The Reversing Weekend Effect: Evidence from the U.S. Equity Markets

ANTHONY YANXIANG GU
Jones School of Business, State University of New York, 115D South Hall, 1 College Circle, Geneseo, NY 14454, USA Tel.: (585) 245-5368, Fax: (585) 245-5467
E-mail: gu@geneseo.edu

Abstract. The well-known weekend effect has been reversing in Major U.S. indices from late 1980s to late 1990s. The correlation between Monday and Friday returns also exhibited a declining trend, and fluctuated around zero in the 1990s. A power ratio method is developed to measure consistently the relative contribution of Friday and Monday returns to the return of the week in each individual year. The revealed dynamics of the anomaly explains why previous researchers report different or conflicting findings. The anomaly may not be necessarily related to firm size.

Key words: weekend effect, anomaly, reverse

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Introduction

Numerous studies have reported abnormally high average Friday returns and significantly negative average Monday returns in the U.S. stock markets. Pioneer research on the so called “weekend effect” can be found in Cross (1973), French (1980), Gibbons and Hess (1981), Hindmarch (1984), Keim and Stambaugh (1984), and Jaffe and Westerfield (1985).

Several researchers explored the possible factors that contribute to the anomaly. Hindmarch (1984) suggests that institutional trades can partially explain the effect, and Sias and Starks (1995) believe that institutional traders are the primary drivers of the effect. Lakonishok and Maberly (1990) and Abraham and Ikenberry (1994) report that share price does worse on Mondays than on other days of the week, because individual investors typically sell stocks on Monday. Branch (1974, 2001) suggests that the Monday effect may be related to weekly cycle in news releases and to weekly pattern in interest rate changes. Similarly, Steeley (2001) reports that a systematic pattern of market-wide news arrivals drives the anomaly in the UK stock market. Branch and Echevarria (1991) indicate that the effect occurs mainly in stocks that do not go ex-dividend on Monday. Schatzberg and Datta (1992) suggest that some factor unrelated to information arrivals causes the weekend effect. Coutts and Hayes (1999) indicate that the effect is in part a stock exchange account settlement effect in major UK indices.

Monday and Friday returns. Abraham and Ikenberry (1994) see the positive correlation between Monday and Friday returns as “most acute in small-and medium-sized companies.”

Other researchers report different findings. Cornell (1985) and Najand and Yung (1994) see no weekend effect in the S&P 500 index futures: the effect seems to exist, they argue, because the returns are affected by conditional heteroskedasticity. Connolly (1989) points out that the effect disappears for some years and then reappears for others. Wang, Erickson and Li (1997) find that the Monday effect occurs primarily in the last two weeks (the fourth and fifth weeks) of the month. For the UK stock market, Board and Sutcliffe (1988) see the significance of the anomaly decreasing over time, and Steeley (2001) notes that the weekend effect disappeared in the 1990s. Sullivan, Timmermann and White (2001) assert that calendar effects, including day of the week effect, no longer remain significant in the context of 100 years of data as the full universe. Brusa, Liu and Schulman (2000) find reverse weekend effect in recent data for major stock indices: Monday returns are positive and significantly greater than the preceding Friday’s. They also report that the reverse weekend effect is strong and significant in large-company stocks. Seyed and Perry (2001) report evidence of reversal of the Monday effect in major US equity markets.

Existing studies offer inconsistent or even conflicting reports, because they look at constant coefficients of dummy variables or average returns of the days for their relatively short sample periods, except Seyed and Perry (2001) who estimated recursive coefficients. Traditional methods cannot reveal the dynamics of the effect because during the whole period one type of observation could overweigh the other if the number of weeks with an abnormal Friday (Monday) is greater than the number of weeks without it, or if the effect is extremely strong in certain weeks. This study develops a power ratio method to calculate the effect of each individual year, and hence answers the question why previous researchers report inconsistent or conflicting results, and reveal the dynamics and trend of the effect.

The methodology and data

To reveal possible trends of the weekend effect, one needs to measure the return of Friday and Monday relative to the return in the remaining trading days of the week for each individual year. It would be difficult to measure the weekend effect when a Friday (Monday) return and return of the week have opposite signs, for example, when a Friday (Monday) return is positive, and the week’s return is negative, or when Friday (Monday) return is negative and the week’s return is positive, and when both Friday (Monday) and the week’s return are negative. A power ratio method is developed that gives a consistent measurement of the contribution of Friday and Monday returns to the return of the week. The Friday, Monday, and weekly returns are calculated as the natural logarithm differentials of the index values. Now define

\[ R_F^* = (1 + \text{mean Friday return})^5 \]  

where the power 5 is used because there are 5 trading days in a week. Obviously \( R_F^* \) is always greater than zero. And

\[ R_w = (1 + \text{mean weekly return}) \]