Research Report

Individual Investors Trading and Performance around Earnings Announcements of Volatile and Short-Sale Constraint Stocks

INDIVIDUAL INVESTORS ARE REPEATEDLY FOUND TO UNDERPERFORM RELATIVE TO A MARKET INDEX. BESIDES EXCESSIVE TRADING, LITTLE IS KNOWN WHEN RETAIL INVESTORS COLLECTIVELY LOSE. THIS ARTICLE SHOWS THAT TRADING IN SHORT-SELLING CONSTRAINED, VOLATILE STOCKS AROUND EARNINGS ANNOUNCEMENTS IS COSTLY TO INDIVIDUAL INVESTORS. THE EFFECT IS PARTICULARLY PRONOUNCED FOR LESS SOPHISTICATED INVESTORS.

Thomas Etheber
Tilman Rochow
Steffen Meyer
Dominik Hennen
Andreas Hackethal

Introduction

Whereas Schlarbaum et al. (1978) and Calvet et al. (2007) do not find American and respectively Swedish individual investors to significantly underperform the market, Barber and Odean (2000) – using a sample of US brokerage clients – document that individual investors underperform the market by 1.5% p.a. This underperformance is attributed to excessive trading. Barber et al. (2008), who analyze all trades on the Taiwanese stock exchange between 1995 and 1999, estimate that trades of private investors underperform trades of institutional investors by roughly 3.8% p.a. According to the authors, the losses stem from aggressive orders of the investors. Moreover, in a study on German investors Meyer et al. (2012) look at the value of skill in the cross-section of individual investors and find a negative value of skill in excess of 7.0% p.a.

Besides the insight that private investors overtrade, little is known about sources of this massive underperformance of private investors.

In this paper, we tested the conjecture that private investors lose by trading around earnings announcements in stocks that are highly volatile and short-selling constrained (measured by low institutional ownership). This conjecture rests on two strands of literature:

On the one hand, for example, Berkman and Koch (2008) test the theory by Miller (1977) which postulates that short-sale constrained securities become overpriced when heterogeneous value expectations exist among investors. They find evidence that the information released at earnings announcement events can lead to an unraveling of the heterogeneous value expectations about these stocks, and document significant changes in trading activity for Miller's stocks and abnormal return patterns. In fact, for these stocks they observe a price run-up prior to earnings announcements and a price correction thereafter.

On the other hand, private investors are found to buy attention-grabbing stocks, i.e., stocks with a huge price increase, volume increase, or extensive media coverage (Barber and Odean, 2007). Earnings announcements with relatively strong news coverage are therefore likely to attract private investors' attention. Literature points out that private investors in fact strongly react to earnings announcements as trading volume around these announcements is shown to be abnormally high.

Combining the two strands of literature suggests that private investors lose by trading around earnings announcements of short-selling constrained and volatile stocks.

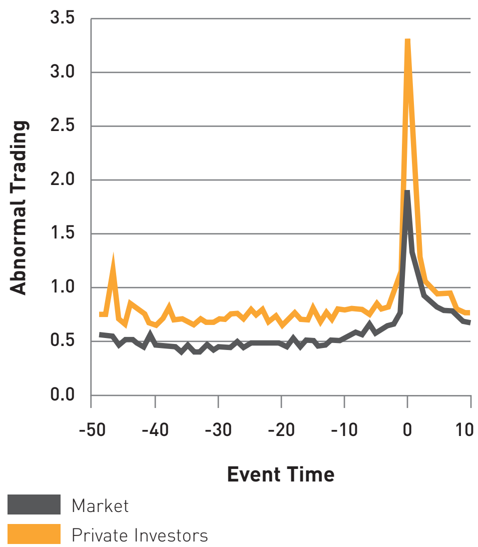

Figure 1: Development of abnormal trading volume

Dataset and Methodology

We use a dataset of a large discount brokerage with trading data from mid-2000 until mid-2009. The dataset includes detailed information on more than 50,000 private investors. Moreover almost 13,000 earnings announcements for the German market (CDAX stocks) have been collected from various data providers. Alongside the earnings announcements, data has been collected to estimate the volatility of stocks as well as on the development of institutional ownership over the 2000 to 2009 period. Furthermore, data on a couple of investor characteristics has been provided by the broker, which enables us to analyze the impact of expe-

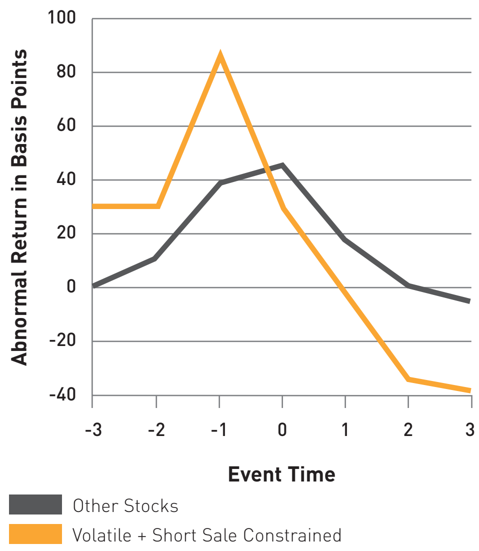

Figure 2: Performance around earnings announcements (t = 0)

rience and sophistication on trading and performance around earnings announcements.

The data on volatility and institutional ownership is employed to classify stocks whether they are highly volatile and/or short-sale constrained (low institutional ownership). In order to investigate the effects of earnings announcements on private investors' trading behavior and performance in these stocks, we use abnormal trading volume of private investors to measure trading activity and holding period as well as round-trip returns to measure performance.

An event window of +/- 20 days around each earnings announcement is chosen to measure the change in trading activity. Performance in the holding period approach is calculated for a period of three days to 250 days. Round trip returns are calculated for the entire length of the round trips. An artificial cut-off is not assumed.

Empirical Findings

First, for the entire German market, we observe a price run-up prior to the earnings announcement followed by a sharp price correction afterwards, which is mostly pronounced for volatile and short-sale constrained stocks. This also replicates the results from the United States (Berkman and Koch, 2008).

Second, individual investors' trading activity increases significantly during earnings announcement periods with volumes about four times higher than in the preannouncement period (see Figure 1). The key driver is a sharp increase in buy trades.

Third, individual investors underperform when trading around earnings announcements compared to non-announcement trades (see Figure 2). In particular, transactions conducted in a three-day window around the event exhibit the worst holding period (daily underperformance of up to 17 basis points) and round-trip returns (daily underperformance of 10 basis points). Thereby, the underperformance is even more pronounced for volatility and short-sale constrained stocks albeit statistically insignificant.

Finally, experience and sophistication apparently plays a major role in this context. Particularly when trading in volatile and short-sale constrained stocks, experience is of crucial importance. We find strongly negative round-trip returns by inexperienced investors (abnormal daily negative returns of 36 basis points) and a return differential of 41 basis points compared to experienced investors, which is both economically and statistically significant.

Conclusion

We analyzed private investors' trading and performance around earnings announcements with a focus on volatile stocks also exhibiting short-sale constraints (Miller stocks) in Germany. For private investors, we find that abnormal private investor trading is higher around earnings announcements, compared to the average market. On these trades private investors underperform relative to non-announcement trades. Trading in these stocks generates strongly negative returns. Thereby, returns are particularly negative for inexperienced and unsophisticated investors.

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