North American Journal of Economics and Finance 37 (2016) 472–484

Contents lists available at ScienceDirect

North American Journal of Economics and Finance

journal homepage: www.elsevier.com/locate/ecofin

The impact of individual investor trading on information asymmetry in the Korean stock market

Chune Young Chung[a,*], Kainan Wang[b]

[a] School of Business Administration, Chung-Ang University, Seoul 156-756, Republic of Korea
[b] Department of Finance, College of Business and Innovation, University of Toledo, OH 43606, USA

ARTICLE INFO

Article history:
Available online 25 May 2016

Keywords:
Individual investor trading
Information asymmetry
Bid-ask spread
Short-term trading data
Korean stock market
Emerging market

ABSTRACT

This paper examines the impact of individual investor trading on information asymmetry in the market. In particular, we examine the relationship between the trading volume by individual investors and the corresponding bid-ask spread in the Korean stock market, where the majority of the trading activity is driven by individual investors and therefore information asymmetry can be evident. We find that high trading activity by individual investors increases the bid-ask spread in a short investment horizon, suggesting that individual investors, as uninformed and unsophisticated traders, amplify the degree of information asymmetry in the market through trading.

1. Introduction

Individual investors do not always trade rationally in financial markets due to their informational disadvantages and/or behavioral biases in making their investment decisions compared to other groups of investors. Various studies document that trading behavior and performance by individual investors tend to be worse than those of institutional investors or foreign investors (e.g., Amihud & Li, 2006; Barber & Odean, 2000; Choi & Sias, 2012; Cohen, Gompers, & Vuolteenaho, 2002; Gibson, Safieddine, & Sonti, 2004; Grinblatt & Keloharju, 2000; Nofsinger & Sias, 1999). These studies suggest

* Corresponding author. Tel.: +82 2 820 5544.
E-mail address: bizfinance@cau.ac.kr (C.Y. Chung).

http://dx.doi.org/10.1016/j.najef.2016.05.005
1062-9408/

that the asymmetric information stemming from informational disadvantages and/or behavioral biases of individual investors largely explains their poor trading.[1] Hence, the information asymmetry among diverse market participants is a matter of importance in the market.

In this paper, we hypothesize that active trading by individual investors amplifies the degree of information asymmetry in the Korean stock market, which results in a wider bid-ask spread (BAS). The intuition behind our hypothesis is straightforward: if individual investors are collectively uninformed and unsophisticated, they tend to set high ask prices and low bid prices to recover potential losses from information asymmetry, which results in a larger discrepancy in the bid-ask spread. To test this hypothesis, we focus on the Korean stock market owing to its three unique features. First, unlike the U.S. stock market, the Korean stock market is an order-driven market, where all buyers and sellers display prices at which they wish to buy or sell a particular security, as well as the amounts of the security desired to be bought or sold.[2] Thus, the bid-ask spread in the Korean stock market reflects information asymmetry in valuation among investors.[3] Moreover, the trading volume by individual investors in the Korean stock market is one of the highest in the world. According to the Korea Exchange (KRX), during the period from January 2001 to December 2010, the trading volume by individual investors accounted for 88.19% of total market activities or 61.32% of the total trading value. Given that individual investors are the major participants in the Korean stock market, their trading should be the key determinant of price discovery in the market. Lastly, unlike the U.S. or other developed stock markets, where the financial system is relatively transparent and efficient, emerging markets typically do not have a sound financial system or strong legal protection for individual investors. Thus, the informational disadvantages of individual investors and their consequent noise trading are more pronounced in such an environment. Due to these reasons, we believe that the Korean stock market provides an ideal setting for studying the implication of individual investor trading on information asymmetry in the market.

The empirical evidence on the impact of individual investor trading on information asymmetry is sparse in the literature because of the limited availability of data on individual investor trading in a short investment horizon. Even though data on bid-ask spread, a commonly used measure for information asymmetry, are available on a daily basis, the literature typically utilizes the quarterly institutional ownership data in the U.S. (13F) to infer the ownership and trading by individual investors. This approach assumes that a firm's ownership that is not covered by institutional investors is held by individual investors and a positive net demand by institutional investors implies a negative net demand by individual investors.[4]

In this paper, we use a uniquely available short-term trading dataset in the Korean stock market to investigate if active trading by individual investors increases the degree of information asymmetry in the market. In particular, we study the relationship between the short-term trading volume by individual investors and the corresponding BAS. Our results show that high trading volume by individual investors increases BAS in a short investment horizon, consistent with the hypothesis that uninformed and unsophisticated individual investors amplify the degree of information asymmetry in the market through their trading activities. In addition, we test whether the impact of individual investor trading on information asymmetry can be attributed to their buy or sell trade. In particular, we study the relationship between the net buy trading volume by individual investors and the corresponding BAS. We find that the positive net buy trading volume by individual investors is associated with a high degree of information asymmetry, suggesting that the negative influence of individual

[1] The literature typically documents that information asymmetry among investors occurs due to two main reasons: (1) the lack of access to private information; and (2) the lack of information processing capability due to psychological biases.

[2] By contrast, the U.S. stock market is a quote-driven market, which only displays the bid and ask offers of designated market makers, dealers, or specialists, and these market makers will post the bid and ask prices that they are willing to accept at that time.

[3] Based on the theoretically and empirically strong association between the bid-ask spread and the level of information asymmetry among investors, a large body of literature has utilized the bid-ask spread as a proxy for information asymmetry (Bagehot, 1971; Brockman & Chung, 2000; Choi, Lam, Sami, & Zhou, 2013; Demsetz, 1968; Lev, 1988).

[4] Other studies use transaction data to infer trading by individual investors based on trade size (Hvidkjaer, 2008; Malmendier & Shanthikumar, 2007).