representatives. 43/

The second element of excessive trading is a determination that the transactions effected by the broker-dealer are excessive in size or frequency in light of the nature and resources of the account and the investment objectives of the customer. 44/

Since excessive trading "cannot be and need not be, established by any one precise rule or formula," 45/ several factors are relevant

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42/ See generally WOLFSON, supra note 15 at ¶ 2.11.

43/ Russell L. Irish, 42 S.E.C. 735, 736-737 (1965), aff'd sub nom. Irish v. SEC, 367 F.2d 637 (9th Cir. 1966), cert. denied, 386 U.S. 911 (1967).

44/ In this regard, the prohibition against excessive trading is related to the suitability doctrine in that churning is, by definition, unsuitable for any customer. Both principles are designed to protect customers by obligating broker-dealers to act with customers' interests uppermost in mind. The principal distinction between the two concepts, however, is that churning applies to a series of transactions while suitability also applies to each individual trade as well as a series of transactions.

45/ Hecht v. Harris, Upham & Co., 283 F. Supp. 417, 435 (N.D. Cal. 1968), aff'd, 430 F.2d 1202 (9th Cir. 1970).

in determining whether an account has been traded excessively. The nature of the account must be considered since the trading in an account need not only be active but must also be inconsistent with the financial circumstances and investment objectives of the customer. For example, a moderate level of activity might constitute excessive trading where the investment objective of the customer is capital conservation, while the same or higher level of trading might not be considered excessive in the account of a customer seeking short term profits. In addition, whether active trading in speculative securities is appropriate in a particular account depends, in part, on whether the customer is financially able to bear the assumed risk of loss.

Since the motive behind excessive trading is usually the registered representative's interest in generating commissions, evidence of trading which is designed "to derive profits for [the broker-dealer or salesperson], while disregarding the interest of the customer", 46/ while not necessarily an element of the offense, is another factor to be considered. For example, the repeated purchase and sale of the same security absent any price change, or the continous switching from one security to another with no apparent rationale, may reflect the broker's interest in generating commissions. Options transactions in which the maximum potential profit is entirely offset by the commissions charged raise similar questions as to the registered representative's motives.

46/ Ibid.

c. The measurement problem

The most difficult problem relating to excessive trading is how to measure activity. One factor frequently used to measure activity is the "turnover rate" of an account. Various formulas have been used by the Commission and the courts to measure the rate of turnover. These formulas typically relate the total cost of purchases made for the account during a period of time to the average amount invested in the account over the same period of time. The figure derived is the turnover rate. Thus:

$$\frac{\text{total cost of purchases for time period}}{\text{average amount invested in account for time period}} = \text{turnover rate for time period}$$

The formula above is known as the "Looper formula" 47/ and was designed for equity trading. As used in this formula, purchases include the full cost of all securities purchased whether on a cash or margin basis during the period to be measured. The amount of average monthly investment is then calculated by totaling all cash additions to the account, including cash deposits, proceeds from the sale of securities, and dividends; by deducting cash withdrawals; and by dividing the resulting total by the number of months in the period under consideration.

The Looper formula accurately reflects the level of activity in an an account only if the account is initiated with a cash deposit, if no other securities are available for liquidation, and if no dramatic changes occur in the prices of the securities held. If substantial securities

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47/ Looper & Co., 38 SEC 294 (1958).

positions are held in the account (or are otherwise within the discretion of the registered representative), the Looper formula substantially overstates the degree of activity since the value of these positions is excluded from the amount of average monthly investment. For example, if $1,000,000 of stock is held in the account and a sale is made releasing $10,000 which is then reinvested in the same month, the Looper formula will yield a turnover rate of 1:

$$\frac{\$10{,}000 \text{ (purchases)}}{\$10{,}000 \text{ (average monthly investment)}} = 1$$

Obviously, the use of such a turnover rate could be misleading if the user believes that this rate measures the activity in the whole account. Similarly, if the values of portfolio securities change significantly, the formula will not accurately reflect the ratio of the amount of purchases to the amount of total capital available for investment. This limitation is particularly significant when an account includes highly leveraged options positions which are subject to substantial price fluctuation.

A commonly suggested modification of the Looper Formula is the inclusion in "net monthly investment" of all securities available for investment at market value, calculated monthly. This procedure measures the rate of turnover of capital available for investment during each month. Applying this modification to the example above, the sale and purchase of $10,000 worth of stock in an account with an equity of $1,000,000 provides a turnover rate of .01 per month, a more realistic indication of the activity within the whole account.

Still, neither of these conventional formulations adequately measures the impact of options trading on the activity in customer accounts since they completely ignore the effect of the sale of options contracts. An account in which calls are sold against stock positions would not reflect any activity unless the positions were closed through purchases.

The Options Study has analyzed several alternative methods of measuring activity in accounts which include options. One approach is to focus on options alone, by calculating the number of contracts bought or sold in opening transactions per every $1,000 invested during the period under review. For example, consider the computations associated with a "conservative" covered option writing account which has $10,000 in equity created by a 400 share long position. At any given time, the 400 share equity position serves to cover the writing of up to four options contracts. Assume that the account sells the calls nearest to expiration, repurchases the calls on expiration date or allows them to expire, and then sells new calls. Using such a strategy, the account would effect opening transactions for four contracts once every three months, or for sixteen contracts during a one year period. The contract activity index would be calculated as follows:

$$\frac{16\text{ (contracts)}/12\text{ (months)}}{\$10{,}000\text{ (account equity)}/\$1000} = .13$$

Table III illustrates the use of the contract index approach by applying it to several customer options accounts which the Commission, in a recent enforcement action, found to be excessively traded.

TABLE IV

Account	Equity * Invested	No. of Contracts	Duration of Account	Contract Index
A	$18,236	406	4 months	5.5
B	31,468	418	4 months	3.3
C	12,653	370	5 months	5.8
D	14,214	168	3 months	3.9
E	23,671	300	2 months	6.4

This method of measurement does provide a convenient basis for comparing the activity in various options accounts, but its failure to reflect activity in other securities in the account is a serious limitation, particularly since many options strategies are not limited to options but also involve the underlying or other securities.

An alternative approach to calculating excessive trading focuses on the amount of commissions generated by trading in the account rather than upon the calculation of a rate of turnover. This approach analyzes commissions earned as a percentage of investment during the period in question. Since commissions ostensibly are the most common motive for excessive trading, and since commissions provide a basis for comparison of accounts using various investment vehicles, this approach offers one logical solution to the need for a standard formula to measure trading activity in customer accounts which include options.

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* Equity figures used in the calculations in Tables IV and V (below) represent the customer's total investment in the account. A more precise calculation would be to divide monthly commissions by account equity for that month (or average monthly commissions by average account equity).

The use of commissions to measure excessive trading is illustrated in the following table, using the same accounts set out in Table III above:

TABLE V

Account	Equity * Invested	Commissions	Duration of Account	Monthly Commission/ Equity
A	$18,236	9,234	4 months	.13
B	31,468	18,975	4 months	.10
C	12,653	13,242	5 months	.21
D	14,214	8,215	3 months	.19
E	23,671	12,303	2 months	.26

In addition, the commission approach appears to be workable since the accounting information necessary for this calculation is readily available in the industry. Most brokerage firms currently calculate commissions generated by each account on a monthly basis. They also generally possess the capability of calculating the equity in each customer account on a monthly basis either within their existing accounting systems or through the use of other currently available technology. Thus, a simple formula of commissions as a percent of account equity on a monthly and year-to-date basis could provide the needed measurement of activity for brokerage firm supervision of accounts but would require no more information than is otherwise necessary to maintain adequate surveillance over options accounts. While the use of this formula cannot, by itself, specifically determine whether an account has been excessively traded, it does provide a means of comparison necessary to such a determination.

* See note, p. 158.

d. Account review procedures to control excessive trading

Illegal excessive trading can occur only in an account over which the registered representative exercises significant control. As noted elsewhere, options customers frequently grant registered representatives such control, either formally or informally. The Commission and the exchanges have imposed rules which together require: (1) that every discretionary options account be specifically authorized by the customer in writing; (2) that every options trade in a discretionary account be initialed by an ROP; and (3) that every order ticket for a discretionary options trade be identified as such. 48/ Often, however, a registered representative exercises discretion over an account without complying with these requirements. Such accounts, which lack the required documentation and authority for discretionary trading, are normally treated by firm supervisors as non-discretionary accounts.

Brokerage firms employ various controls in an effort to help insure that trading in accounts is not excessive. One approach taken by several major brokerage firms is to prohibit discretionary accounts entirely or to restrict such accounts to those managed at the home office. Other firms reject this approach, taking the position that "a prohibition [on discretionary accounts] merely chases them underground". Most firms, including those

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48/ See, e.g., Rule 9.10, CBOE GUIDE (CCH) ¶ 2310. See also Exchange Act Rule 17a-3(a)(b), 17 CFR 240.17a-3(a)(6).

which do not permit formal discretionary accounts, employ some automated procedures to detect and highlight a large number of trades effected in, or substantial commissions generated by, all types of customer accounts. A few firms have computer programs which isolate accounts with high trading activity by calculating turnover rates using Looper-type formulas on a monthly basis, while others use some combination of commissions or number of transactions in an account. Customer accounts identified as overly active usually are then reviewed to determine whether the activity is justified or whether the trading is out of character for the account.

When firms identify a non-discretionary account with an unexplained degree of trading activity, either the sales office manager or the firm's compliance department will frequently send the customer an "activity letter" which purports to notify the customer about the unusual nature of the activity in his account. Some activity letters describe the unusual trading activity that prompted the mailing; others simply send greetings from the branch manager and invite questions about the customer's account. In either case, many activity letters appear to have been phrased to protect the firm from liability rather than to inform the customer that the management of the firm is concerned about the activity in the customer's account.

Moreover, most firms do not require that customers acknowledge receipt of, or respond to, activity letters, and none of the firms in the industry group sample reported routine procedures for sending a second activity letter to a customer if the first is not acknowledged.

Many firms simply file the unanswered activity letters, to be used later, if the customer complains, to demonstrate the customer's knowledge of the activity in his account.

The self-serving purpose served by activity letters is exemplified by an internal memorandum sent from a compliance officer of a national brokerage firm to one of his subordinates, with copies sent to a partner of the firm. The memorandum, which expressed concern about options trading losses in excess of $20,000 in a discretionary account managed by one of the firm's registered representatives, contained the following handwritten notation from the partner to the firm's chief compliance officer:

> 1) Has [John] analyzed other accounts of [the registered representative] where they may be problems?
>
> 2) On accounts where commissions are large and trading active, have we sent [a] "suicide letter" to [the] customer? It cuts both ways but I think, on balance, it helps the firm. What do other firms do?

The chief compliance officer returned the memorandum to the partner with the following notation:

> [Bill] doesn't want [analysis of other accounts] done until we have an actual complaint.
>
> Can't send suicide letters to discretionary accounts.

Another weakness of compliance systems that rely heavily on activity letters being processed by the branch manager is that many branch managers themselves handle active accounts. For example, a broker-dealer inspection conducted by the Commission staff in 1978 disclosed one situation in which the branch manager was personally responsible for an account that was being excessively traded. The account opening documents reflected that the customer was a retired man with an annual income of $12,000 and a net worth of $100,000, who listed speculation as his only investment objective. Analysis of this customer's monthly account statements revealed that during a six month period in 1977, the account had effected 362 options transactions, established postions worth $286,182, and had incurred losses of $42,475, including $21,955 in in commissions. Because the branch manager controlled both the trading in the account and the activity letter review process, he did not notify the customer of the high degree of activity in the account nor did the firm provide any effective supervision of the account activity.

3. Unauthorized Trades

One of the most frequent complaints by options customers is that their registered representatives have effected unauthorized trades in their accounts. Indeed the Commission has investigated many customer complaints of unauthorized trading and has found that these complaints are often an early warning of serious trading abuses, including excessive trading. For example, the Options Study reviewed a situation in which a customer had been out of the country and, therefore, out of contact with his registered representative for several months. During that period active options trading nevertheless occurred in his accounts. After this customer complained of unauthorized trading in his account, an investigation revealed that the registered representative had effected unauthorized options trades in the accounts of at least four of his other customers, recommended options transaction not suitable for other customers and engaged in excessive trading in still another customer's options account.

Complaints about unauthorized trading in a customer's options account are sometimes an indication that options trading is unsuitable for the customer or that he is otherwise confused about the status of his options account. The customer who does not understand a proposed strategy or trading program may inadvertently "authorize" a transaction without comprehending its nature or its risks. This confusion can result in the sale of options investment programs to customers for whom such programs are unsuitable.

Too frequently, firms fail to investigate customer complaints of unauthorized trading thoroughly. The apparent rationale for this failure is a desire to discourage such complaints since some customers complain that a trade was unauthorized when, in fact, the trade simply caused them to lose money. The Options Study has found that often a firm's response to a complaint will be to obtain the registered representative's version of the episode and then resolve any conflicts in favor of the registered representative.

In one instance, during 1977, a brokerage firm received complaints from five options customers about a single registered representative. In each case, the customer accused the registered representative of making misrepresentations, recommending unsuitable trades, doing unauthorized trades and generally mishandling the customer's account. In addition, several other customers of that registered representative complained of excessive trading of their accounts. The firm responded that the customers presumably knew what they were doing at the time of the trades and, therefore, should not complain (or blame the firm or its registered representative) because their options transactions turned out badly. By mid-1978, this registered representative had twice been the subject of self-regulatory disciplinary proceedings and had been sued by several customers.

Proper supervision requires that firms investigate customer complaints of unauthorized trades. The Commission's investigations show that in many instances, had supervisors followed up on complaints of unauthorized trades, they would or should have discovered excessive trading, uneconomic trading and/or unauthorized trades in the complaining customer's account as well as in the accounts of other customers handled by the salesperson concerned.

4. Uneconomic Trades

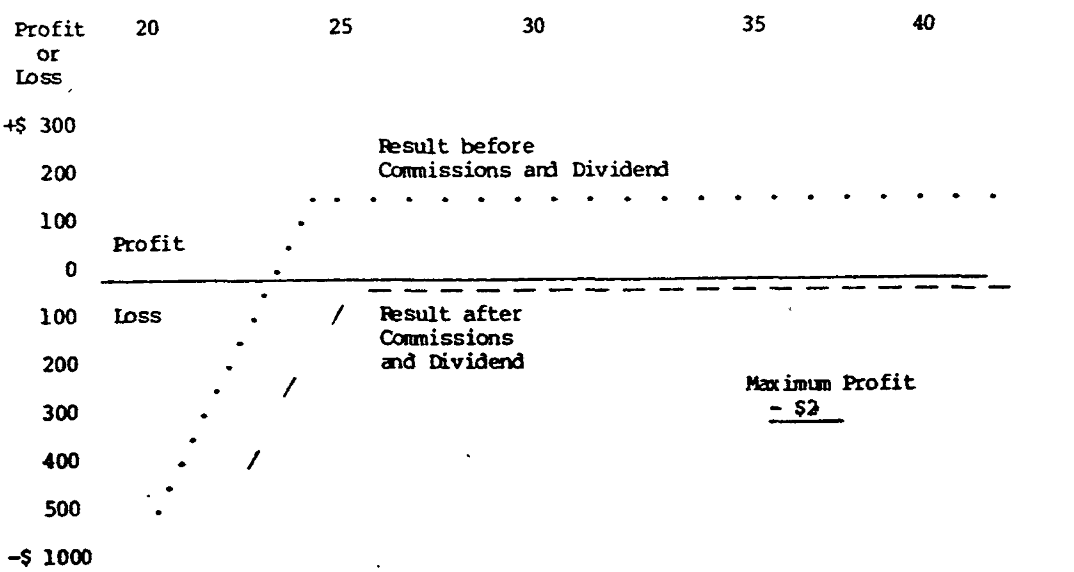
a. The trade with little or no profit potential

The adverse effects of the conflict between the interests of commission-dependent salespersons and the interests of their customers can be seen most clearly in instances where the registered representative recommends a transaction which will give him more in commissions than his customer can hope to realize in profits. Indeed, the Options Study has reviewed some trades in which the best possible outcome for the customer was a loss. Figure II depicts one such options trade in which the customer's best possible outcome is a two dollar loss, regardless of the stock price at exercise or expiration.

FIGURE I

Date of Transaction:	February 6, 1977
Strategy:	Covered Writing
Position Assumed:	Buy 200 BCC @ 27-1/8 $5425 Cost of Stock Sell 2 BCC Nov 25 Calls @ 3 ($ 600) Proceeds from Calls 4825
Cost to Establish Position:	$4825
Plus Commission	+139
Capital at Risk:	$4964
Best Possible Outcome: for Customer	Loss of $2

STOCK PRICE AT EXPIRATION OR EXERCISE



Cost to Establish Positions	Stock Price at Expiration or Exercise	Proceeds of Liquidation or Exercise	Result Before Commission and Dividend	Commission	Dividend	Result after Commissions and Dividend
$4825	$10	$2000	$(2825)	$195	$55	($2965)
4825	20	4000	(825)	222	55	(992)
4825	21	4200	(625)	224	55	(794)
4825	22	4400	(425)	227	55	(597)
4825	23	4600	(225)	229	55	(399)
4825	24	4800	(25)	230	55	(200)
4825	25	5000	175	232	55	(2)
4825	30	5000	175	232	55	(2)