TEST OF A TAX LOSS TRADING RULE APPLIED TO OPTIONS FOR 1976 - 1983

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Branch (1) developed a trading rule based on tax loss selling. A question that Branch asked, "Might (the tax loss trading rule) be successfully applied to option trading?" (1, p. 207) is the major thrust of this paper. To test the trading rule developed by Branch, the performance of call options of stocks that made new lows during the last week of the year were monitored. The results were not very encouraging. The trading rule applied to options was not as successful as the trading rule applied to stocks.

Branch (1) reasoned that if a stock made a new low during the week that ended with the last Friday of the year it may be due to tax loss selling. His trading rule was to buy any stock that made a new low during the last week of the year and monitor its performance for the first four weeks of the new year. His results showed an average increase of 5.35%, 7.53%, 7.50% and 8.00% for the first four weeks respectively of 1965-1974 (1, p. 202). For the first four weeks of 1965-1974, the trading rule on an unweighted basis performed between 3.5% and 6.2% better than the New York Stock Exchange (NYSE) Composite Index for the same time period (1, p. 204). The performance for weighted average portfolios of stocks making new lows during the last week of the year was between 9.89% and 12.84% better than the NYSE Composite Index for each of the first four weeks of the new year (1, p. 204). In his conclusion, Branch wondered if leverage might improve the results.

Roll (3) showed that stocks performed better the first five trading days of the year relative to the rest of the year. He formulated the following trading rule: "purchases would be made of the first 10 (alphabetical) stocks on each exchange that achieved their annual low on the sixth from the last trading day. The stock would then be purchased on the second from last trading day and sold at the close of the fourth trading day of the new year." (3, p. 24) The trading rule showed a mean return from 1962 through 1980 on the NYSE of 6.89% and on the American Stock Exchange (AMEX) the mean return was 14.2%.

The AMEX stocks performed considerably better than the NYSE stocks under the Roll (3) and Branch (1) trading rules. However, the AMEX performance is especially sensitive to additional transactions that would result from the actual use of the trading rule.

Dyl (2) found that stocks that appreciated during the year have abnormally low volume in December. Stocks that declined in price during the year have abnormally high volume in December. Dyl attributed these findings to year end tax loss selling.

The tax laws in the United States affect stock market prices. Capital gains and losses are not recognized until realized under the U. S. Tax Code. The timing of this realization is largely at the taxpayers discretion. With all other things being equal, typically a taxpayer would rather recognize losses as soon as possible and defer gains as long as possible. Investors have an incentive to engage in year end tax strategies. Most investors are

calendar year taxpayers and if they want to take advantage of a capital loss they need to do so by December. If they do not realize their losses by December, their recognition will be deferred for at least one tax year.

METHOD AND RESULTS

The tax loss trading rule formulated by Branch was examined. Options that have stocks that set a new low during the last week of the year ending with a Friday were monitored for their fourth week performance. The fourth week performance was used in this research because that is the week that on average performed best for Branch. Options are examined because options result in considerable leverage with the potential for substantial profits.

The Wall Street Journals' (WSJ) list of new lows was used to identify stocks that made new lows during the last week of the year ending with a Friday. If the stock made a new low and it had a listed option, an assumed purchase was made at the next day's closing price. The option that had the closest expiration date and the closest exercise price over the current selling price of the stock was chosen. The same option was assumed to be sold four weeks later at that day's closing price. All data were gathered manually through the WSJ. The time period 1976-1983 was used. The Chicago Board of Options Exchange was not formed until 1976, and options were traded little until that time. The results of the trading rule are in Table 1.

The column marked weighted assumes the trader weighted his or her participation by the number of options that had related issues reaching new lows. The unweighted column shows the results if the same number of each option was purchased. The results are not very encouraging. Weighted performed better than unweighted which is consistent with the results of Roll (3) and Branch (1). In 1976, no stocks that had listed options traded reached new lows during the last week of the year. The data for 1976 is not included in any of the tables. The average for unweighted and weighted respectively are -23.07% and -18.31%. The most surprising result of testing this trading rule was that only 26 stocks that reached new lows during the last week of the year had options.

While collecting the data for the option prices, it was relatively easy to collect data for the related stock prices. The returns for the related stocks are in Table 2. The performance of stocks that have options which reached a new low during the last week of the year is -0.4% on a weighted and an unweighted basis. These results are considerably worse than the results that Branch (1) and Roll (3) arrived at independently. Stocks that reach new lows during the last week of the year that have options do not perform as well as stocks that do not have options.

The performance of the NYSE as measured by the NYSE Composite Index, and the performance of the trading rule on a weighted and an unweighted basis relative to the NYSE is shown in Table 3. The tax loss trading rule applied to options showed an average loss of-23.1% and -18.0% relative to the NYSE Composite Index respectively for unweighted and weighted performance. The trading rule applied to the related stock does slightly better than the NYSE Composite on a weighted and unweighted basis.

CONCLUSIONS

Options (Table 1) do not seem to be a viable alternative in applying the tax loss trading rule nor do stocks that have options (Table 2). From 1976 through 1983, there were only 26 stocks that set new lows during the last week of the year that had listed options. The return from these 26 options was dismal, and the return from the stocks

TABLE 1

Performance of the Trading Rule for Options

Year	# of Options	Unweighted % Option Gain of Loss	Weighted % Option Gain or Loss
1977	2	-94.0	-65.0
1978	10	76.0	99.0
1979	4	10.0	-1.4
1980	3	-46.3	-45.6
1981	2	-63.6	-69.8
1982	2	-15.3	-14.0
1983	3	-28.3	-31.4
	average	-23.07	-18.31

TABLE 2

Performance of the Related Stocks

Year	# of Stocks	Unweighted % Change	Weighted % Change
1977	2	-5.0	-4.9
1978	10	9.8	10.6
1979	4	3.2	3.2
1980	3	-0.1	-1.5
1981	2	-13.6	-13.4
1982	2	2.6	3.0
1983	3	0.0	-0.2
average		-0.4	-0.4

TABLE 3

Performance Relative to Composite Index

Year	% Change in NYSE Composite	Unweighted Option Relative to Composite	Weighted Option Relative to Composite	Unweighted Stock Relative to Composite	Weighted Stock Relative to Composite
1977	-6.9	-87.1	-58.1	1.9	2.0
1978	6.0	7.0	92.0	3.8	4.6
1979	5.4	4.6	-6.8	-2.2	-2.2
1980	-4.6	-41.7	-41.0	4.5	3.1
1981	-5.8	-57.8	-64.0	-7.8	-7.6
1982	3.0	-18.3	-17.0	-0.4	0.0
1983	-0.6	-31.3	-30.8	0.6	0.4
avg.	-0.5	-23.1	-18.0	0.1	0.1

themselves, while better than the options, was still negative. Commissions were ignored in this study. If commissions were included, performance of the trading rule applied to options and stocks with options would have been even worse.

More work needs to be done on this trading rule. Branch (1) tested the tax loss trading rule on all common and preferred stocks that set new lows during the last week of the year. In collecting the data for this study, it was noticed that preferred stocks make up a considerable percent of the stocks that set new lows. Preferred stock process would be very sensitive to additional transactions which would be necessitated by the tax loss trading rule. The performance of preferred stocks relative to common stocks needs to be ascertained. The potential to exploit this trading rule on the American Stock Exchange and the Over-the-Counter markets needs to be examined.

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