

Month-of-the-Year and Symmetrical Effects in the Nikkei 225

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Abstract: *This study finds significant November effect in the Nikkei 225 index of the Tokyo Stock Exchange (TSE). This finding is consistent with previous evidence supportive of tax-loss selling hypothesis for the stock markets of U.S. and U.K. In addition, the estimated Threshold generalized autoregressive conditional heteroscedasticity (TGARCH) model reveals no significant asymmetrical effect on good and bad news. The existence of month-of-the-year effect in TSE suggests that by means of properly timed investment strategies, financial managers, financial counselors and investors could take advantage of the patterns and gain profit.*

Keywords: *month-of-the-year-effect, Nikkei 225, TGARCH*

I. Introduction

Understanding the stock market behavior especially the price movement and the return generating mechanism is always of great interest to not only the market participants, but also academicians. In this regard, historical stock price has become the main tool for the academicians and non-academicians in studying and predicting the stock market movement or the performance of particular companies. Important information, among others, that can be abstracted from historical stock prices is the month-of-the-year effect.

Month-of-the-year effect is a form of calendar anomaly in which the mean return of a specific month is consistently different from those of other months. The most prevalent month-of-the-year effect is the January effect, where returns are significantly higher than any other month (see Coutts et al., 2000 and the references therein). However, January is not always the month with the highest return in the literature¹. Bhabra et al. (1999), Gibson et al. (2000) and Johnston and Paul (2005), for instance, reported November effect in some stock markets.

The existence of the month-of-the-year effect holds important implications for the markets and investors. If month-of-the-year effect existed in stock returns, investors might be able to take advantage of relatively regular patterns in the market by designing trading strategies, which accounts for such predictable patterns. As this nature of study has various important implications to stock market participants, there are abundant of studies attempting to search for calendar anomalies from the stock markets all over the world (See, Rozeff and Kinney, 1976; Gultekin and Gultekin, 1983; Lakonishok and Smidt, 1989; Balaban, 1995; Choudhry, 2001; Mehdian and Perry, 2002; Fountas and Segredakis, 2002).

In reviewing the related literature, few observations are remarkable. First, it is noticed that many of the studies on month-of-the-year effect were done in the selected Western developed markets, for example, Germany, U.S., and U.K. stock markets (Rozeff and Kinney, 1976; Gultekin and Gultekin, 1983; Lakonishok and Smidt, 1989; Choudhry, 2001; Mehdian and Perry, 2002). Less attention is paid to another developed market, namely the Japan stock market, which is also the largest stock market in Asia (Groenewold, Tang and Wu, 2004)². The Tokyo Stock Exchange (TSE) located in Tokyo, Japan, is the second largest stock exchange market in the world by monetary volume. The TSE trading began on June 1, 1878 and functioned as the central market of Japan, thereby playing a crucial role in the growth and expansion of the nation's economy. The TSE had a market value of ¥559 trillion as of the end of March 2007 and a trading value of ¥678 trillion for the fiscal year ended March 31, 2007, making it one of the leading stock exchanges in the world in terms of size and liquidity³. Owing to the influential role it plays in the world markets, it is important to see if patterns of market

¹ See, among others, Arsad and Coutts (1997), Baker and Limmark (1998), Cheung and Coutts (1999), Bhabra et al. (1999), Coutts and Sheikh (2000) and Johnston and Paul (2005).

² Two exceptional studies on calendar anomalies for this market are Kato (1994) and Hamori (2001). Kato (1994) provided day of the week effect in the Japanese stock returns, whereas Hamori (2001) found monthly effects in various Japanese stock returns.

³ Besides, the TSE currently lists 2,271 domestic companies and 31 foreign companies, with a total market capitalization of over 5 trillion USD. Stocks listed on the TSE are separated into the First Section (for large companies), the Second Section (for mid-sized companies), and the "Mothers" section (for high-growth startup companies). As of March 2006, there are 1,721 First Section companies, 489 Second Section companies and 156 Mothers companies. The TSE offers a wide range of exchange services. The main indices tracking the TSE