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Journal of Financial Markets 6 (2003) 73–98

Journal of FINANCIAL MARKETS

www.elsevier.com/locate/econbase

The tax-loss selling hypothesis, market liquidity, and price pressure around the turn-of-the-year ☆

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Abstract

In this paper, we use intra-day data for all stocks listed on the ISSM and provide new and direct evidence consistent with the tax-loss selling hypothesis. We find that (a) there is abnormal selling pressure prior to the year-end for stocks that have experienced large capital losses in the current and prior years (b) investors delay realizing capital gain by postponing the sale of capital gain stocks until after the new year (c) there is a significant decrease in the average trade size for stocks with large capital losses before the year-end and for stocks with capital gains in the new year, which suggests that individuals, rather than institutional investors, are the major sellers around the year-end (d) the tax-loss selling hypothesis, and not firm size or share price, is the fundamental explanation for abnormal January returns. Further, small or low share priced firms with capital gains do not experience abnormal returns in January. However, conditional on capital losses, small or low share priced firms magnify the turn-of-the-year effect (e) On average, the increase in selling activity adversely affects market liquidity by increasing bid-ask spreads and reducing depths. (f) The tax-loss selling pressure not only causes the price to be at the bid at the year-end, it also temporarily depresses the equilibrium price indicating the short run demand curve is not perfectly elastic (g) the year-end buying activity suggests that large investors buy capital loss stocks prior to the year-end to take advantage of the temporarily depressed price and capital gain stocks after the new year to reinvest the proceeds of the tax-loss selling.

JEL classification: G10; G14

☆ The authors would like to thank K.C. Chan, Ravi Jagannathan, Rajiv Sant, Jeffrey Harris, Atulya Sarin, and Gerald Whitney for helpful comments on earlier versions of this manuscript. All errors are the responsibilities of the authors.

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1386-4181/02/$ - see front matter
PII: S 1 3 8 6 - 4 1 8 1 (0 2) 0 0 0 2 3 - X

Keywords: Tax-loss selling; Year-end trading; January effect

1. Introduction

Rozeff and Kinney (1976) are the first to document that mean equity returns in January are higher than in other months. Further, Keim (1983) and Roll (1983) document that the high January equity returns are concentrated within a narrow window that extends from the last trading day in December to the first few days in January of the following year. This seasonal pattern in stock returns, which Roll (1983) refers to as "turn-of-the-year effect", is found to be most pronounced in small firms (Keim, 1983; Reinganum, 1983; Blume and Stambaugh, 1983) or in low share price firms (Jaffe et al., 1989; Bhardwaj and Brooks, 1992) or in both.

Several hypotheses have been put forward to explain the abnormal January returns. Among them are the risk changes (Tinic and West, 1984; Ritter and Chopra, 1989), information changes (Seyhun, 1988) and institutional window dressing (Bildersee and Kahn, 1987; Lakonishok et al., 1991; Eakins and Sewell, 1994). However, the explanation that has received the most attention in the literature to date is the tax-loss selling hypothesis of Givoly and Ovadia (1983), Reinganum (1983) and Roll (1983). This hypothesis posits that investors who are motivated to reduce their year-end tax liability sell stocks that have experienced a decline in price over the year and use the realized losses to offset capital gains. These transactions produce a selling pressure that results in an increase in the number of trades at the bid price (i.e., sell trades), causing a decline in year-end stock prices. At the beginning of the new year, the selling pressure abates and stocks resume trading at their equilibrium price. The tax-loss motivated trading activity around the turn-of-the-year therefore results in positive abnormal stock returns in the new year.

Several studies have tested the tax-loss selling explanation by examining the return patterns around the year-end. However, the results presented in these papers do not provide conclusive support of this hypothesis. For example, Roll's (1983) finding of a negative relation between the prior year's returns and the turn-of-the year returns is consistent with both of the tax-loss selling and institutional window dressing hypotheses.[1] Further, Brown et al. (1983) and Kato and Schallheim (1985) examine the turn-of-the-year effect for Australia and Japan respectively and document a similar stock return pattern in January even though these countries having different tax laws and tax-year ends.[2]

[1] The window-dressing hypothesis posits that because institutional investors' stock picking ability depends on their ability to report portfolio gains, they have an incentive to sell stocks that have declined in value over the year and buy stocks that have increased in value. This trading strategy is normally undertaken at the year-end when institutional performance is evaluated.

[2] In the Brown et al. (1983) study, the tax year-end in Australia is June 30th. Kato and Schallheim (1985) state that Japanese firms can arbitrarily choose their fiscal year-end and individual investors do not pay taxes on capital gains.