



Are retail traders compensated for providing liquidity?[☆]



Jean-Noel Barrot^{a,b,*}, Ron Kaniel^{b,c,d}, David Sraer^{e,f}

^a Massachusetts Institute of Technology, United States

^b Centre for Economic Policy Research, United Kingdom

^c Simon School of Business, University of Rochester, United States

^d Interdisciplinary Center Herzliya, Israel

^e University of California, Berkeley, United States

^f National Bureau of Economic Research, United States

ARTICLE INFO

Article history:

Received 20 June 2014

Revised 25 February 2015

Accepted 23 March 2015

Available online 21 January 2016

JEL classification:

G01

G11

G14

Keywords:

Liquidity

Retail investors

Crisis

ABSTRACT

This paper examines the extent to which individual investors provide liquidity to the stock market and whether they are compensated for doing so. We show that the ability of aggregate retail order imbalances, contrarian in nature, to predict short-term future returns is significantly enhanced during times of market stress, when market liquidity provisions decline. While a weekly rebalanced portfolio long in stocks purchased and short in stocks sold by retail investors delivers 19% annualized excess returns over a four-factor model from 2002 to 2010, it delivers up to 40% annualized returns in periods of high uncertainty. Despite this high aggregate performance, individual investors do not reap the rewards from liquidity provision because they experience a negative return on the day of their trade and they reverse their trades long after the excess returns from liquidity provision are dissipated. During the financial crisis, French active retail stock traders stepped up to the plate, increased stock holdings, and provided liquidity. In contrast, mutual fund investors fled from delegation by selling their mutual funds.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

What is the contribution of individual investors to the formation of prices and liquidity in financial markets? A long-standing literature has considered them as noise traders, in the sense of Black (1986) and Shleifer and Summers (1990), who push prices away from fundamentals and destabilize markets. In contrast to this literature, recent empirical evidence suggests that individual investors'

trades provide liquidity to meet the demand for immediacy of other market participants (Kaniel, Liu, Saar, and Titman, 2012; Kaniel, Saar, and Titman, 2008; Kelley and Tetlock, 2013). While retail investors are possibly less sophisticated than their institutional counterparts, they also face lower agency costs and liquidity constraints than institutional investors, such as mutual funds (Chevalier and Ellison, 1999; Coval and Stafford, 2007). Retail traders could thus have some ability to act as market makers, especially when institutional liquidity dries up, as was the case during the 2008–2009 financial crisis.

This paper examines the extent to which individual investors provide liquidity to the stock market and whether or not they are compensated for doing so. We use a unique data set obtained from a leading European online broker in personal investing and online trading. This data set allows us to track the trades of a large sample of individuals from

[☆] For helpful comments and suggestions, we thank Remy Chicheportiche, Christian Gollier, Augustin Landier, Juhani Linnainmaa, Tarun Ramadorai, Elias Rantapuska (our Helsinki Finance Summit discussant), Patrick Roger, David Thesmar, and participants of the Helsinki Finance Summit. We acknowledge support from the Observatoire de l'Épargne Européenne.

* Corresponding author. Tel.: +1 617 715 4820; fax: +1 617 258 6855.

E-mail address: jnbarrot@mit.edu (J.-N. Barrot).

January 2002 to December 2010. The data cover the recent financial crisis, when the liquidity-provision capacity of traditional market makers was plausibly reduced (Nagel, 2012). We uncover a series of new findings.

First, individuals provide liquidity especially at times when conventional liquidity providers are constrained. We begin by showing that in our sample, consistent with recent literature, aggregate retail buy-sell imbalances are contrarian and positively predict the cross section of stock returns at a horizon of a few weeks. A one standard deviation increase in daily order imbalances is associated with an increase in returns of about 15 additional basis points over the following three trading weeks (a 4% increase in annualized returns). We then test whether this increase in returns earned by retail investors corresponds to compensation for liquidity provision. To do so, we first construct a weekly rebalanced portfolio that goes long in stocks purchased and short in stocks sold by retail investors (the retail portfolio). We then compare the returns on this portfolio with time series variation in the supply of liquidity provided by institutional investors. Guided by prior work showing that intermediaries are especially constrained in their ability to provide liquidity in times of high uncertainty, we split our sample into periods of high and low VIX [Chicago Board Options Exchange (CBOE) volatility index], when the VIX is higher or lower than 20, its 2002–2010 median. We contrast the returns on the retail portfolio in these two subsamples and find robust evidence that they increase sharply in times of high uncertainty. While the retail portfolio earns 19% annualized excess returns over a four-factor model from 2002 to 2010, it earns up to 40% annualized returns when traded over the weeks when the VIX is above its sample median. We also provide suggestive evidence that, during times of high uncertainty, retail investors do in fact step up to provide more liquidity and that their risk-bearing capacity seems to increase. These results indicate that retail traders do provide liquidity to the stock market, especially when institutional liquidity dries up.

Second, we exploit the unique panel feature of our data set to show that retail investors fail to reap the returns from liquidity provision. We provide two explanations for this result. The first has to do with the price at which retail orders are executed on the day of trading. To benefit from the predictable short-term returns that follow a day of intense imbalances, individual investors need to avoid being picked off on day 0. To understand why, suppose that institutions holding stock *S* are hit with liquidity shocks and need to fire sell their shares of *S*. The price of *S* plummets on day 0 and recovers in the short-term thereafter. Individuals buying stock *S* at its lowest on day 0 fully benefit from the price reversal in the subsequent days. However, those who purchase *S* before it reaches its lowest price experience a negative intra-day return on day 0, which can more than offset the gain from price reversal. Our analysis of order-level data indicates that, in our sample, retail investors get picked off on day 0. The average retail trade experiences large and negative returns on this day, so much so that returns on day 0 more than offset the rewards from liquidity provision that could arise subsequently.

The second reason for the low performance of individual investors in our sample has to do with the speed at which they reverse their trades. Individuals cannot benefit from liquidity provision unless they reverse their trades quickly enough thereafter, before the benefits are dissipated. This is exactly what retail investors in our sample fail to do. The average holding period among retail investors in our sample is above three hundred days, and most of the returns from liquidity provision are dissipated, on average, after 20 days. Thus, surprisingly, low trading frequency – specifically, slow reversal of trades – is one of the reasons that individual investors in our sample underperform. If retail traders were to close their positions earlier, they could be demanding liquidity themselves, which might adversely affect their returns. Nonetheless, while Odean (1998) or Barber and Odean (2000) argue that overtrading is associated with high transactions costs and is, therefore, responsible for the low performance of retail traders, our findings suggest that retail traders could paradoxically capture a larger liquidity premium by trading more quickly.

Finally, we take advantage of the richness of our data and uncover substantial cross-sectional heterogeneity in the returns to liquidity provision. We first sort trades based on the experience of the individual placing them. We find that highly experienced individuals are much less prone to the picking-off effect. In addition, they flip their trades much more quickly.¹ These two components explain a significant share of their outperformance relative to less experienced traders. We also sort trades based on the average speed at which the individuals who place them usually reverse their trades. We find that fast traders are less prone to the picking-off effect and, thus, experience higher returns relative to slower traders.

Our findings are in contrast to the view expressed by part of the financial press arguing that the financial crisis led to a massive exodus of small retail investors from the stock market. Using our data, we show that, during the financial crisis, French retail investors on aggregate fled from delegation by selling their mutual funds, yet, at the same time, active retail stock traders stepped up to the plate, increased stock holdings, and provided liquidity.

This paper adds to the ongoing debate on the contribution of retail trades to stock market efficiency. A number of papers find that individual trades positively predict short-term returns. A first body of work has interpreted this as evidence of noise trading pushing prices away from fundamentals. Barber, Odean and Zhu (2009) find that stocks that individual investors are buying (selling) during one week have positive (negative) abnormal returns on that week and in the subsequent two weeks. These returns then reverse over the next several months. Although

¹ Some notable contributions to the recent and growing literature on learning dynamics in finance are (Agarwal, Driscoll, Gabaix, and Laibson, 2008; Chiang, Hirshleifer, Qian, and Sherman, 2011; Choi, Laibson, Madrian, and Metrick, 2009; Greenwood and Nagel, 2009; Kaustia, Alho, and Puttonen, 2008; List, 2003; Mahani and Bernhardt, 2007; Nicolosi, Peng, and Zhu, 2009; Seru, Shumway, and Stoffman, 2009), and (Linnainmaa, 2011).

Download English Version:

<https://daneshyari.com/en/article/959435>

Download Persian Version:

<https://daneshyari.com/article/959435>

[Daneshyari.com](https://daneshyari.com)