

Contents lists available at [SciVerse ScienceDirect](http://www.sciencedirect.com)

Journal of Banking & Finance

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

Individual investor perceptions and behavior during the financial crisis

Arvid O.I. Hoffmann^{a,b,*}, Thomas Post^{a,b}, Joost M.E. Pennings^{a,c,d,e}^a Maastricht University, School of Business and Economics, Department of Finance, P.O. Box 616, 6200 MD Maastricht, The Netherlands^b Network for Studies on Pensions, Aging and Retirement (Netspar), P.O. Box 90153, 5000 LE Tilburg, The Netherlands^c Maastricht University, School of Business and Economics, Department of Marketing, P.O. Box 616, 6200 MD Maastricht, The Netherlands^d Wageningen University, Marketing and Consumer Behaviour Group, P.O. Box 9101, 6700 HB Wageningen, The Netherlands^e Office for Futures and Options Research (OFOR), University of Illinois at Urbana–Champaign, 326 Mumford Hall, 1301 W. Gregory Drive, Urbana, IL 61801-3605, United States

ARTICLE INFO

Article history:

Received 8 March 2012

Accepted 9 August 2012

Available online 23 August 2012

JEL classification:

D14

D81

G01

G11

G24

Keywords:

Financial crisis

Individual investors

Investor perceptions

Trading behavior

Risk-taking behavior

ABSTRACT

Combining monthly survey data with matching trading records, we examine how individual investor perceptions change and drive trading and risk-taking behavior during the 2008–2009 financial crisis. We find that investor perceptions fluctuate significantly during the crisis, with risk tolerance and risk perceptions being less volatile than return expectations. During the worst months of the crisis, investors' return expectations and risk tolerance decrease, while their risk perceptions increase. Towards the end of the crisis, investor perceptions recover. We document substantial swings in trading and risk-taking behavior that are driven by changes in investor perceptions. Overall, individual investors continue to trade actively and do not de-risk their investment portfolios during the crisis.

© 2012 Elsevier B.V. All rights reserved.

1. Introduction

An extensive literature examines the causes and consequences of the 2008–2009 financial crisis for housing and securitization markets, financial institutions, corporate investment decisions, household welfare, bank lending, financial contagion, financial regulation, as well as institutional investors.¹ Less is known, however, about the impact of the crisis on individual investors' perceptions and behavior. It is important to also study the experiences of this group of investors, as their behavior can affect asset prices (Lee

* Corresponding author at: Maastricht University, School of Business and Economics, Department of Finance, P.O. Box 616, 6200 MD Maastricht, The Netherlands. Tel.: +31 43 38 84 602; fax: +31 43 38 84 875.

E-mail addresses: a.hoffmann@maastrichtuniversity.nl (A.O.I. Hoffmann), t.post@maastrichtuniversity.nl (T. Post), joost.pennings@maastrichtuniversity.nl (J.M.E. Pennings).

¹ See, for example, Demyanyk and Van Hemert (2011) (housing and securitization markets), Maddaloni and Peydró (2011) and Brunetti et al. (2011) (financial institutions), Campello et al. (2011) (corporate investment decisions), Bricker et al. (2011) (household welfare), Santos (2011) and Ivashina and Scharfstein (2010) (bank lending), Longstaff (2010), Aloui et al. (2011), and Baur (2012) (financial contagion), Jin et al. (2011) and Moshirian (2011) (financial regulation), and Ben-David et al. (2012) (institutional investors).

et al., 1991; Hirshleifer, 2001; Kumar and Lee, 2006; Kogan et al., 2006), return volatility (Foucault et al., 2011), and even the macro-economy (Korniotis and Kumar, 2011a). Moreover, the economic significance of individual investors' stock-market participation rises because of an increasing self-responsibility for building up retirement wealth.

To examine how individual investors' perceptions as well as their behavior changes during the crisis, we use a panel-data set which combines monthly survey data with matching brokerage records. For each month between April 2008 and March 2009, we measure individual investors' perceptions in a survey on their expectations for stock-market returns, their risk tolerance, and their risk perceptions.² In addition, we collect information on these investors' trading and risk-taking behavior through their brokerage records. The sample period includes, on the one hand, the months when worldwide stock markets were hit hardest, that is, September and October 2008. During these months, in the US, Lehman Brothers collapsed and AIG was bailed out, and in Europe, parts of ABN AMRO and Fortis were nationalized. On the other hand, stock markets were still relatively calm at

² Whenever we do not specifically refer to return expectations, risk tolerance, or risk perceptions, the term "perceptions" is used to refer to these survey variables in a general way to set them apart from the brokerage data.

the beginning of the sample period (April 2008), while at the end of the sample period, stock markets already began to recover (March 2009). As such, the available data provide a relatively complete coverage of the crisis's impact on the stock markets.

The brokerage records at hand show that individual investors were hit hard by the financial crisis: several months of double-digit negative stock-market returns almost halved their portfolio values within the sample period. According to conventional wisdom (Stev-erman, 2009; Shell, 2010) as well as expectations from prior literature (Malmendier and Nagel, 2011), this dramatic shock to investor wealth, combined with this market period's uncertainty and volatility, could permanently shift investor perceptions of the stock market as well as of their personal investments. In particular, the financial crisis could be expected to make individual investors aware of the true risk of investing in stocks, decreasing their return expectations and risk tolerance, increasing their risk perceptions, and leading them to de-risk their investment portfolios.

Our results, however, challenge these predictions: although the financial crisis temporarily decreases individual investors' return expectations and risk tolerance, and increases their risk perceptions, these variables quickly recover. Furthermore, investors continue to trade and do not de-risk their investment portfolios during the crisis. Investors also do not try to reduce risk by shifting from risky investments to cash. Instead, investors use the depressed asset prices as a chance to enter the stock market.

The remainder of this paper is organized as follows. In Section 2 we present related literature and develop the hypotheses. In Section 3 we introduce the data. In Section 4 we set out the results. In Section 5 we present robustness checks and evaluate alternative explanations. In Section 6 we conclude.

2. Literature and hypotheses

In this section we develop hypotheses about the expected changes in investor perceptions and behavior during the financial crisis. Recent research shows a persistent effect of investor psychology on trading and risk-taking behavior (Barber and Odean, 2001; Bailey et al., 2011). A key finding from such studies is that individual investors have difficulty learning from their experiences, and if they learn, this is a slow process (Gervais and Odean, 2001; Seru et al., 2010). Moreover, individual investors often fail to update their behavior to match their experiences and are relatively unaware of their return performance (Glaser and Weber, 2007). Thus, it seems that at least during tranquil times, investors' experiences have little or no impact on their perceptions and behaviors.

Extreme events such as the 2008–2009 financial crisis, however, may have a strong impact on individual investors because of their salience (Kahneman and Tversky, 1972). Malmendier and Nagel (2011), for example, suggest that dramatic experiences, such as the Great Depression of the 1930s, can have a permanent impact on investors' perceptions and risk-taking behavior. Thaler and Johnson (1990) as well as Barberis (2013) find that experiencing a number of consecutive losses reduces investors' subsequent willingness to take risks. As the financial crisis combines an unexpected and negative shock to investors' wealth as well as their returns with an uncertain and volatile market environment, we hypothesize that:

H₁. The financial crisis depresses individual investors' perceptions. That is, their return expectations and risk tolerance decrease, while their risk perceptions increase

H₂. The financial crisis makes investors aware of a higher than expected investment risk. In response, individual investors reduce their portfolio risk

During the financial crisis, investors are exposed to an unusually high volume of dramatic and unexpected news (Dzieliński, 2011). Receiving (too) much information can result in information overload (Lam et al., 2011), which stimulates status-quo bias, thus potentially reducing individual investors' trading activity during the crisis (cf. Agnew and Szykman, 2005). Alternatively, however, the large amount of information investors receive during a crisis may induce frequent changes in their perceptions, as well as a larger divergence of such perceptions (disagreement amongst various investors). Glaser and Weber (2005), for example, find an increase in the standard deviation of individual investors' return and volatility forecasts directly after September 11 and the subsequent stock-market turmoil. Changes in and divergence of perceptions are both expected to lead to higher trading activity: the first effect provides more reasons to trade, the second effect makes it more likely to find a trading counterpart (cf. Harris and Raviv, 1993; Banerjee, 2011). Based on the prior discussion, we develop two mutually exclusive hypotheses:

H_{3a}. The frequent arrival of information during the financial crisis leads to information overload. As a result, individual investors reduce their trading activity

H_{3b}. The frequent arrival of information during the financial crisis changes investor perceptions and creates a larger divergence in their perceptions. As such, having more reasons as well as opportunities to trade increases individual investors' trading activity

3. Data

To test the hypotheses, we combine brokerage records of 1510 clients of the largest discount broker of the Netherlands with matching monthly questionnaire data that we collected for these investors from April 2008 through March 2009. The investors do not receive investment advice and manage their own accounts, which ensures that the observed trading patterns, as well as survey responses, reflect their own decision making and opinions. An additional advantage of discount-brokerage data is that this is the dominant channel through which both US and Dutch individuals invest (Barber and Odean, 2000; Bauer et al., 2009). As in Bauer et al. (2009), we exclude accounts of minors (age < 18 years) and those with an average end-of-month portfolio value (in the sample period) of less than €250. Furthermore, to exclude professional traders, we discard accounts in the top 1% of annual trading volume, number of transactions, or turnover distributions. Imposing these criteria leaves 1376 individual accounts for analysis.

3.1. Brokerage records

Brokerage records are available for investors who completed at least one survey during the sample period. A record consists of an identification number, a transaction date and time, a buy/sell indicator, the type of asset traded, the gross transaction value, and transaction commissions. The records also contain information on investors' daily account balances, demographics such as age and gender, and their 6-digit postal code. Based on this postal code, which is unique to each street (or even parts of a street) in the Netherlands, and data from Statistics Netherlands, we assign income and residential house value to each investor.³ Table 1 defines all variables. Table 2 shows descriptive statistics.

³ Home ownership rates are high in the Netherlands (67.5%, as of 2008 (Eurostat, 2011)), as well as skewed towards wealthier households (Rouwendaal, 2007). Thus, it is likely that the assigned house values correspond closely to the value of the houses actually owned by the investors in the sample.

Download English Version:

<https://daneshyari.com/en/article/5089391>

Download Persian Version:

<https://daneshyari.com/article/5089391>

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