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The Buying and Selling Behavior of Individual Investors at the Turn of the Year: Discussion

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18. Josef Lakonishok and Seymour Smidt. "Volume and Turn of the Year Behavior." *Journal of Financial Economics* 13 (September 1984), 435–56.
19. Marc R. Reinganum. "The Anomalous Stock Market Behavior of Small Firms in January: Empirical Tests for Tax-Loss Selling Effects." *Journal of Financial Economics* 12 (June 1983), 89–104.
20. ———. "Discussion: What the Anomalies Mean." *Journal of Finance* 39 (July 1984), 837–40.
21. Jay R. Ritter and Navin Chopra. "Risk, Return, and January." Unpublished University of Michigan working paper, 1988.
22. Richard Roll. "Vas ist das? The Turn of the Year Effect and the Return Premia of Small Firms." *Journal of Portfolio Management* 9 (Winter 1983), 18–28.
23. Stephen A. Ross. "The Arbitrage Theory of Capital Asset Pricing." *Journal of Economic Theory* 13 (December 1976), 341–60.
24. Michael S. Rozeff. "Tax Loss Selling: Evidence from December Stock Returns and Share Shifts." Proceedings of the CRSP Seminar on the Analysis of Security Prices (May 1986), 9–45.
25. ——— and William R. Kinney, Jr. "Capital Market Seasonality: The Case of Stock Returns." *Journal of Financial Economics* 3 (October 1976), 379–402.
26. Paul H. Schultz. "Tax Loss Selling in Common Stocks." Unpublished University of Chicago Ph.D. dissertation, 1988.
27. H. Nejat Seyhun. "The January Effect and Aggregate Insider Trading." *Journal of Finance* 43 (March 1988), 129–41.
28. Andrei Shleifer. "Do Demand Curves for Stocks Slope Down?" *Journal of Finance* 41 (July 1986), 579–90.
29. Seha M. Tinic and Richard R. West. "Risk and Return: January vs. the Rest of the Year." *Journal of Financial Economics* 13 (December 1984), 561–74.

DISCUSSION

WILLIAM T. ZIEMBA*: The evidence is very strong for the existence of a turn-of-the-year effect. The prices of small-capitalized stocks increase significantly relative to large-capitalized stocks on the first ten or so trading days of January. The effect seems to begin on trading day -1 where there is a tendency for a shift in sales of the small stocks at the asked rather than at the bid. Trading days $+1$ to $+4$, on average, show enormous gains in the small stocks over the large stocks and this effect continues until mid-January. The total average difference between the smallest and largest deciles of stocks from -1 to $+9$ is on the order of 6 to 10 percent. Studies supporting this effect use data over extremely long periods. For example, the original Rozeff-Kinney study concerned the period 1904–74. The period from 1962 to present has been especially thoroughly analyzed. One additional useful empirical study not referenced by Ritter is Smidt and Stewart [7].

Why does this effect occur and with such regularity? Jay Ritter's excellent paper provides us with more insight into the understanding of this phenomenon with an analysis of the "parking-the-proceeds" hypothesis. Using a unique data set for the fifteen turns of the years from 1971 to 1985, he finds that the buy/sell ratio of individual investors at Merrill Lynch explains 46% of the variance of the excess returns of small over big stocks in the first half of January. During

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this period the small stocks gained 8.17% more than the big stocks on days +1 to +9 or nearly 1% per day. Figure 1 visually shows the argument in a convincing manner.

The "parking-the-proceeds" argument is based on three suppositions. First, when individuals buy stocks, they buy disproportionately more small stocks than big stocks relative to institutional investors. Some supporting evidence is presented, and this hypothesis is reasonable since it is these very investors who have loaded up the large mutual and pension funds with the vast bulk of the market wealth, and these institutions do seem to concentrate on the large-capitalized stocks since in many cases they are judged on their performance relative to the S&P 500. Moreover, the individual investors (especially those well healed enough to have accounts at Merrill Lynch) likely buy more small stocks in their personal accounts to diversify. Secondly, the price of these small stocks is affected by buying pressure—again reasonable as demonstrated by Stoll and Whaley [8] and others. Finally, individuals are net buyers in early January because of the proceeds remaining from December's tax-motivated sales, and their purchases are large enough to move the market. The arguments that individuals sell in December to take losses, that they like to see the money in their account at the end of December before repurchasing in January, and that they receive pay and bonuses starting on day -1 that can be reinvested appear sound. Ritter's data indicate that relative to the rest of the year individuals are net buyers in January but that in absolute terms they have been net sellers for each of the fifteen years in the sample. It is likely that the net selling is movement into mutual funds and away from individual accounts. Perhaps, as he suggests, in January these individuals are switching into small stocks and out of big stocks with capital gains. This needs to be checked. There is an analogy of the late-charging horse running faster to nip a front runner at the wire when in fact the charger is not accelerating at all. The horse is simply decelerating at a slower rate.

Obviously there are a number of factors that lead to the turn-of-the-year effect. The studies of Ariel [1] with spot data for 1963–1981 and Sick and Ziemba [6] with futures data from 1982–1988 show that throughout the year the small stocks outperform the big stocks in the trading interval -1 to +9 and particularly -1 to +4. See also Keim and Smirlock [4]. The arrival of new money from income, bonuses, parked proceeds and other sources seems to fuel the net purchase of small stocks relative to big stocks in this period.

The data also seem to support the hypothesis that the turn-of-the-year effect is strongest following a bear market. January 1988 following the October 1987 crash was certainly a strong example of this.

Why does the market not respond to this effect to eliminate it as it should in an efficient market? In fact, at least for the turn of the year, it does seem to do this in the futures markets. Clark and Ziemba [2] have shown that the futures price of the Value Line Composite begins to anticipate the turn-of-the-year effect around the middle of December. Moreover, the extent of this anticipation is capturing more and more of the expected gain of the turn-of-the-year effect as information about the effect becomes more widely known partly through trade books like Haugen and Lakonishok [3] and Ziemba [11]. The expected gain in the futures market of the Value Line Composite over the S&P 500 in the mid-

December to mid-January period has averaged about 2 to 3 percent in the past 10+ years, with about two thirds of this being anticipated.

I am in agreement with Ritter that institutional factors such as he discussed and the flow of funds at the turns of months and particularly at the turn of the year are among the main causes of the bidding up of the small stocks at these times. It is very useful to have reliable risk-return equilibrium relationships to explain asset prices. Even the substantial increase in risk during January found by Tinic and West [9] and Ritter and Chopra [5] does not explain the effect. The latter paper also concludes that risk is rewarded according to the CAPM only in January and then only for small stocks. Otherwise, this popular model does not explain the risk-return relationship.

Theoretical studies such as Williams' [10] asymmetric-information model, using better-informed inside traders and tax sellers that yields a bounce back of prices in January once the tax selling is completed and the risk premiums fall back in line, will be useful to piece together the missing 54% of the explanation. However, it does seem that the turn-of-the-year effect is caused by a number of factors coming together at one time and that they are largely institutional. Hence it will be hard for any one model to be the sole explanation of the effect.

REFERENCES

1. Robert Ariel. "A Monthly Effect in Stock Returns." *Journal of Financial Economics* 18 (March 1987), 161-74.
2. Ross Clark and William Ziemba. "Playing the Turn of the Year Effect with Index Futures." *Operations Research* (November-December 1987), in press.
3. Robert A. Haugen and Josef Lakonishok. *The Incredible January Effect: The Stock Market's Unsolved Mystery*. Homewood, Illinois: Dow Jones-Irwin, 1988.
4. Donald B. Keim and Michael Smirlock. "The Behavior of Intraday Stock Index Futures Prices." *Advances in Futures and Options Research* 2 (1987), 143-66.
5. Jay R. Ritter and Navin Chopra. "Risk, Return, and January." Unpublished University of Michigan working paper, 1988.
6. Gordon A. Sick and William T. Ziemba. "The Turn of the Month Effect in the Futures Markets." Mimeo, University of British Columbia, 1988.
7. Seymour Smidt and Scott D. Stewart. "Risk Premium Seasonality." Unpublished manuscript, Cornell University, 1984.
8. H. R. Stoll and Robert Whaley. "Transaction Costs and the Small Firm Effect." *Journal of Financial Economics* 12 (June 1983), 57-79.
9. Seha M. Tinic and Richard R. West. "Risk and Return: January vs. the Rest of the Year." *Journal of Financial Economics* 13 (December 1984), 561-74.
10. Joseph Williams. "Financial Anomalies Under Rational Expectations: A Theory of the Annual Size and Related Effects." Working paper, Graduate School of Business, New York University, October 1986.
11. William T. Ziemba. *Strategies for Making and Keeping Excess Profits in the Stock Market*. Forthcoming, 1988.