FAKULTÄT FÜR BETRIEBSWIRTSCHAFTSLEHRE
Lehrstuhl für Internationale Finanzierung
Prof. Dr. Stefan Ruenzi

UNIVERSITÄT MANNHEIM

Universität Mannheim
Lehrstuhl für Internationale Finanzierung
68131 Mannheim

Besucheradresse:
L9, 1-2
68161 Mannheim

kunzmann[at]bwl.uni-mannheim.de
http://intfin.bwl.uni-mannheim.de

Master Thesis Topics HWS 2016

Topic R1: New Highs and Lows, Investor Attention, and Stock Returns
Advisor: Michael Ungeheuer

Topic R2: Active Stocks, Investor Attention, and Stock Returns
Advisor: Michael Ungeheuer

Topic R3: Short Interest, Mispricing and Arbitrage Risk
Advisor: Pavel Lesnevski

Topic R4: The Growth of Arbitrage Capital and the Profitability of Mispricing-Based Equity
Advisor: Pavel Lesnevski

Topic R5: Yield and liquidity segmentation of G7 sovereign countries
Advisor: Zorka Simon

Topic R6: The effect of unconventional monetary policy of sovereign bond yields
Advisor: Zorka Simon

Topic R7: Integration of EU capital markets
Advisor: Sascha Steffen

TOPIC R1: **New Highs and Lows, Investor Attention, and Stock Returns**

Classification: Empirical topic
Advisor: Michael Ungeheuer

Barber and Odean (2008) suggest that investor attention to certain stocks causes net buying of these stocks by retail investors, and consequently a temporary positive price impact of investor attention. They find evidence in support of increased buy-sell-imbalances for high-attention stocks. As a proxy for high attention, they use extreme returns, trading volume, and news coverage. Da et al. (2011) measure investor attention more directly, using Google search volume for tickers (e.g. AAPL for Apple). They find evidence in support of the price impact and reversal pattern suggested by Barber and Odean (2008). Hence, it seems that investor attention has an effect on stock returns. One potential attention-causing event for stocks is reaching the 52-week high or low. These stocks are easy to identify, since webpages provide information on stocks leaving 52-week low-high range:
http://online.wsj.com/mdc/public/page/mdc_us_stocks.html
http://markets.on.nytimes.com/research/markets/usmarkets/usmarkets.asp
The Wall Street Journal prints a list on each day of the US stocks that crossed the 52-week high or low during the last trading session. The New York Times provides graphical information on S&P 100 stocks' 52-week low-high price range, together with the current price.

The goal of this master thesis is to analyze investor attention shocks, as well as price impact and reversal patterns caused by a stock's price leaving the 52-week low-high range. As a measure of investor attention, we will provide daily page view counts from firms' Wikipedia pages. Do these high/low-stocks receive an investor attention boost? Are they consequently overpriced? How is this effect related to the return premium for stocks with high monthly trading volume (see Gervais et al, 2001) and the idiosyncratic volatitlity puzzle (for an overview, see Hou and Loh, 2016)?

Requirements:
The empirical work for this topic requires the use of statistical software (e.g. Stata), manipulation of data and the application of econometric methods. Some experience in this area would be helpful. We are going to provide Wikipedia page view data.

Introductory Literature:

- Barber, B.; Odean, T. (2008): All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors, The Review of Financial Studies 21 (2), pp. 785-818.
- Da, Z.; Engelberg, J.E.; Gao, P. (2011): In Search Of Attention, The Journal of Finance 66 (5), pp. 1461-1499.
- Hartzmark, S.M. (2014): The Worst, the Best, Ignoring All the Rest: The Rank Effect and Trading Behavior, The Review of Financial Studies 28 (4), pp. 1024-1059.
- Hou, K.; Loh, R.K. (2016): Have we solved the idiosyncratic volatility puzzle?, Journal of Financial Economics, forthcoming.
- Gervais, S.; Kaniel, R.; Mingelgrin, D.H. (2001): The High-Volume Return Premium, The Journal of Finance 56 (3), pp. 877-919.

TOPIC R2: **Active Stocks, Investor Attention, and Stock Returns**

Classification: Empirical topic
Advisor: Michael Ungeheuer

Barber and Odean (2008) suggest that investor attention to certain stocks causes net buying of these stocks by retail investors, and consequently a temporary positive price impact of investor attention. They find evidence in support of increased buy-sell-imbalances for high-attention stocks. As a proxy for high attention, they use extreme returns, trading volume, and news coverage. Da et al. (2011) measure investor attention more directly, using Google search volume for tickers (e.g. AAPL for Apple). They find evidence in support of the price impact and reversal pattern suggested by Barber and Odean (2008). Hence, it seems that investor attention has an effect on stock returns. One potential attention-causing event is becoming one of the 10-100 most actively traded stocks. These stocks are easy to identify, since webpages provide information on stocks with the highest levels of trading volume:
http://online.wsj.com/mdc/public/page/mdc_us_stocks.html
http://markets.on.nytimes.com/research/markets/usmarkets/usmarkets.asp
The Wall Street Journal prints a list on each day of the US stocks with the highest volume and the highest relative change in volume during the last trading session. The New York Times also provides information on stocks with the highest trading volume.

The goal of this master thesis is to analyze potential investor attention shocks, as well as price impact and reversal patterns for the 10-100 stocks with the highest trading activity. As a measure of investor attention, we will provide daily page view counts from firms' Wikipedia pages. Do these stocks receive an investor attention boost? Are they consequently overpriced? How is this effect related to the return premium for high volume stocks (see Gervais et al, 2001) and the idiosyncratic volatitlity puzzle (for an overview, see Hou and Loh, 2016)?

Requirements:
The empirical work for this topic requires the use of statistical software (e.g. Stata), manipulation of data and the application of econometric methods. Some experience in this area would be helpful. We are going to provide Wikipedia page view data.

Introductory Literature:

- Barber, B.; Odean, T. (2008): All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors, The Review of Financial Studies 21 (2), pp. 785-818.
- Da, Z.; Engelberg, J.E.; Gao, P. (2011): In Search Of Attention, The Journal of Finance 66 (5), pp. 1461-1499.
- Hartzmark, S.M. (2014): The Worst, the Best, Ignoring All the Rest: The Rank Effect and Trading Behavior, The Review of Financial Studies 28 (4), pp. 1024-1059.
- Hou, K.; Loh, R.K. (2016): Have we solved the idiosyncratic volatility puzzle?, Journal of Financial Economics, forthcoming.
- Gervais, S.; Kaniel, R.; Mingelgrin, D.H. (2001): The High-Volume Return Premium, The Journal of Finance 56 (3), pp. 877-919.

Topic R3: Short Interest, Mispricing and Arbitrage Risk

Classification: Empirical topic
Advisor: Pavel Lesnevski

Investors that engage in short selling are typically sophisticated, with hedge funds accounting for 85% of aggregate short interest [Goldman Sachs (2008)]. The literature finds that short interest predicts stock returns [Boehmer, Huszar, and Jordan (2010)]. Moreover, short-sellers tend to trade based on superior information [Akbas et al. (2013)]. Why this predictability persists and is not arbitraged away by other investors, given that the level of short interest is available to the public? The prevailing explanation in the literature is that arbitrage risk prevents other market participants from eliminating the return predictability [i.e. Engelberg, Reed, and Ringgenberg (2015)].

Similarly, Stambaugh, Yu, and Yuan (2015) show that the profitability of combined strategy, based on 11 mispricing anomalies, is strongly related to arbitrage risk, proxied by idiosyncratic volatility (IVOL). Moreover, this profitability is stronger on the short leg and after the periods of high sentiment. The purpose of this master thesis is to analyze the relation between the short interest strategy, mispricing and arbitrage risk.

The first goal of the master thesis is to replicate the major results of Stambaugh, Yu, and Yuan (2015). Next, an investment strategy based on the level of short interest should be constructed. Afterwards, the student is expected to show that the abnormal returns of short interest strategy could not be explained by factors known in the literature. Finally, the student is expected to relate the profitability of short interest strategy to the profitability of the combined mispricing strategy and arbitrage risk.

Access to the data from CRSP and Compustat will be provided.

Requirements:
The empirical work for this topic requires the use of statistical software (e.g. Stata), manipulation of data and the application of econometric methods. Experience in this area would be helpful.

Introductory Literature:

- Akbas, Ferhat, Ekkehart Boehmer, Bilal Erturk, and Sorin M. Sorescu, 2013, Short Interest, Returns, and Fundamentals. SSRN Scholarly Paper, Social Science Research Network, Rochester, NY.
- Boehmer, Ekkehart, Zsuzsa R. Huszar, and Bradford D. Jordan. "The Good News in Short Interest." *Journal of Financial Economics* 96, no. 1 (April 2010): 80–97. doi:10.1016/j.jfineco.2009.12.002.
- Engelberg, Joseph, Adam V. Reed, and Matthew Ringgenberg, 2015, Short Selling Risk. SSRN Scholarly Paper, Social Science Research Network, Rochester, NY.
- Goldman Sachs, 2008, Hedge Fund Trend Monitor, *Goldman Sachs Report*
- Stambaugh, Robert F., Jianfeng Yu, and Yu Yuan. "Arbitrage Asymmetry and the Idiosyncratic Volatility Puzzle." *The Journal of Finance* 70, no. 5 (October 1, 2015): 1903–48. doi:10.1111/jofi.12286.
- Stambaugh, Robert F., Jianfeng Yu, and Yu Yuan. "The Short of It: Investor Sentiment and Anomalies." *Journal of Financial Economics*, Special Issue on Investor Sentiment, 104, no. 2 (May 2012): 288–302. doi:10.1016/j.jfineco.2011.12.001.

TOPIC R4: The Growth of Arbitrage Capital and the Profitability of Mispricing-Based Equity

Classification: Experimental topic
Advisor: Pavel Lesnevski

In the presence of sentiment-driven investors, stock prices can deviate from their fundamentals. Stambaugh, Yu, and Yuan (2012) analyze a broad set of anomalies that are related to mispricing on the stock market. They find that an investor could earn significant abnormal returns by taking a long position in underpriced stocks and a short position in overpriced stocks. Consistent with the mispricing explanation, abnormal returns of these strategies are higher after the periods of high sentiment. Moreover, short sale constraints lead to the short leg of the anomalies being significantly more profitable than the long leg.

Hanson and Sunderam (2014) suggest a new methodology that exploits time-variation in the cross-section of short interest to infer the amount of arbitrage capital allocated to equity strategies. The authors apply this methodology to the momentum and value strategies and show a significant growth of arbitrage capital exploiting them. Moreover, the authors show that the variation in arbitrage capital is significantly related to the profitability of these strategies. The goal of this master thesis is to extend the analysis of Hanson and Sunderam (2014) to the mispricing anomalies of Stambaugh, Yu, and Yuan (2012).

First, the student is expected to replicate the major results of Hanson and Sunderam (2014). As an extension, the similar methodology should be applied to Stambaugh, Yu, and Yuan (2012)'s return anomalies. Special attention should be paid to the growth of arbitrage capital and its impact on the profitability of the strategies.

Access to the data from CRSP and Compustat will be provided.

Requirements:
The empirical work for this topic requires the use of statistical software (e.g. Stata), manipulation of data and the application of econometric methods. Experience in this area would be helpful.

Introductory Literature:

- Hanson, Samuel G., and Adi Sunderam, 2014, The Growth and Limits of Arbitrage: Evidence from Short Interest, *Review of Financial Studies* 27, 1238–1286.
- Stambaugh, Robert F., Jianfeng Yu, and Yu Yuan, 2012, The short of it: Investor sentiment and anomalies, *Journal of Financial Economics* 104. Special Issue on Investor Sentiment, 288–302.

TOPIC R5: Yield and liquidity segmentation of G7 sovereign countries

Classification: Empirical topic
Advisor: Zorka Simon

European pension funds and insurers managed more than €3.5 trillion worth of assets in 2015. For these institutions it is crucially important to attain precise estimates of long term discount rates for their asset management and valuation of liabilities for regulatory purposes. Despite its practical importance and potential welfare consequences, modelling and examining the long end of the nominal term structure has attracted little attention in the academic literature. Driessen, Nijman and Simon (2016) aim to fill this gap in the literature by studying the differential pricing of short and long maturity bonds, especially focusing on segmentation in yields and liquidity. To address this question, they explore the channels through which this affects the pricing of short and long ends of the German nominal term structure between 2005 and 2015. They find statistically significant, but economically negligible segmentation in yields and some degree of liquidity segmentation of short-term versus long-term bonds.

In this study the student would replicate the analysis of Driessen et al. (2016) based on the sovereign bond market of another G7 country and compare the findings to those of the reference paper. The empirical approach consists of multiple steps. First, applying the method of Hu, Pan and Wang (2013), a bond market liquidity measure is constructed. Using this measure one can show how the nature of liquidity and the drivers of yields differs across short and long maturity bonds.

Requirements:
This empirical topic requires the use of Matlab's Financial Instruments Toolbox and fitting interest rate curve functions. This is a well-documented tool and additional help will be provided. We further recommend that the candidate should feel comfortable using statistical packages, such as Stata or Matlab. Access to financial market data from Bloomberg or Datastream will be provided.

Introductory Literature:

- Driessen, J., Nijman, T. E. and Simon, Z. (2016): Much ado about nothing: A study of differential pricing and liquidity of short and long term bonds, Working paper available upon request
- Hu, G. X., Pan, J. and Wang, J. (2013), Noise as Information for Illiquidity, The Journal of Finance, Vol. 68, pp. 2341–2382.
- Krishnamurthy, A., Nagel, S. and Vissing-Jorgensen, A. (2015): ECB Policies involving Government Bond Purchases: Impact and Channels, Working paper

TOPIC R6: The effect of unconventional monetary policy of sovereign bond yields

Classification: Emirical topic
Advisor: Zorka Simon

During periods of extreme economic crises, such as that financial crisis of 2008 and the subsequent euro crisis, traditional tools of monetary policy become ineffective. In these times central banks have started to turn to unconventional monetary tools, such as large scale asset purchases or quantitative easing.

The academic literature has studied the effect of these tools: while Krishnamurthy and Vissing-Jorgensen (2011) show that quantitative easing (QE) in the US caused a supply shortage for certain clientele demand, pushing yields downwards, Christensen and Gillan (2015) provide evidence on how market liquidity is improved by such measures. D'Amico et al. (2012) present similar evidence on the effect of large-scale asset purchase programs (LSAP) on the preferred habitat and duration of sovereign bonds, alongside with D'Amico and King (2013) who show that LSAP often causes market segmentation. There is also growing evidence from the intervention of the European Central Bank (Eser and Schwaab, 2016; and Krishnamurthy, Nagel and Vissing-Jorgensen, 2015) and its effect on the liquidity of European sovereign bond markets (De Pooter, Martin and Pruitt, 2013; and Pelizzon et al., 2014 and 2016).

In this study the student would choose one of the papers below and replicate its methodology in a cross-section of European countries. The empirical approaches of these papers are based on sovereign bond yield decomposition – they disentangle the differential effect of monetary policy on yields and to study subsequent changes in risk premia.

Requirements:
This empirical topic (might) require(s) the use of Matlab's Financial Instruments Toolbox and fitting interest rate curve functions. This is a well-documented tool and additional help will be provided. We further recommend that the candidate should feel comfortable using statistical packages, such as Stata or Matlab. Access to financial market data from Bloomberg or Datastream will be provided.

Introductory Literature:

- Krishnamurthy, A. and Vissing-Jorgensen, A. (2011): The Effects of Quantitative Easing on Interest Rates: Channels and Implications for Policy, with Arvind Krishnamurthy, Brookings Papers on Economic Activity
- Krishnamurthy, A., Nagel, S. and Vissing-Jorgensen, A. (2015): ECB Policies involving Government Bond Purchases: Impact and Channels, Working paper
- De Pooter, M., Martin, R. F. and Pruitt, S. (2013): The Liquidity Effects of Official Bond Market Intervention, Working paper
- D'Amico, S. and King, T.B. (2013): Flow and Stock Effects of Large-Scale Treasury Purchases, Journal of Financial Economics, Vol. 108, pp. 425–448.
- Eser, F. and Schwaab, B. (2016): Evaluating the impact of unconventional monetary policy measures: Empirical evidence from the ECB's Securities Markets Programme, Journal of Financial Economics, Vol. 119 (1), pp. 147–167.

TOPIC R7: Integration of EU capital markets

Classification: Emirical topic
Advisor: Sascha Steffen

In 2016, the Eurozone is still coping with the consequences of two financial crises that revealed the shortcomings of an incomplete monetary union. The European economy suffered two severe recessions and a sustainable growth path is still elusive. Risks in the banking system and a severe banking sector debt-overhang played a major role in both crises as Eurozone firms are heavily reliant on bank financing. To foster economic growth in the Eurozone, the European Commission suggested the creation of a capital markets union, in which local capital markets are developed further and integrated across borders as alternative sources for corporate finance.

This master thesis investigates integration of EU capital markets. Especially during the sovereign debt crisis (since 2010), we observe a significant home bias of European banks and market participants, i.e. investors retrench from cross-border capital markets and invest in their domestic markets. The thesis has 2 parts, a theoretical and an empirical part. In the theoretical part, the student explains and contrasts various measures of market integration with respect to interbank, bond/loan and equity markets in a concise way. In the second part, he / she implements these measures (maybe not all, needs to be discussed) using various data sources and analyzes to what extent and which markets are integrated (or fragmented).

This thesis is in collaboration with the Centre for European Economic Research (ZEW) and can be combined with a research internship.

Introductory Literature:

- Adam, K. et al. (2002). Analyse, Compare, and Apply Alternative Indicators and Monitoring Methodologies to Measure the Evolution of Capital Market Integration in the European Union. EU Policy Paper.

Contact:

- Sascha Steffen: steffen[at]bwl.uni-mannheim.de