Does Public News Mitigate The Market’s Underreaction to Liquidity Shocks?

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I. Abstract

There is evidence that equity markets underreact to liquidity shocks. In this paper, I examine whether the presence of firm-level public news mitigates such underreaction. I use comprehensive news data and find that when there is important public news released in the same months of the liquidity shocks, the price discovery process of liquidity shocks does not get any faster. In certain tests, the drift is actually significantly larger. This shows that even though public news reveals more information to investors and draws more investor attention, it does not help investors incorporate liquidity shocks into prices. If anything, public news only aggravates the market’s underreaction to liquidity shocks in certain cases. This provides evidence that liquidity level overall is difficult for average investors to grasp. Information environment and investor inattention are not the market frictions that result in the market’s underreaction to liquidity shocks.

II. Introduction

Liquidity as a stock characteristic is priced. (Amihud, 2002)

The stock markets underreact to liquidity shocks, in the sense that liquidity level predicts future stock returns up until six months. (Bali et al., 2014)

Literature also shows that the stock markets underreact to firm-level public news, and overeat to price movements due to liquidity shocks. (Savor, 2012; Chan, 2003)

Therefore, it is not clear whether the market is underreacting to liquidity shocks or overeating to liquidity shocks.

When there is firm-level public news released, the information asymmetry is reduced (Tetlock, 2008) and it draws more investors’ attention (Barber and Odean, 2008).

If so, does public news mitigate the market’s underreaction to liquidity shocks?

III. Methodology

Amihud measure of illiquidity:

$$\text{ILLIQ}_{t} = \frac{\text{Abs } \left( \frac{\text{returns}_{t}}{\text{vol}_{t}} \right)}{\text{Vol}_{t}}$$

Measure of liquidity shocks:

$$\text{Liquidity} = - \text{Lique}_{t} \Rightarrow \text{AVGILLIQ}_{t+1} - \text{AVGILLIQ}_{t+2}$$

IV. Results

Portfolio sorted on liquidity shocks:

Top decile minus bottom decile portfolios

News and no-news group:

Firms with news released in month t in one group and no news in another

Fama-MacBeth regressions:

$$\text{R}_{t+k} - \text{R}_{t+k}^{*} = \alpha_{t+k} + \beta_{t+k} \times \text{ILLIQ}_{t+k} + \gamma_{t+k} \times \text{ILLIQ}_{t+k} \times \text{Secnews}_{t+k} + \delta_{t+k} \times \text{Secnews}_{t+k} + \epsilon_{t+k}$$

Table 6

<table>
<thead>
<tr>
<th>Current Month</th>
<th>1-Month</th>
<th>2-Month</th>
<th>3-Month</th>
<th>12-Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>EW</td>
<td>VW</td>
<td>EW</td>
<td>VW</td>
<td>EW</td>
</tr>
<tr>
<td>Alpha</td>
<td>2.05***</td>
<td>1.58***</td>
<td>0.51***</td>
<td>-0.64***</td>
</tr>
<tr>
<td>Obs</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>

Table 8

Stock-level cross-sectional regressions for with and without news group

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>(1) Return t</th>
<th>(2) Return t+1</th>
<th>(3) Return t+2</th>
<th>(4) Return t+3</th>
<th>(5) Return t+4</th>
<th>(6) Return t+5</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQU</td>
<td>0.04***</td>
<td>0.03**</td>
<td>0.23***</td>
<td>0.038</td>
<td>0.033</td>
<td>0.018</td>
</tr>
<tr>
<td>BETA</td>
<td>-0.094</td>
<td>0.116</td>
<td>-0.382</td>
<td>0.177</td>
<td>-0.289</td>
<td>0.170</td>
</tr>
<tr>
<td>LNME</td>
<td>0.068</td>
<td>-0.004</td>
<td>0.074</td>
<td>-0.109**</td>
<td>0.082</td>
<td>-0.096**</td>
</tr>
<tr>
<td>LBM</td>
<td>0.244***</td>
<td>0.296*</td>
<td>0.302***</td>
<td>0.107</td>
<td>0.287***</td>
<td>0.132</td>
</tr>
<tr>
<td>MOE</td>
<td>-0.012***</td>
<td>0.002</td>
<td>-0.012***</td>
<td>-0.000</td>
<td>-0.011***</td>
<td>0.000</td>
</tr>
<tr>
<td>IVOL</td>
<td>1.675***</td>
<td>-0.204**</td>
<td>2.657***</td>
<td>-0.146**</td>
<td>2.235**</td>
<td>-0.146**</td>
</tr>
<tr>
<td>ILLIQ</td>
<td>-0.179***</td>
<td>-0.048</td>
<td>-0.166***</td>
<td>-0.045</td>
<td>-0.207***</td>
<td>-0.038</td>
</tr>
<tr>
<td>REVE</td>
<td>-0.055***</td>
<td>-0.04**</td>
<td>-0.024***</td>
<td>-0.055</td>
<td>-0.04**</td>
<td>-0.024***</td>
</tr>
</tbody>
</table>

Table 9

Firms with news released in month t in one group and no news in another

V. Key Takeaway

- The stock markets indeed underreact to liquidity shocks.
- The stock markets underreact to price movements with public news.
- The stock markets overreact to price movements without public news, and such price movements are not due to liquidity shocks, but due to investor sentiment or other reasons.

More information and more investors’ attention do not mitigate the market’s underreaction to liquidity shocks.

- Liquidity level overall is difficult for average investors to grasp.

VI. Discussions

- What types of news aggravate the market’s underreaction to liquidity shocks?
- Why is book-to-market ratio highly correlated to the magnitude of the markets’ underreaction?