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Liquidity and the Post-Earnings-Announcement Drift

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Abstract

The post-earnings-announcement drift is a longstanding anomaly that conflicts with market efficiency. This study documents that the post-earnings-announcement drift occurs mainly in highly illiquid stocks. A trading strategy that goes long high-earnings-surprise stocks and short low-earnings-surprise stocks provides a monthly value-weighted return of 0.04 percent in the most liquid stocks and 2.43 percent in the most illiquid stocks. The illiquid stocks have high trading costs and high market impact costs. By using a multitude of estimates, the study finds that transaction costs account for 70–100 percent of the paper profits from a long–short strategy designed to exploit the earnings momentum anomaly.

One of the most persistent anomalies that seem to violate the semi-strong-form market efficiency as defined by Fama is the post-earnings-announcement drift (PEAD), or earnings momentum. This anomaly refers to the fact that companies reporting unexpectedly high earnings subsequently outperform companies reporting unexpectedly low earnings. More specifically, a company's standardized unexpected earnings (SUE) is defined as the difference between the last available quarterly earnings and the earnings during that same quarter in the previous year, scaled by the standard deviation of this difference over the previous eight quarters. A trading strategy that each month goes long the stocks in the top decile of SUE and short the stocks in the bottom decile of SUE earns, on average, 90 bps per month (10 percent annually) over the 1972–2005 period.

The goal of this article is to demonstrate that stock liquidity is an important consideration for understanding the persistence of the PEAD anomaly over the years. Previous studies have not taken trading costs into account in the calculation of abnormal returns. We studied the impact of illiquidity on the profitability of the PEAD trading strategy and show that this strategy is likely to be unprofitable after adjusting for transaction costs.

First, we studied the relationship between the PEAD and illiquidity by using double-sorted portfolios. Our findings suggest that the PEAD is prevalent mainly in illiquid stocks. We examined the profitability of the long–short SUE strategy after sorting stocks into decile portfolios on the basis of their illiquidity. For this analysis, we used the Amihud measure of stock illiquidity, which is the average of the daily price impacts of the order flow (i.e., the daily absolute price change per dollar of daily trading volume). Returns to the long–short SUE strategy increased monotonically from 0.04 percent per month for the most liquid stocks to 2.43 percent for the most illiquid stocks.

Because we found that the PEAD is more prevalent in illiquid stocks, following a PEAD trading strategy will generate high transaction costs and a substantial price impact. We used several transaction-cost estimates to calculate the net returns to PEAD trading strategies. Our results show that transaction costs consume 70–100 percent of the potential profits. This lack of profitability can thus explain the persistence of the PEAD anomaly and is consistent with Jensen's definition of market efficiency and Rubinstein's definition of minimally rational markets.

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