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Evidence on Tax-Motivated Securities Trading Behavior

S. G. BADRINATH and WILBUR G. LEWELLEN*

ABSTRACT

Tax-loss selling by investors in common stocks near the end of calendar years has been proposed as an explanation for the turn-of-the-year effect in stock returns. Past analyses of this hypothesis have relied on inferential data. We provide here some direct data from a compilation of over 80,000 actual common stock investment round trips by a sample of 3000 individual investors. We find strong evidence of a concentration of loss-taking trades late in the year and milder evidence of a concentration just prior to the dates when investments become eligible for long-term tax treatment.

THE QUESTION AS TO whether, and in what manner, the imposition of a tax on realized capital gains affects the securities trading behavior of investors who are subject to the tax has been a longstanding topic of research in the financial economics literature. The original attention devoted to the matter was motivated primarily by a concern about resource allocation and federal tax revenue consequences and was directed toward the phenomenon of what has been termed the “lock-in” effect of a gains tax. That issue has remained an important public policy one and continues today as part of the ongoing debate about appropriate strategies for reducing the federal budget deficit. Particular additional interest in the topic has emerged in recent years, however, because securities transactions undertaken systematically for tax reasons have also been proposed as part of the explanation for certain observed anomalies in historical common stock returns—most prominently, the well-documented *turn-of-the-year* effect.

Our purpose here is to provide some new evidence that decisions by investors as to the timing of the realization of capital gains and losses from their common stock investments are significantly affected by tax considerations. This evidence indicates that a difference in the tax rates applicable to realizations classified as short and long term influences the timing of individual investors’ trades and, further, that there is a clear tendency for trades by individuals which give rise to losses to be concentrated near the end of calendar (which, for them, are also tax) years. While we cannot conclude that

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the latter phenomenon thereby *explains* the turn-or-the-year effect, it does seem to be the case that at least one of the behavioral patterns which might contribute to such an effect is in fact present in the securities marketplace.

Sections I and II of this paper review the theoretical literature and the available empirical evidence on tax-trading behavior. Section III describes the data employed in the current investigation. Section IV provides an analysis of the within-year profile of gain- and loss-taking activity by the investors in the sample, and Section V presents a corresponding analysis of such activity around the dates when the investment positions in question became eligible for long-term capital gains tax treatment. A summary of the findings concludes the paper in Section VI.

I. Taxes and the Timing of Trades

As Constantinides (1983, 1984) and Stiglitz (1983) have demonstrated, taxes on capital gains could effectively be avoided by investors through careful trading strategies if capital markets were perfect and there were no transactions costs. Losses would be taken immediately as incurred, to generate tax deductions, and gains would be indefinitely deferred except as "forced" to be realized either for consumption needs or pursuant to portfolio-rebalancing transactions. Even the latter realizations, however, would largely escape taxation because of simultaneous loss taking. Gains on shares bequeathed to heirs would be entirely tax-free. If the tax code differentiated between short- and long-term holdings, gains on certain highly-volatile securities would be taken voluntarily once they qualified as long term in order to establish a new price basis for possible later short-term loss taking. The net effect of these strategies would be at least a substantial moderation and perhaps a complete elimination of any capital gains tax assessments. Indeed, if fully implemented, the result should be the generation of excess tax deductions which could be used to shelter some portion of ordinary income as well.¹

In practice, of course, transactions costs will inhibit the indicated strategies even if investors are knowledgeable and behave rationally. Capital losses will not be taken unless and until they are of a sufficient size as to have the tax savings overcome the costs of trading. Constantinides (1984) suggests that such costs, coupled with a distinction between short- and long-term capital gains tax rates, may give rise to a seasonal pattern in tax-motivated trading behavior, with losses being realized later than they would be in a frictionless marketplace. Schultz (1988) builds on that notion and provides a model which implies that tax-loss selling should optimally be concentrated in December when transactions costs are present. Chan (1986) argues that the logic of late-in-the-year loss taking is most pronounced when losses would qualify as short term in December but become long term in January.

¹ Miller and Scholes (1978) describe corresponding strategies which are available to shelter dividend income for individuals.

Whether investors uniformly pass the tests of knowledgeability and rationality, however, is an open question. In the aggregate, individuals do pay capital gains taxes (e.g, Feldstein and Yitzhaki (1978); Minarik (1981); U.S. Treasury Department (1980)), and Poterba (1987a) notes that in a recent year 60 percent of investors who reported capital gains or losses on their tax returns realized only gains. Consumption needs may be a partial explanation, as may rebalancings to maintain desired portfolio risk levels. One cannot, on the other hand, rule out the possibility that investors are either not fully aware of available tax-minimization strategies or—if they are aware—do not strictly follow them.² Shefrin and Statman (1985), for example, argue that individuals may have a tendency to retain losing investments in their portfolios because of an inherent reluctance to admit their mistakes. Kahneman and Tversky (1979) provide a theoretical underpinning for such behavior, and Ferris, Haugen, and Makhija (1988) offer what they interpret to be supporting evidence. If this reluctance—which has been termed the “disposition effect”—prevails, it may be necessary for some discrete exogenous event to occur in order to prompt action by investors actually to realize their losses.

Among the obvious events, one would be the imminent arrival of a date which might impose a detectable tax penalty if an accumulated loss were further deferred, either the date when the loss would pass from short- to long-term status (if the applicable tax rates differ), or the end of a calendar year (when a delay in loss taking would result in a 1 year delay in the timing of the tax deduction). Simple lethargy in tax planning by investors may accentuate the concentration of loss-taking just prior to those dates, as will the presence of transactions costs even under optimal behavior. Additionally, investors may not resolve their uncertainty about their marginal tax rates or about whether losses can be written off against long- or short-term capital gains until year end. For a variety of reasons, therefore, the notion of a set of “trigger dates” for loss taking is a plausible one. Certainly, the possibility that especially heavy end-of-year selling pressure on securities whose prices have declined during the year may contribute to the observed pattern of turn-of-the-year stock returns has been a frequent conjecture in the literature (Branch (1977); Givoly and Ovadia (1983); Keim (1983); Chang and Pinegar (1986); Reinganum (1983); Lakonishok and Smidt (1986); Reinganum and Shapiro (1987); Ritter (1988)). While concentrated December loss taking is not a very satisfying efficient-markets explanation for unusually high January stock returns, as Roll (1983) notes, evidence on whether there *is* such a concentration—and whether a tax distinction between short- and long-term capital gains affects investor behavior—remains of interest to an understanding of the workings of the capital marketplace and of the effects of federal tax policies.

² It's also possible they follow in part a still simpler, albeit somewhat riskier, tax-minimization strategy: the under-reporting of realized gains. See Hinrichs (1964) and Poterba (1987b).

II. Tax-Trading Data

Past analyses of tax-motivated securities trading behavior have generally relied on what are essentially inferential data of the sort first introduced by Dyl (1977). That is, securities are identified as being likely candidates for loss taking prior to selected dates because their prices are observed to have fallen in the immediately preceding periods. If trading volume is then found to be abnormally heavy in those securities just prior to the dates in question—typically, the ends of calendar years—the inference is that this indicates the presence of deliberate tax-loss selling by investors who purchased the securities at higher prices. The approach has been refined in various ways by Reinganum (1983), Roll (1983) and Chan (1986); Lakonishok and Smidt (1986) have employed it to test for loss-taking activity around dates when accumulated losses would forfeit their short-term status; Brauer and Chang (1988) have applied it to mutual fund transactions; Chang and Pinegar (1986) have applied it to trading in bonds; Bolster, Lindsey, and Matrasi (1989) have used it to examine the effect of the 1986 Tax Reform Act on stock trading activity; and Ferris, Haugen, and Makhija (1988) have further refined it to attempt to distinguish between the tax-loss-selling and disposition-effect hypotheses. An exception to this approach is the recent paper by Ritter (1988) who instead tracked the daily ratio of buys to sells (by dollar volume) for Merrill Lynch cash-account customers over 15 years and found the ratio to be abnormally low during the latter half of December—a phenomenon which he also inferred was attributable to tax-loss selling activity.

The data we offer here are of a more direct nature. They consist of a record of over 80,000 actual “round trip” investments in common stocks (completed purchase-to-sale cycles) undertaken by approximately 3,000 individual account customers of a large national retail brokerage house during the 9-year period 1971 through 1979. Since we have both the beginning and ending trading prices and dates for each of those round trips, we can not only determine whether the particular investment involved gave rise to a gain or a loss but also identify the within-year profile of realizations in the two categories by the investors in a sample. Additionally, because the U.S. tax code differentiated between short- and long-term capital gains and losses during the period in question, we can examine realization patterns in the vicinity of the dates when the investments made the transition from short- to long-term status. In contrast to those used in prior investigations, therefore, the data available here make it unnecessary to attempt to *infer* that transactions occurring on and around particular dates were associated with disproportionately heavy loss-taking activity by investors; we can directly *observe* whether or not they were.³

³ The data also eliminate any potential biases that may result from the under-reporting of gains when tax return data of the sort analyzed by Kaplan (1981) and Slemrod (1982) are employed to examine time patterns of gain and loss taking.

III. The Sample

The investor sample studied was drawn at random from the list of accounts which were open continuously over the interval January 1, 1971, through September 30, 1979, at what was then one of the five largest U.S. retail brokerage firms. A questionnaire survey of a similar sample obtained from the same firm, but covering a prior period (1964–70), showed it to match very closely the demographic characteristics of the population of U.S. common stockholders (Lease, Lewellen, and Schlarbaum (1974)). There is reason to believe, therefore, that the current sample should be equally representative.

For that sample, which comprises 3002 accounts, a record was provided of all transactions in common stocks executed during the study period. The file contained information on the security traded, the execution price, the date of the trade, the number of shares bought or sold, and the brokerage commission charges paid. There were 217,776 such transactions, an average of 73 per account. From those transactions, a total of 82,019 investment round trips were reconstructed—as indicated, a round trip being an identifiable completed cycle from purchase to observed subsequent sale of the security. Consistent with the stipulation of the U.S. tax code, a “first-in, first-out” convention was employed in specifying the round trips. Thus, if 100 shares of a particular security were purchased in a given account on two different dates, and later 100 shares were sold on two different dates, the first sale was matched with the first purchase. A purchase of 200 shares followed by separate sales of 100 shares each was counted as two round trips.⁴

The data in question were compiled as part of an earlier investigation of the investment performance and investment behavior of individual stockholders. A variety of findings have previously been reported.⁵ The recent interest in the literature in the turn-of-the-year effect, and the tax-loss-selling hypothesis, prompted us to resurrect the data for an analysis of possible tax-motivated trading patterns.⁶ While the data pre-date the decade of the 1980's, they span an interval which overlaps those examined in a number of the empirical studies which have dealt with turn-of-the-year stock return phenomena (e.g., Keim (1983) and Reinganum (1983)). They also cover a period in which there was a tax distinction between short- and long-term capital gains, thereby allowing us to consider the possible influence of the transition date on trading behavior. If we find that tax motivations for

⁴ Transactions in the accounts which could not be matched with another trade as part of a round trip would include sales associated with pre-1971 purchases, purchases for which sales occurred after September 1979, and securities that were acquired elsewhere by the sample and transferred to the account with the brokerage firm which provided the data.

⁵ By, among others: Lewellen, Lease, and Schlarbaum (1977); Schlarbaum, Lewellen, and Lease (1978), Lewellen, Lease, and Schlarbaum (1979), Stanley, Lewellen, and Schlarbaum (1980); Blum and Lewellen (1983).

⁶ We were unable to resurrect the corresponding data for the years 1964 through 1970 for the earlier sample drawn.

Table I
Characteristics of the Investment Round trips: Sample of 3002
Individual Investors Over the Period 1971-1979

Attribute	Full Sample	By Tax Status			
		Short- Term Gain	Short- Term Loss	Long- Term Gain	Long- Term Loss
Number of Observations	82,019	24,710	20,379	16,924	20,006
Percent of Total	100	30	25	21	24
Length, in Trading Days					
Mean	252	52	59	468	512
Median	121	40	49	339	380
Length, in Calendar Months					
Mean	12.0	2.5	2.8	22.3	24.4
Median	5.8	1.9	2.3	16.1	18.1
Average Dollar Amount of Gain or Loss Per Round Trip ^a	576	289	556	604	927

^aAfter allowance for brokerage commission charges.

trading were present during the 1970's, there is little reason to suspect that they suddenly disappeared thereafter. It is of course *individual* investors like those in the sample rather than institutions for whom capital gains tax planning would be most relevant.

Summary statistics on the observed investment round trips are contained in Table I. The gain or loss on each was defined on an "all in" basis with brokerage commissions added to the purchase price and deducted from the sale price. The initial impression from the data is that tax considerations must not have been the only factor influencing the trading decisions of the investor sample, since slightly over half the observations fall in the category of realized gains, and the largest single category is the most tax-inefficient: realized short-term gains. On the other hand, the average dollar loss exceeds the average dollar gain, which might suggest at least some effort not only to shield the gains from taxation by simultaneous loss taking but also to generate tax deductions to offset levies on ordinary income. Cumulatively over the study period, aggregate realized gains amounted to \$19.4 million for the sample and realized losses totaled \$29.9 million. This is not inconsistent with rational tax-trading behavior.

IV. Transactions and the Turn-of-the-Year

A key question is whether one manifestation of such behavior was a disproportionately heavy incidence of loss taking near the ends of calendar years. In the aggregate, there were 40,385 identified investment round trips which gave rise to losses, these comprising just over 49 percent of the total for the

Table II
Monthly Distribution of Realized Losses and Gains from Completed
Investment Round Trips: Sample of 3002 Individual Investors
Over the Period 1971-1979

Month	Number of Losses Realized	Number of Gains Realized	Losses as Percent of Total Realizations
January	3273	4166	44
February	2703	4272	39
March	2884	4540	39
April	2905	4109	41
May	3563	3673	49
June	3083	3407	48
July	3222	3562	47
August	3178	3203	50
September	3234	3189	50
October	3744	2667	58
November	4036	2375	63
December	4560	2471	65
First Quarter	8860	12978	41
Second Quarter	9551	11189	46
Third Quarter	9634	9954	49
Fourth Quarter	12340	7513	62
Year Total	40385	41634	49

sample. The within-year variation in that percentage was substantial, however, as Table II documents. Transactions which involved loss taking constituted over 60 percent of all closed-out round trips in the final 3 months of the year, with December having the single largest proportion for the year at 65 percent. By contrast loss realizations represented only about 40 percent of round trips completed in the first calendar quarter. In January alone the figure was 44 percent.

As can be seen, the monthly pattern is nearly, and the quarterly pattern is exactly, monotonic throughout the year, with the loss-realization percentages rising steadily from the early to the late months. This fits with Constantinides' (1984) prediction for an environment where transactions costs are present. The test statistic for differences in proportions within two (sub) samples is

$$Z = \frac{P_1 - P_2}{\left[\frac{P_1(1 - P_1)}{N_1} + \frac{P_2(1 - P_2)}{N_2} \right]^{1/2}}$$

where P_1 and P_2 are the observed proportions in the two groups, and N_1 and N_2 are the respective numbers of observations. The critical value of Z for a

two-tailed significance test at the 99 percent confidence level is 2.576 for samples of the size at issue here (a minimum of 6000 observations in each monthly subset). An examination of the tabulated differences in loss/gain proportions shows both the first ($Z = -23.812$) and second ($Z = -8.237$) quarters to have a significantly lower percentage of loss realizations and the fourth quarter ($Z = +33.585$) a significantly higher percentage than the average for the year. The hypothesis that the third quarter proportions do not differ significantly from those for the year as a whole ($Z = -0.151$) cannot be rejected at any reasonable confidence level. The high percentage of loss realizations in December, and the low percentage in January, are significantly different from the over-all annual average, from the average of the other 10 months, and from each other—again at well beyond the 99 percent confidence level in each case.⁷ It would appear therefore that the time of the year, and especially the turn-of-the-year, does have an influence on investor trading decisions.

It would further appear that the profile of loss/gain proportions over the year reflects both a steady increase in the frequency with which losses were realized from the early to the late months *and* a steady decrease in the incidence of gain realizations. The quarterly breakdown is shown in Table III, with the comparison now being on a per-month basis to allow for the fact that the data contain nine observations for January through September (27 months) but only eight for October through December (24 months).⁸ The implication is that the investors in the sample were not only deliberately

Table III

Quarterly Distribution of Realized Losses and Gains from Completed Investment Round Trips: Sample of 3002 Individual Investors Over the Period 1971–1979

Quarter	Average Number of Losses Realized Per Month	Average Number of Gains Realized Per Month
January–March	328	481
April–June	354	414
July–September	357	369
October–December	514	313

⁷ The computed Z statistics are: December vs. Year Average $Z = -26.253$;
 January vs. Year Average $Z = -8.721$;
 December vs. 10 Months $Z = +27.745$;
 January vs. 10 Months $Z = -6.907$;
 December vs. January $Z = +25.775$.

⁸ There is nothing in market conditions in late 1979 to suggest that trading behavior might have been unusual during the last quarter of that year, which is the “missing” quarter in our 9 years of data. Thus, the average change in the S&P 500 index from the last trading day of September to the last day of December during 1971 through 1978 was +1.30 percent. In 1979, it was -1.26 percent.

Table IV
Monthly Distribution of Dates When Investment Positions Became
Eligible for Long-Term Tax Treatment: Sample of 3002 Individual
Investors Over the Period 1971-1979

Month	Number of Qualifying Positions Per Month	Month	Number of Qualifying Positions Per Month
January	917	July	1252
February	786	August	1172
March	839	September	1223
April	927	October	1181
May	886	November	1040
June	900	December	983
		Average	1008

accelerating their loss taking near the end of the year but also deferring their gain taking until after the beginning of the next year.

A possible alternative explanation for these realization patterns must be considered, however. If, for whatever reason, an unusually large number of the investments undertaken by the sample happened to qualify for long-term tax status near the turn of the calendar years studied, the trading behavior portrayed in Table II might conceivably have been driven by tax planning around long-term eligibility dates rather than motivated by the approach of the end of the year (see Chan (1986)). To examine that possibility, we identified the dates when each security purchase by the investor sample would have made the transition from short- to long-term status.⁹ The distribution of those dates by months is shown in Table IV. Clearly, there is no concentration of transition dates within the sample either at the end or the beginning of the year; if anything, the concentration is in the third quarter.¹⁰ As we shall see below, there *are* some indications that a tax distinction between short- and long-term investment holdings affects investor trading decisions, but there is nothing in the data to suggest that those effects are likely to have been differentially heavy for our sample around the turn-of-the-year.

Further evidence on the point is contained in Table V where the monthly pattern of gain and loss realizations is separated into those which qualified as short and long term, respectively. It can be seen that loss taking was disproportionately high late in the year and low early in the year among *both* short- and long-term trades. Indeed, the most pronounced impact is in Decem-

⁹ For investments initiated in 1971 through 1976, the transition date was 6 months after purchase; for those initiated in 1977, it was 9 months; and for those in 1978 and 1979, it was 12 months.

¹⁰ The number of observations encompassed in Table IV exceeds the number of completed round trips identified, since not all the positions in question were liquidated prior to the end of the study period.

Table V

**Monthly Distribution of Realized Short and Long Term Capital Gains
and Losses from Completed Investment Round Trips: Sample of
3002 Individual Investors Over the Period 1971-79**

Month	Number of Short-Term Losses (a)	Number of Short-Term Gains (b)	(a) (a) + (b) %	Number of Long-Term Losses (c)	Number of Long-Term Gains (d)	(c) (c) + (d) %
January	1478	2473	37	1795	1693	51
February	1308	2710	32	1395	1562	47
March	1518	2853	35	1366	1687	45
April	1533	2633	37	1372	1476	48
May	1849	2249	45	1714	1424	55
June	1803	2042	47	1429	1540	48
July	1793	2022	47	1429	1540	48
August	1613	1786	47	1565	1417	52
September	1679	1793	48	1555	1396	53
October	2154	1443	60	1590	1224	57
November	2027	1312	61	2009	1063	65
December	1624	1394	54	2936	1077	73
First Quarter	4304	8036	35	4556	4942	48
Second Quarter	5185	6924	43	4366	4265	51
Third Quarter	5085	5601	48	4549	4353	51
Fourth Quarter	5805	4149	58	6535	3364	66
Year Total	20379	24710	45	20006	16924	54

ber for long-term trades: fully 73 percent of the realizations in that category during the month were losses. Once investments are held long enough to be eligible for long-term tax treatment, there is no reason for there to be a seasonal pattern in their termination dates—unless, as appears to be the case, the turn-of-the-year *is* considered by investors to be an important tax planning event. In both the short- and long-term categories, the high loss proportions in December and in the fourth quarter are significantly different from the average for the year at the 99 percent level; the same is true of the low loss proportions in January and the first quarter, again in both categories. The proportions in December and January are, in turn, significantly different from each other at the same confidence level, also in both categories. The evidence of a turn-or-the-year influence on trading decisions therefore is pervasive.

V. Transactions and Tax Status

The dates when investment holdings made the transition from short- to long-term status—and thereby became subject to lower tax rates on any gains or losses during the time period covered by our study—are of course the other

Table VI
Distribution of Realized Capital Gains and Losses from Investment
Round Trips, Prior to and After Eligibility Dates for Long-Term
Capital Gains Tax Status: Sample of 3002 Individual Investors
Over the Period 1971-79

Interval Relative to $t = 0^a$	Realized Losses as a Percentage of Total Realizations
All Short-Term Round Trips	45
Sixth Month Prior	42 ^b
Fifth Month Prior	42 ^b
Fourth Month Prior	47
Third Month Prior	47
Second Month Prior	51 ^b
First Month Prior	56 ^b
First Month After	48 ^c
Second Month After	50 ^c
Third Month After	50 ^c
Fourth Month After	50 ^c
Fifth Month After	50 ^c
Sixth Month After	54
All Long-Term Round Trips	54

^aDay $t = 0$ is the eligibility date for each investment.

^bRealized loss percentage is significantly different from the mean of all short-term round trips at the 99 percent confidence level.

^cRealized loss percentage is significantly different from the mean of all long-term round trips at the 99 percent confidence level.

potentially important tax “trigger” dates for the investors in the sample. As noted earlier, the presence of transactions costs, the possible existence of a disposition effect, and a tendency toward lethargy in tax planning would all lead to a prediction that loss-taking trades would be observed to be an unusually high proportion of total trades just prior to the respective eligibility dates for long-term tax treatment.

In order to test this proposition, the eligibility date applicable to each of the investment round trips in the sample was defined as “event” time $t = 0$ for that investment. We then identified the time relative to $t = 0$ when the round trip was actually closed out with a sale and whether the outcome was a realized gain or loss. Thus, all sales prior to $t = 0$ terminated long-term round trips, and all sales on or subsequent to $t = 0$ terminated long-term round trips. The profile of the mix of those gain and loss realizations for a period of a year surrounding the various eligibility dates is recorded in Table VI and charted in Figure 1. In doing so, we assumed a calendar month to span 21 trading days.

As can be seen, the realization pattern is consistent with the notion that investors were also sensitive to the tax consequences of the transition from short- to long-term investment status. The proportion of trades resulting in

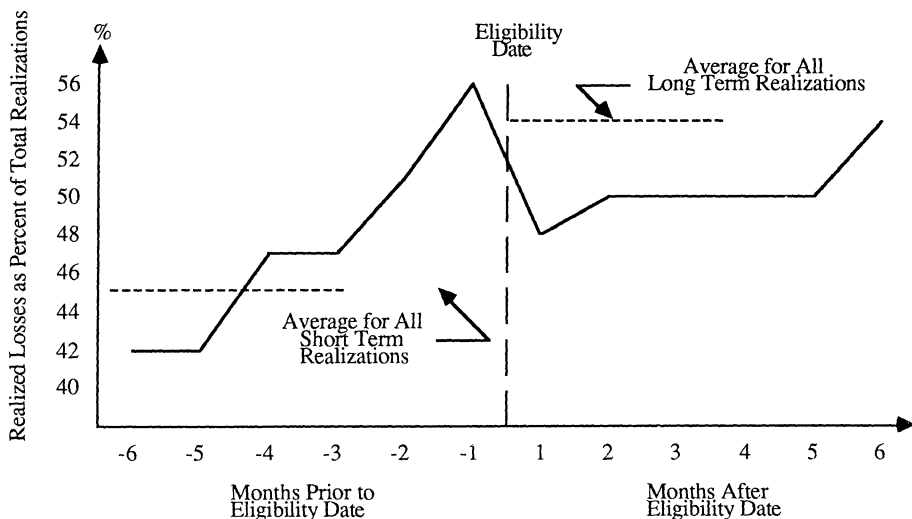


Figure 1. Relized losses as a percentage of total realizations, prior to and after eligibility dates for long-term capital gains tax status.

loss realizations rises steadily as the long-term eligibility dates approach. It moves from below the mean for all short-term round trips in the sixth and fifth months prior to $t = 0$ (the differences being statistically significant) to above the mean in the 2 months immediately prior to $t = 0$ (also statistically significant), with the last month prior having the single highest loss-taking proportion. A decline is then observed, with the proportion of realized losses remaining below the average for all long-term round trips in each of the first 5 months after the eligibility date passes. Additionally, the difference in the proportions of trades which involved loss taking between the first month prior to $t = 0$ and the first month after is statistically significant at the 99 percent confidence level ($Z = +5.810$) as is the difference between the proportions in the first 2 months prior to and after combined ($Z = +4.381$).

The data therefore would indicate that investor trading behavior was in fact affected by the approach of a tax-status transition date. The magnitude of the effect, however, appears to be much milder than that associated with the approach of the end of a calendar year. Indeed, of the 8 months surrounding the respective eligibility dates for long-term capital gains treatment (4 on either side), only in the month immediately preceding these dates is the proportion of trades resulting in loss realizations significantly different ($Z = +7.734$) from the proportion of loss realizations for *all* round trips in the sample. Moreover, the difference—56 percent, as compared with 49 percent for the full sample—is substantially less than those documented above which are characteristic of the months in proximity to the turn of calendar years. This is a surprising finding since, as Chan (1986) has noted, it would seem likely that the impact on an investor's wealth of a lower tax rate on capital gains and losses would be greater than the impact of accelerating loss deductions or deferring gain realizations by 1 tax year. Nonetheless, our data

would suggest that the latter strategy has the more pronounced influence on the timing of trades.

VI. Summary and Conclusions

We analyze a sample of over 82,000 common stock investment round trips undertaken in the accounts of 3000 individual customers of a large national retail brokerage house over the period 1971 through 1979 for evidence of tax-motivated securities trading behavior. We find a distinct seasonal pattern in that trading, with transactions which involve loss realization being disproportionately heavy near the end of calendar years and those which result in gains being disproportionately heavy at the beginning. Importantly, the pattern is present for investments which qualify both for short- and long-term capital gains tax treatment. The implication is that the presence of such a tax does affect trading decisions in a manner that is consistent with the notion that end-of-year tax-loss selling pressure might well contribute to the turn-of-the-year effect on stock returns which a number of previous studies have detected. Our data do not of course constitute a proof of the tax-loss-selling hypothesis, but they do permit what we believe to be the first *direct* test of the possibility that the time of the year has an impact on the decisions by individuals to realize gains and losses on their common stock investments. The evidence from those data that a reduced tax rate on long-term capital gains and losses affects the timing of trades is, on the other hand, much weaker. We find some increase in the incidence of loss-taking trades just prior to the dates when investments become eligible for long-term tax status, but it is not very substantial. The attendant public policy implication is that—at least for common stocks—while the *imposition* of a capital gains tax noticeably affects trading behavior, the availability of a lower rate for long-term holdings matters less. The elimination of the latter by the Tax Reform Act of 1986 therefore is likely to have had only a mild effect on trading decisions.

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