Commonality in individuals’ trading: A systematic path between behavioral bias and expected returns☆

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Abstract

This paper investigates whether there is commonality in the trading of individual investors. To test for the existence of trading commonality, we apply three different methods employed in assessments of commonality in liquidity. Using actual individual trading in the Korean stock market, we demonstrate the strong commonality in individual trading. Additionally, we find evidence that commonality in individual trading predicts future stock returns, and its predictability is significant in medium-size stocks. The Korean market also shows strong commonality in liquidity, but it has little relation to commonality in individual trading in explaining stock returns.

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1. Introduction

To academics and practitioners, individual traders are often viewed as noise traders or uninformed traders. The traditional finance literature suggests that deviations in stock prices generated by uninformed individuals is arbitrated away by smart informed traders (Friedman, 1953; Fama, 1965; Rubinstein, 2001;...
Coval and Shumway, 2005)\(^1\). However, a variety of recent studies have confirmed that trading by individual investors can affect stock returns. For example, Kaniel et al. (2008) provide evidence to suggest that intense trading by individuals is correlated positively with future excess returns. Additionally, Barber et al. (2009a) have demonstrated that small trade order imbalances, which are correlated with retail trade imbalances, can forecast future returns.

The question that naturally follows when we discuss the relationship between individual trading and stock returns is whether such a relationship is systematic in nature. One necessary condition of individual trading consistently affecting stock returns is the existence of commonality (e.g., Lee et al., 1991; Barber et al., 2009b; Kumar and Lee, 2006). If commonality and stock returns vary together, such covariance may be indicative of systematic risk. Even though previous behavioral finance studies demonstrate that individual trading can affect stock returns, a systematic path between individual trading and stock returns, i.e., the presence of commonality in individual trading, remains unclear.

This paper tests whether individual trading involves commonality, and the results show strong evidence of such commonality. At first, actual trading data are utilized to obtain the individual trading proportion in the Korean stock market. To test for the presence of commonality in individual trading, we apply three different methodologies that are used to determine commonality in liquidity. The first methodology is the market model regression developed by Chordia et al. (2000). We regress a firm’s liquidity measure on the market aggregate liquidity measure and define the significance of the estimated coefficient as their commonality measure. We adopt their general method and regress individual trading of each stock against market-wide, aggregate individual trading. The second commonality testing method is the principal component analysis of Hasbrouck and Seppi (2001). The third method uses a time series regression for two exclusive groups, as in the study of Huberman and Halka (2001). All three methods provide evidence to suggest that commonality in individual trading exists in the Korean stock market.\(^2\)

Then, we further examine whether commonality in individual trading can predict future stock returns by using a portfolio-based approach. The results show that portfolios with high commonality in individual trading outperform low-commonality portfolios. The average annual hedge return (13.013%) from decile portfolios is significant ($t=2.258$). The hedge returns of double-sort portfolios by firm size and commonality in individual trading are statistically significant only in the medium-size portfolio.

In summary, we find the strong commonality in individual trading as a precondition that individual trading affects stock returns systematically. We also find significant relationship between commonality in individual trading and stock returns.

Additionally, we investigate commonality in liquidity, in which our methods are originally employed. By using the market model regression of Chordia et al. (2000), we confirm a high and significant liquidity commonality in the Korean stock market. Then, we examine whether the commonality in liquidity can explain the relationship between commonality in individual trading and stock returns. The portfolio results show that commonality in individual trading has little relationship with commonality in liquidity.

The next question to be answered involves how we interpret the commonality in individual trading. We argue that individual trading indicates the level of investors’ behavioral bias. Investors’ biases, which include disposition effects, overreaction, and mental accounting, are frequently reported among individual investors (e.g., Odean, 1998, 1999; Goetzmann and Kumar, 2005). Based on these behavioral finance studies, we argue that individual investors tend to be more irrational than others. Therefore, we suggest that a large proportion of individual trading functions as a proxy for investor irrationality and reflects an increase in the degree of sentiment involved in trading. We find that individual trading is correlated most highly with default spread, possibly reflecting investors’ sentiment-based trading.

The remainder of this article is organized as follows: Section 2 explains the data and variables. Section 3 describes the empirical methodologies and results of this study. Section 4 examines the relation between

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\(^{1}\) Coval and Shumway (2005) investigate the Chicago Board of Trade proprietary traders rather than individual investors, and find strong evidence for loss aversion among them. However, prices set by loss-averse traders are reversed more quickly than prices set by unbiased traders, which is consistent with the arguments of Friedman (1953) and Fama (1965). We include the study of Coval and Shumway in the literature since their paper shows that even biases from professional traders are arbitrated away in the market.

\(^{2}\) Kaniel et al. (2008) use the NYSE’s Consolidated Equity Audit Trail data to determine whether there is commonality in individual trading in the U.S. However, they were unable to find any evidence of commonality in individual trading in their data, although they did detect a relationship between individual trading and stock returns. We presume that the difference between their results and ours results reflects differences in sample periods and databases.
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