Are institutions informed about news? ☆

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A B S T R A C T

This paper combines daily buy and sell institutional trading volume with all news announcements from Reuters. Using institutional order flow (buy volume minus sell volume) we find a variety of evidence that institutions are informed. Institutional trading volume predicts the occurrence of news announcements. Institutional order flow predicts (i) the sentiment of the news; (ii) the stock market reaction on news announcement days; (iii) the stock market reaction on crisis news days; and (iv) earnings announcement surprises. These results suggest that significant price discovery related to news stories occurs through institutional trading prior to the news announcement date.

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1. Introduction

Institutional trading is important because it constitutes the majority of daily trading volume and institutional investors are the largest owners of publicly traded stocks in the U.S.[3] Potentially important drivers of institutional trading are superior information gathering and processing skills. Superior information by institutions could arise from access to more information and greater resources to process information. Unlike retail investors, institutions often directly communicate with publicly traded firms as well as brokerage firms through their investment banking, lending, and asset management divisions. Most mutual funds and hedge funds employ buy-side analysts and enjoy better relationships with sell-side analysts. Their economies of scale allow institutions to monitor many sources of

[3] See, for example, Boehmer and Kelley (2009) and Securities Industry Association Fact Book (2007).

information. Finally, institutions employ professionals and technologies with superior information processing skills. There is some evidence that institutional investors are informed, but studies examining institutional order flow around specific events provide mixed evidence.[4] This paper uses comprehensive news and institutional trading data to show that institutions are informed about news.

To illustrate how institutions trade around news we examine one of the highest profile events in our sample: the Martha Stewart insider trading trial. Stewart's broker tipped her that drug manufacturer ImClone's stock price was about to drop because its drug Erbitux failed to get the expected Food and Drug Administration (FDA) approval. In response, Stewart sold about $230,000 in ImClone shares on December 27, 2001, a day before the announcement of the FDA decision. On June 4, 2003, a federal grand jury in Manhattan indicted Stewart on charges of securities fraud, obstruction of justice, and conspiracy. The same day, Stewart resigned as chief executive officer and chairman of Martha Stewart Living Omnimedia (MSO), but remained on the company's board. Stewart's trial began on January 27, 2004 in New York City and ended on March 5.

Fig. 1 plots MSO's cumulative stock return (Panel A) and institutional order flow (buy volume minus sell volume) in MSO (Panel B) from January 27, 2004 through April 10, 2004. Until February 27, institutions roughly maintained their positions in MSO as their order flow remained close to zero. On February 27, the judge threw out the securities fraud charge against Stewart, which could have led to up to ten years in prison and a $1 million fine. In response MSO's stock price rose roughly 10% and remained there until the verdict on the remaining charges was announced on March 5. In contrast to the rising stock price, institutions sold MSO heavily from February 27 through March 5. Prior to the verdict, institutions sold 8% of MSO's market capitalization.

Trading in MSO was halted after Stewart was found guilty of conspiracy, obstruction of justice, and two counts of making false statements to a federal investigator. When trading in MSO reopened, the stock price plunged roughly 30%. On the same day institutions sold 10% more of MSO's market capitalization. Thus, approximately half of institutions' selling occurred prior to the news. Institutions' selling is consistent with them being better informed about the final verdict and them correctly interpreting the lack of good news in the charges being dismissed on February 27.

Moving beyond the Martha Stewart example to examine whether institutional trading is informed about news in general, this paper combines daily non-public data on buy and sell volume by institutions from 2003 through 2005 for 1,700 NYSE-listed stocks with all news announcements from Reuters. Natural language processing categorizes the sentiment associated with each news story. We use institutional order flow as a quantitative measure of net trading by institutions. Using these comprehensive data of institutional trading and news announcements we find that institutional trading predicts news announcements, the
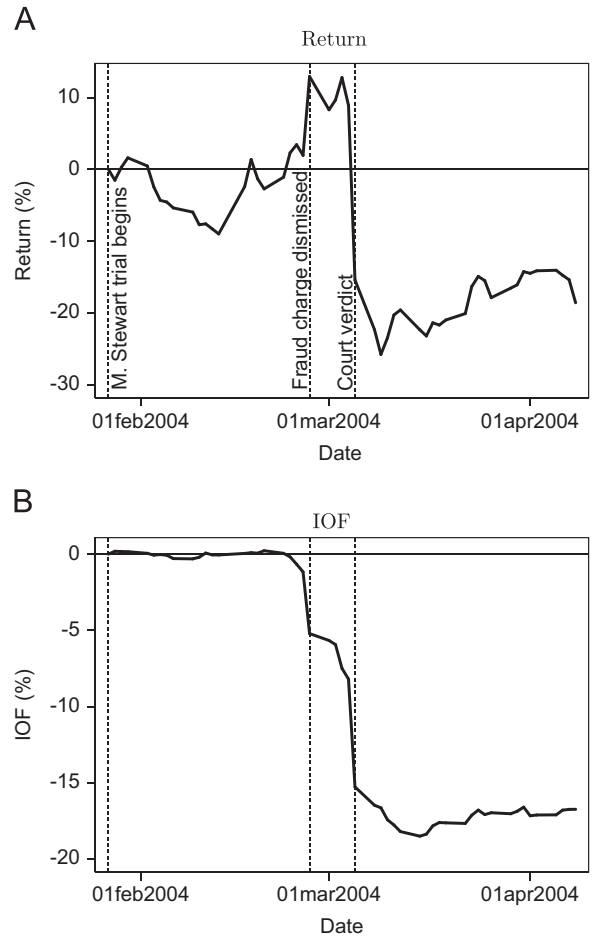

Fig. 1. Stock returns and institutional order flow during the Martha Stewart insider trading trial. The figure documents cumulative stock returns (Panel A) and institutional order flow (IOF; Panel B) in Martha Stewart Living Omnimedia (MSO) from January 27, 2004 through April 10, 2004.

sentiment of the news, returns on the announcement day, and earnings announcement surprises.

To initially examine the question of whether institutions are informed about news, we study institutional trading volume around news announcements (Section 3). Event-study methodology shows that institutional trading volume increases a few days before news announcements. Calendar-time probit regressions show that institutional trading volume predicts whether or not a news announcement will occur after controlling for prior stock volatility and prior news announcements. This is consistent with institutions being informed about whether or not news announcements will occur, although it does not establish that institutions are informed about the content of the news itself.

We next analyze whether institutions are informed about the contents of the news (Section 4). We measure institutions' forecast of future information arrival by their order flow. Natural language processing measures the contents of the news itself. We use stock market reaction on news days as a signal of the information contained in the news announcements. Event-study methodology shows that institutional order flow increases more than five days prior to the announcement of good news as measured by

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[4] For example, see the below discussion of Griffin, Shu, and Topaloglu (2012), Jegadeesh and Tang (2010), and Busse, Green, and Jegadeesh (2012).