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Current Topics on Retail Investor Behavior – Insights from the 3rd European Retail Investment Conference (ERIC), April 2015

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I. Introduction

The 3rd European Retail Investment Conference was hosted at Boerse Stuttgart, Germany from 22nd to 24th of April 2015. The conference chairs invited academics and practitioners to participate and discuss empirical and theoretical research that investigates retail investor products and services, the impact of technology on retail investors, investors' decision-making, investor protection schemes, and market microstructure. The final program of the main conference had 15 presentation slots. In addition, 6 papers written by PhD students were selected for presentation at the doctoral consortium.

The keynote speech was given by Joseph Engelberg on search data and behavioral finance. Joseph Engelberg is Associate Professor of Finance at the University of California at San Diego – Rady School of Management. In his research, he focuses on the way information is disseminated among market participants, especially by financial media and social networks. His major research areas are empirical corporate finance, networks and financial media.

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II. Conference Presentations – State of the Research on Retail Investor Behavior and Financial Retail Products

This section provides a comprehensive overview on the conference contributions in a chronological order. The content of the summaries is partially derived from the respective paper abstracts.

1. Session: Market Microstructure

Elvira Sojli (Erasmus University Rotterdam) opened the first session on market microstructure with her presentation of the paper "Trading on Algos", co-authored by Johannes A. Skjeltrop (Central Bank of Norway) and Wing Wah Tham (Erasmus University Rotterdam and Tinbergen Institute). In their empirical work, the authors investigate the impact of algorithmic trading on asset prices. They find that the heterogeneity of algorithmic traders across stocks generates predictable patterns in stock returns. A trading strategy that exploits the algorithmic trading return predictability generates a monthly risk-adjusted performance between 50–130 basis points for the period 1999 to 2012. The authors find the statistically and economically signifcant effect that stocks with lower algorithmic trading have higher returns, after controlling for standard risk factors. Further, return predictability is stronger among stocks with higher impediments to trade and higher amount of predatory or opportunistic algorithmic traders. The paper is the first to study and establish a strong link between algorithmic trading and asset prices.

2. Session: Momentum Trading

The second session on the topic of momentum trading began by a presentation of Daniel Andrei (UCLA Anderson School of Management). In their paper "Information Percolation, Momentum, and Reversal" Daniel Andrei and his co-author Julien Cujean (University of Maryland) propose a rational model to explain time-series momentum. As a key ingredient they use word-of-mouth communication in a noisy rational expectations framework. Word-of-mouth communication accelerates information revelation through prices and generates short-term momentum and long-term reversal. Social interactions allow investors with heterogeneous trading strategies – contrarian and momentum traders – to coexist in the marketplace. The authors find that momentum is not completely

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eliminated, although a significant proportion of investors trade on it. They also show that word-of-mouth communication spreads rumors and generates price run-ups and reversals.

Another contribution to the second session was the paper "Who trades on Momentum?" by Markus Baltzer (Deutsche Bundesbank), Stephan Jank (Frankfurt School of Finance and Management) and Esad Smajlbegovic (University of Mannheim). Using a data set that contains a complete identification of the characteristics of the trading actors of the German stock market, they study the momentum and contrarian trading of different investor groups. Momentum traders are foreign investors, financial institutions and especially mutual funds, whereas private households are contrarians. They find that contrarian trading by private households declines with investors' financial sophistication though, as proxied by financial wealth and equity home bias. Observing momentum trading over time, they document a substantial increase in sales of loser stocks by foreign and institutional investors during the market downturn of the Great Recession and just before the crash of the momentum strategy in 2009. Finally, their evidence indicates that excessive sales of loser stocks pushed prices below their fundamental value, predicting the relative overperformance of past losers and the reversal of the momentum strategy.

3. Session: Behavioral Finance

In the third session, three papers were presented. The first one "The power of primacy: Alphabetic bias, investor recognition, and market outcomes" is written by Heiko Jacobs and Alexander Hillert (both from the University of Mannheim). They find that the convention of alphabetical name ordering tends to provide an advantage to those elements positioned in the beginning of the alphabet. For the first time the authors explore the implications of this alphabetic bias in the natural setting of financial markets. Most notably, the authors find that stocks with names early in alphabet have about 5 % to 15 % higher trading activity and liquidity. These findings are related to firm visibility as well as investor sophistication. International evidence, mutual fund flows and other settings further support the idea that ordering effects are strong enough to affect economic aggregates.

The second paper was presented by Alexander Kerl (University of Giessen) who with his co-author Nils Schäfer (also from University of Giessen) analyzes the question "Do Capital Markets discriminate against

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Analysts with foreign sounding Names?". Based on a cross-country dataset they examine to what extent the informativeness of sell-side analyst reports depends on analysts' characteristics such as analyst location and, new within this strand of the literature, the sound and familiarity of the analysts' name. Their results show that local analysts issue forecasts that trigger a higher market response following recommendation updates and earnings and target price revisions. Similarly, the accuracy of their forecasts is much higher. However, they can show within their study that market participants additionally react differently to analysts' recommendations, depending on the sound and familiarity of the analysts' name. Investors seem to follow financial analysts more if the analysts' name seems familiar, relative to the cultural and ethnical background of the company that the analyst is covering. In contrast, their results show that forecasts issued by analyst with foreign sounding names trigger a much weaker stock price reaction. Likewise, those forecasts are also much less accurate, relative to forecasts' of analysts with familiar names. Their results are first evidence that investors value the cultural proximity between analysts and companies apart from pure location effects.

Third, Elizaveta Mirgorodskaya (Luxembourg School of Finance) presented a paper which was co-authored by Ronald Bosman (VU University Amsterdam) and Roman Kräussel (Luxembourg School of Finance) called "The Framing Effect of News on Investor Beliefs: An Experimental Approach". In an experimental study they ask people to estimate a future stock price for twelve real listed companies. As additional information, they provide them with historical stock prices and extracts from real newspaper articles. They propose to change the framing of news by manipulating the tone in which the news extracts are written without distorting its content. Test persons in different treatment groups read opposite tone news for exactly the same stocks. They find that probands tend to predict a significantly higher (lower) return for stocks after reading positive (negative) tone news. The effect is especially pronounced for stocks with poor past performance. Test persons are more likely to be optimistic (pessimistic) about the economy and to buy (sell) stocks after reading positive (negative) tone news. Their results show that the news media might affect not only how investors perceive information, but also what they do in response to it.

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4. *Session: Household Finance*

The session was opened by Elias Rantapuska (Aalto University) who presented his work on "Labor Market Experiences and Portfolio Choice: Evidence from the Finish Great Depression". With his co-authors Samuli Käfer (London Business School and CEPR) and Matti Sarvimäki (Aalto University and VATT) he traces the long-run impact of labor market experiences on portfolio choice. Labor market experiences are a natural candidate for explaining heterogeneity in portfolio choice. However, identifying their impact is challenging, because unobservable variables can influence the events and circumstances people experience. They use plausibly exogenous variation in labor market conditions during the Finnish Great Depression in the early 1990s to trace the long-run impact of labor market experiences on portfolio choice. The results suggest that workers who experienced adverse labor market conditions are less likely to invest in various types of risky assets. This pattern is robust to a number of controls, including wealth and income, and it is pervasive across different types of workers. The consequences of labor market experiences span generations: individuals whose parents have experienced adverse labor market conditions also avoid risky investments.

The second paper of the fourth session was presented by Lena M. Jaroszek (University of Mannheim). "Think Twice or be Wise in Consumer Credit Choices" is co-authored by Christian D. Dick (Centre for European Economic Research) and analyzes whether the frequent use of credit lines is influenced by households' thinking dispositions, i.e. their tendency to reflect upon decisions or to opt for intuitive and impulsive solutions. The authors consider the special case of Germany where credit lines on current accounts are available to 80 % of the population. They document that the frequent usage of costly credit lines is more likely for people who give intuitive but incorrect answers in the Cognitive Reflection Test. Their analysis of a rich sample of household data also adds to the discussion on the role of financial literacy in credit decisions. Their results provide evidence that consumers with higher levels of financial literacy buy less on credit lines independently from their tendency to reflect.

5. *Session: Technical Analysis and Retail Investors*

The first paper of the session on Technical Analysis and Retail Investors was a contribution by Sebastian Ebert (Tilburg University) and

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Christian Hilpert (University of Hamburg). The paper "The Trend is your (Imaginary) Friend – A Behavioral Perspective on Technical Analysis" offers a new explanation why investors apply technical trading rules, which is not based on a belief in their profitability. In particular, the authors show that trend-chasing trading rules such as those based on moving averages are consistent with prospect theory even when prices do not move in trends and when stock trading is unattractive to rational expected utility maximizers. While technical analysts argue that market participants' bounded rationality explains why technical analysis is profitable, this paper shows that technical trading is attractive – even when not profitable – to investors who themselves are boundedly rational.

A second contribution to the fifth session was given by Thomas Etheber, Andreas Hackethal (both Goethe University Frankfurt) and Steffen Meyer (Leibniz University Hannover). They use trading records from an online broker to investigate the prevalence of technical trading among retail investors and find that retail trading volume soars on days when popular trading rules trigger. For at least one in ten investors the engagement in technical trading is not random. Abnormal returns from technical trading by retail investors are zero before transaction cost, suggesting that technical analysis lures investors into costly noise trading.

6. Session: Mutual Funds

The session on Mutual Funds, which was held on the second day of the conference, started with a paper on "The Impact of Scandals on Mutual Fund Performance, Money and Fees" by Adrian Chapman-Davies, Jerry T. Parwada and Kian M. Tan (all from University of New South Wales). In his presentation Jerry T. Parwada pointed out that he and his fellow researchers examine the effects of fraud committed by mutual fund managers, taking into account the dual responsibilities managers have for their employer firm and investors. They find that scandal funds underperform by 45 basis points, while other funds that are affiliated with a fund family linked to scandal underperform by a larger magnitude of 74 basis points in annualized terms. Fraud is punished by reduced fund inflows to affected funds. Underperformance and money outflows are increasing with timing scandals, higher monetary fines, regulatory actions initiated by the Securities and Exchange Commission, and the involvement of more than one regulatory body. Further tests show that scandal funds are more likely to be engaged in net selling in the aftermath of a

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scandal, possibly to meet redemptions. Finally, they find that scandal funds and other funds in the same family reduce their expenditure on marketing and distribution costs, likely to ameliorate the fallout from scandals by withdrawing affected funds from the limelight.

The second presentation of this session was given by Markus Natter (University of Augsburg). In a paper with Martin Rohleder, Dominik Schulte and Marco Wilkens (all from University of Augsburg) he analyzes the "The Benefits of Option use by Mutual Funds". Their paper is the first presenting consistent evidence that mutual fund option use is beneficial for investors. Specifically, option users have a significantly higher alpha compared to non-users. This outperformance is based on superior skill. Moreover, option use causes significantly lower systematic risk because funds use options mainly for hedging strategies, namely protective puts and covered calls. These results are based on a comprehensive and previously unused set of information from the SEC's N-SAR filings from 1998 to 2013. Their results are robust to a novel 5-factor "IOS" model with which they explicitly control for investable option strategies.

The last contribution to session six was given by Alexander Hillert (University of Mannheim) on his joint work with Alexandra Niessen-Ruenzi and Stefan Ruenzi (both from University of Mannheim): "Mutual Fund Shareholder Letter Tone – Do Investors Listen?". Fund companies send shareholder letters to their investors on a semi-annual basis to discuss fund performance and general market conditions. In their paper the authors use textual analysis to investigate the impact of shareholder letters on mutual fund flows. They find that the tone of these letters predicts future fund flows; a more negative tone leads to lower net flows. They do not find any predictive power of shareholder letter tone for future fund performance, but a more negative tone of a letter predicts less subsequent idiosyncratic risk taking.

7. *Session: Investment Decisions*

The last session of the conference started out by a contribution on "Financial Advice and Bank Profits" written by Daniel Hoechle (Zurich University of applied Sciences), Stefan Ruenzi (University of Mannheim), Nic Schaub (University of St. Gallen) and Markus Schmid (University of St. Gallen). They use a unique dataset from a large Swiss retail bank containing internal managerial accounting data on revenues and costs per client to analyze how banks and their financial advisors generate profits

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with individual investors. They document that transactions executed based on optional financial advice are associated with higher bank profits than independently executed trades of the same client. Moreover, when a client decides to fully delegate account management to the bank, bank profits with this customer increase significantly. They find trades in structured products to generate the highest transaction-related profits for the bank. Bank-own mutual funds are associated with the highest holding-related profits. In addition, they document that profits increase with trade size. Consistently, they show that financial advisors recommend larger trades, trades in structured products, and trades in bank-own mutual funds. Their study is the first to document that financial advisors induce transactions which are associated with above average profits to the bank and thereby above average costs to their lients.

The paper "Does a personalized Feedback on Investment Success mitigate Investment Mistakes of Private Investors? Answers from a large natural Field Experiment" by Steffen Meyer (Leibniz University Hannover), Linda Urban (Goethe University Frankfurt) and Sophie Ahlswerde (Goethe University Frankfurt) was the last paper presented at ERIC 2015. The authors present a natural field experiment with almost 2.000 customers of an online-broker. They test what happens when investors receive feedback on their investment success in a monthly securities account report over a period of fifteen months. Four designs were tested using different graphical displays and text. All report designs show investors last year's returns, costs, their current level of risk and their portfolio diversification. Depending on the design, the authors also include peer-group and/or benchmark information. The authors find that receiving a report results in investors trading less, diversify more and have higher risk-adjusted returns. Results are robust to controlling for potential play money accounts and changes in report designs. The results imply that feedback helps retail investors making better investment decisions.

III. Round Table – "Financial System Complexity – The Role of Regulated Trading Venue"

Motivated by the challenging market environment for retail investors in the recent past, an expert panel discussed the topic "Financial System Complexity – The Role of Regulated Trading Venue". Participants were Jella Benner-Heinacher (Chief Managing Director (Deputy), DSW), Christoph Lammersdorf (Former Member of the Executive Board of

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Boerse Stuttgart), Niels Lemmers (Legal & Public Affairs Director, Dutch Investor's Association VEB) and Ryan Riordan (Queen's School of Business, Queen's University).

Due to recent scandals, investors are left with little trust in the financial market. A wide range of reasons such as the lack of financial education, the complexity of the market, social reasons, (over)regulation or the loss of confidence in general might have led to fewer private investments. While Niels Lemmers claims that the financial sector needs a behavioral change, Jella Benner-Heinacher stresses that there is a strong need for European initiatives as well. Tax incentives, which many other countries employ, might be a step in the right direction. Ryan Riordan also highlighted some cultural differences: while Canadians are generally more willing to take risks he pointed out that Germans are more careful when it comes to investing money. Niels Lemmert added that in America individuals invest more money on capital markets compared to Europe, because it is more implemented in the Americain culture. This attitude makes it easier for US companies to raise money.

All panelists agreed upon the fact that market complexity makes it more difficult for the investors to make sensible choices. In their opinion technology helps dealing with the increasing flood of information to a point where making a decision is possible. It was highlighted that picking the right product for oneself is as essential as the willingness to accept offerings from institution such as Boerse Stuttgart or banks in general. With regard to the papers presented at the conference, it was proposed that media channels should spread some of the insights gained through research to help investors making educated financial decisions. Andreas Scholz as moderator summed up that conferences like ERIC also help to solve problems of the financial sector by initiating dialogues and discussing potential solutions.

IV. Keynote Speech – "Search Data and Behavioral Finance"

Jospeh Engelberg (University of California at San Diego – Rady School of Management) gave the ERIC 2015 keynote speech on search data and behavioral finance. After an introduction on the topic of Behavioral Finance as a union of finance and psychology, he emphasized the fact that phenomena such as attention and sentiment are hard to measure. According to Engelberg, to overcome this issue and to make these key concepts of behavioral finance measurable are two of the biggest challenges

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in behavioral finance. He gave an overview on existing concepts such as the approach to explain prices through prices or the idea to explain prices by analyzing trade data on turnover and IPO Volume. Another concept tries to capture the influence of human behavior on prices by capturing what people tell others.

Engelberg pointed out that a more efficient way to capture people's thoughts would be to examine what they search on the internet. Moreover, if data on these searches is available, for example via google trends, effects such as sentiment and attention become quantifiable. He presented a recent study on flu trends based on google search volume that found out that people start searching for flu-like symptoms two weeks before the actual outbreak of a disease. This study underpins the fact that search volume contains valuable information. The data contains information about the attention, the interests and the concerns of its users. Furthermore, it gives insights into the mind of people. A major advantage of using data from search engines is that a large part of the population uses them. In addition, the search volume is recorded in real-time and therefore delivers insights at every point in time on all users.

After his introduction, Engelberg went on with a presentation of two articles, which assess the problem of measuring attention and sentiment. He proposes to apply the google search volume to capture investor attention of stocks. A direct measure of search volume is the so-called Search Volume Index (SVI). The index consists of weekly google trend data for Russell 3000 companies for a period from January 2004 up to June 2008. The use of stock tickers symbols avoids noise through misleading searches, as for example search results on ordinary apples instead of Apple Inc. The findings Engelberg presented suggest that the newly created attention measure captures some variation, which other variables in the regression do not explain. The variation of the new measure can be used to explain retail investor attention. Given the assumption that shocks to retail attention create price pressure, it can be found that short term stock return increases after high search volume in that stock. Moreover, the new measure enables a prediction of first-day IPO returns and subsequent reversals.

In a second step, Engelberg addressed the question whether it is possible to measure investor sentiment with google search volume. Based on a list of sentiment-revealing terms, the so-called FEARS[1] index is estab-

[1] Financial and Economic Attitudes Revealed by Search.

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lished. This index represents a new measure of investor sentiment. During 2004 and 2011, the findings support the idea that increases in FEARS queries predict low market returns on the same day and high market returns over the following two days. Another finding is that also excess volatility and fund flows from equity into bond funds are observable. Therefore, Engelberg pointed out that the created FEARS index is able to measure investor sentiment. Overall Engelberg emphasized that search data is a window into the mind of people. Furthermore, it offers the possibility to capture the opinion of a broad population, which makes it a valuable source for behavioral finance analysis with vast opportunities for future research.

V. Doctoral Consortium

The papers presented at the doctoral consortium covered various aspects of retail investor behavior and financial products traded by retail investors, ranging from optimal asset liability management to decisions in limit order markets. The participating students engaged in fruitful discussions and received valuable feedback from the participating professors Hans-Peter Burghof (University of Hohenheim), Joseph Engelberg (University of California at San Diego – Rady School of Management), Ryan Riordan (Queen's University), and Monika Gehde-Trapp (University of Cologne). The third edition of the Doctoral Consortium was gratefully sponsored by "SÜDWESTBANK".

The two most outstanding contributions were honored with the best and second best paper awards, sponsored by "Sparkassen Finanzgruppe Wissenschaftsfoerderung", an initiative of the German Savings Bank Finance Group. The winning paper by Geoffrey Tombeur (KU Leuven) co-authored by Hans Degryse (KU Leuven and Tilburg University) and Gunther Wuyts (KU Leuven) is named "Two Shades of Opacity: Hidden Orders versus Dark Trading". According to Tombeur, there are two distinct ways how traders can hide their trading intentions, hidden orders in transparent trading venues and dark trading venues. Both ways enable traders to manage their exposure risk. Based on a high-frequency data set the paper analyses the effect of market conditions on hidden orders and dark trading. The findings indicate that market conditions affect hidden orders and dark trading differently. On high volume days hidden order trading is preferred over dark trading. Moreover, algorithmic trading relates negatively to both types of opaque trading. Furthermore,

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Tombeur and his co-authors find that, hidden order traders substitute lit venues with deeper visible order books for lit venues with shallower order books. Second, the authors find that dark trading and hidden order trading are substitutes. However, dark trading appears to be a better substitute for hidden order trading than the other way around. These findings have implications for regulation: regulatory restriction on dark trading might harm some classes of investors that now use dark trading venues, since hidden orders do not offer a perfect substitute.

VI. Conclusion and Acknowledgments

Overall, the various contibutions to the 3rd European Retail Investment Conference (ERIC) have highlighted that a profound analysis of retail investor behavior and and products is of growing relevance, both for the scientific community and financial institutions. Whereas retail investors are still liable to biases such as the alphabetic bias, the findings of this year's conference also suggest that retail investors improve their investment decisions if information is adapted to their needs. Hence, future efforts of the scientific community and the financial industry should be directed at innovative solutions how to further increase the financial literacy of retail investors and successfully assist them in taking more sensible investment decisions.

The 3rd European Retail Investment Conference has managed to substantially increase the already high international interest among leading researchers and financial practitioners for the conference. Given this renewed success, ERIC has established itself as one of the leading scientific finance conferences for retail investor topics in Europe. The high-quality presentations and the intense and fruitful discussions at the conference greatly contributed to new insights for all conference participants.

The survey responses from the conference participants confirm this impression and show a very high satisfaction regarding the presented topics and the conference organization. The 4th European Retail Investment Conference will prospectively be held in 2017. Finally, on behalf of the conference chairs and the organization committee of the 3rd European Retail Investment Conference, we would like to thank the conference partners and sponsors, first and foremost Boerse Stuttgart. Their financial and logistical support shows their dedication to both scientific progress and the understanding of the needs of retail investors. Again, our

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