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Master Thesis Topics HWS 2015

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TOPIC R4:	Wikipedia-Based Investor Sentiment in International Stock Markets Advisor: Michael Ungeheuer
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TOPIC R6:	Asset Pricing Anomalies and Attention in Developed and Emerging Markets Advisor: Lena Jaroszek
TOPIC R7:	Are Asset Pricing Anomalies Driven by Income Inequality?

Advisor: Lena Jaroszek









TOPIC R1:Measuring the Effects of Investor Distraction around Earnings Announcements –Evidence from March Madness

Classification:	Empirical topic
Advisor:	Florens Focke

The theory of limited attention posits that investors are only able to pay attention to a subset of the available information (Hirshleifer and Teoh (2003)). They have to choose between various financial events (like earnings announcements of different firms) as well as non-financial events (like sports events). Hence, it might be the case that reactions to financial market events are muted on days with other attention-grabbing events, even if these are value-irrelevant. Drake et al. (2015) suggest that the yearly college Basketball tournament known as March Madness distracts investors to a degree sufficient to impact financial markets. They show that the response to earnings surprises is lower for announcements made during the tournament.

The purpose of this thesis is to build on the study by Drake et al. (2015) to investigate whether investor distraction by March Madness impacts the response to earnings announcements. To this end, data on tournament dates, earnings announcement data from IBES as well as data from CRSP and Compustat should be merged. Access to these databases will be provided. Moreover, data on page view counts for firms' Wikipedia sites will be provided. One necessary condition for the proposed effect is that investors are indeed distracted from earnings announcements by March Madness games. Using page views of companies' Wikipedia sites, this condition should be tested. Wikipedia page view counts are a novel measure of investor attention that is available for a broad range of firms at the daily level (Focke et al. (2014)). Building on this evidence, it should be investigated whether short-and long-term announcement reactions are less pronounced for announcements made during March Madness.

Requirements:

We recommend that the candidate should feel comfortable in the use of a statistical software program and econometrics (such as STATA).

Introductory Literature:

Drake, M., D. Roulstone, and J. Thornock, 2012, Investor Information Demand: Evidence from Google Searches Around Earnings Announcements, Journal of Accounting Research 50, 1001–1040.

Drake, M., K. Gee, and J. Thornock. 2015. March Market Madness: The Impact of Value-Irrelevant Events on the Market Pricing of Earnings News. Contemporary Accounting Review (forthcoming).

Focke, F., S. Ruenzi, and M. Ungeheuer. 2014. Advertising, Attention, and Financial Markets. Working Paper.

Hirshleifer, D., S. Lim, and S. Teoh. 2009. Driven to distraction: Extraneous events and underreaction to earnings news. Journal of Finance 64 (5): 2289-2325









TOPIC R2: How Do Firms Respond to Product Crises? Empirical evidence on advertising spending in the pharmaceutical industry

Classification:	Empirical topic
Advisor:	Florens Focke

The recent finance literature suggests that product advertising might have an effect at least on investor attention, and maybe even some financial market outcomes (Madsen and Niessner, 2015; Focke et al., 2014). Therefore, understanding what determines firms' advertising spending becomes relevant not only to Marketing, but also in the area of Finance.

In the pharmaceutical industry, companies are highly dependent on their reputation for product quality. At the same time, the US Food and Drug Administration publishes detailed information on product safety incidents as part of the MedWatch Safety Alerts program. Moreover, the pharmaceutical industry spent more than \$120bn on advertising between 1999 and 2012, making it the second biggest advertiser after the automobile industry. This makes the pharmaceutical industry a good laboratory to study the impact of product crises on advertising expenditures. Building up a (positive) reputation is one of the fundamental tasks of advertising. Hence, companies might intensify their advertising efforts after product recall crises to (re)gain consumer trust (see e.g., Cleeren et al., 2008). However, increased advertising in these situations might also be counter-productive if it is seen as a signal that the company is not taking the product quality issues seriously enough.

The purpose of this study is to investigate whether firms adjust their advertising spending in reaction to FDA Safety Alerts. Specifically, in the first step it should be studied whether firms change their overall advertising budget. Building on this evidence, the thesis should consider the impact of Safety Alerts on advertising for the specific product in question. As a further extension, different advertising channels or determinants of the advertising reaction could be studied. Data on FDA Safety Alerts as well as advertising spending of firms will be provided. However, to study the impact of Safety Alerts on product-specific advertising, these datasets will need to be merged by product and firm names. Moreover, firm information from CRSP and COMPUSTAT might be necessary; access to these databases will be provided.

Requirements:

We recommend that the candidate should feel comfortable in the use of a statistical software program and econometrics (such as STATA).

Introductory Literature:

Cleeren, K., M. Dekimpe, and K. Helsen. 2008. Weathering product-harm crises. Journal of the Academy of Marketing Science.

Focke, F., S. Ruenzi, and M. Ungeheuer. 2014. Advertising, Attention, and Financial Markets. Working Paper.

Madsen, J., and M. Niessner (2015). Is Investor Attention for Sale? The Role of Advertising in Financial Markets. Working Paper.









TOPIC R3: How Do Firms Respond to Product Crises? Empirical evidence on advertising spending in the automobile industry

Classification:	Empirical topic
Advisor:	Florens Focke

The recent finance literature suggests that product advertising might have an effect at least on investor attention, and maybe even some financial market outcomes (Madsen and Niessner, 2015; Focke et al., 2014). Therefore, understanding what determines firms' advertising spending becomes relevant not only to Marketing, but also in the area of Finance.

Product recalls often represent significant crises for companies. In addition to the direct costs of recalling and repairing faulty products, companies face severe reputational risks. For instance, after it became public that Takata Corporation had to recall millions of airbags at the end of 2014, the New York Times quoted Akihiro Ohta, the Japanese transportation minister as saying "the problem put Japan's car-making reputation at risk along with drivers' safety." At the same time, building up a (positive) reputation is one of the fundamental tasks of corporate advertising. Hence, companies might intensify their advertising efforts after product recall crises to (re)gain consumer trust (Cleeren et al, 2008). However, increased advertising in these situations might also be counter-productive if it is seen as a signal that the company is not taking the product quality issues seriously enough.

The purpose of this study is to investigate whether firms adjust their advertising spending in reaction to product recalls. Specifically, in the first step it should be studied whether firms change their overall advertising budget. Building on this evidence, the thesis should consider the impact of product recalls on advertising for the specific product in question. As a further extension, different advertising channels or determinants of the advertising reaction could be studied. Data on product recalls in the automobile industry is available from publicly listed sources. Data on advertising spending of firms will be provided. However, these datasets will need to be merged by product and firm names. Moreover, firm information from CRSP and COMPUSTAT might be necessary. Access to these databases will be provided.

Requirements:

Some prior knowledge in textual analysis or willingness to acquire such knowledge is necessary. We recommend that the candidate should feel comfortable in the use of a statistical software program and econometrics (such as STATA).

Introductory Literature:

Cleeren, K., M. Dekimpe, and K. Helsen. 2008. Weathering product-harm crises. Journal of the Academy of Marketing Science.

Focke, F., S. Ruenzi, and M. Ungeheuer. 2014. Advertising, Attention, and Financial Markets. Working Paper.

Madsen, J., and M. Niessner (2015). Is Investor Attention for Sale? The Role of Advertising in Financial Markets. Working Paper.

New York Times. 2014. Japan to Ask Automakers to Recall Vehicles With Faulty Takata Airbags. November 29.









TOPIC R4: Wikipedia-Based Investor Sentiment in International Stock Markets

Classification:	Empirical topic
Advisor:	Michael Ungeheuer

There is strong evidence that noise trading and investor sentiment have a temporary impact on stock prices and volatility. For instance, Da et al. (2011) find that increases in investor attention – measured by Google search volume for firms' ticker symbols - cause temporary increases in stock prices. Other evidence suggests that sentiment might have an impact on the whole stock market. Da et al. (2015) construct a 'Financial and Economic Attitudes Revealed by Search' (FEARS) index in order to measure investor sentiment on the market level. It is based on the number of Google searches for terms like 'recession' or 'unemployment'. They find that their FEARS index predicts short-term market returns and volatility. In a survey article, Baker and Wurgler (2007) suggest that 'the question is [...] how to measure investor sentiment and quantify its effects'. Using Google search volume was a particularly successful answer to this question. However, Google search volume is a relatively noisy measure of investor sentiment. For instance, it is not clear whether someone looking for 'depression' is actually looking for the state of the economy or the mood disorder. The number of views of Wikipedia pages like http://en.wikipedia.org/wiki/Depression %28economics%29 might be a better measure of investor sentiment. Wikipedia page views of financial and economic Wikipedia pages can be collected not only for the USA, but also for other countries, e.g. for France: http://fr.wikipedia.org/wiki/D%C3%A9pression %28%C3%A9conomie%29.

The goal of this master thesis is to check the results from Da et al. (2015) using daily Wikipedia page view data of several language regions (such as USA/UK, Germany/Austria/Switzerland, France, Italy, Portugal/Brazil, Spain/Latin America, ...). Does Wikipedia-based investor sentiment predict market returns and volatility similarly in the USA and elsewhere? Is it possible to construct a profitable trading ('country rotation') strategy based on this new measure of country-level investor sentiment?

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 assist you with the collection of Wikipedia page view data.

Introductory Literature:

Da, Zhi; Engelberg, Joseph; Gao, Pengjie (2011): In Search of Attention, *The Journal of Finance*, 66 (5), pp. 1461-1499.

Da, Zhi; Engelberg, Joseph; Gao, Pengjie (2015): The Sum of All FEARS Investor Sentiment and Asset Prices, *Review of Financial Studies*, 28 (1), pp. 1-32.

Moat, Helen Susannah; Curme, Chester; Avakian, Adam; Kenett, Dror Y.; Stanley, Eugene H. (2013): Quantifying Wikipedia Usage Patterns Before Stock Market Moves, *Scientific Reports*, 3, pp. 1-5.

Baker, Malcolm; Wurgler, Jeffrey (2006): Investor Sentiment and the Cross-Section of Stock Returns, *The Journal of Finance*, 61 (4), pp. 1645-1680.

Baker, Malcolm; Wurgler, Jeffrey (2007): Investor Sentiment in the Stock Market, *Journal of Economic Perspectives*, 21 (2), pp. 129-151.

Bollerslev, Tim; Todorov, Viktor (2011): Tails, Fears, and Risk Premia, *The Journal of Finance*, 66 (6), pp. 2165-2211.

Welch, Ivo; Goyal, Amit (2007): A Comprehensive Look at the Empirical Performance of Equity Premium Prediction, *Review of Financial Studies*, 21 (4), pp. 1455-1508.





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TOPIC R5: Downside Funding Liquidity Risk

Classification:	Empirical topic
Advisor:	Michael Ungeheuer

There is strong evidence of a risk premium for assets whose returns move with the market particularly during downturns. Ang at al. (2006) measure asymmetric dependence via conditional covariances – conditional on below-average market returns – and find a significant risk premium for this downside beta. Chabi-Yo et al. (2014) focus on extreme downside events (crises) by using tail dependence, a measure from extreme value theory, to classify stocks. They find an even stronger premium. A second line of research finds evidence for a liquidity risk premium, i.e. a premium for stocks whose returns or liquidity costs comove with market returns or market liquidity costs (see Acharya and Pedersen, 2005). Combining these two strands of literature, Ruenzi et al. (2013) measure the impact of downside market liquidity risk. Again, stocks with strong dependence during crises bear a significant risk premium.

There are sound theoretical reasons for market liquidity shocks to be particularly extreme and systemic (see Brunnermeier and Pedersen, 2009). The same reasoning that applies to market liquidity ('the ease with which an asset is traded') suggests that funding liquidity ('the ease with which traders can obtain funding') should dry up while markets crash and market liquidity evaporates. Asness et al. (2014) suggest that important patterns in asset prices can be explained by this funding liquidity risk. Based on the existing literature on downside risk, it seems plausible that stocks, which become particularly illiquid or perform particularly badly during funding liquidity crises should have lower prices. The goal of this master thesis is to test whether stocks with such (extreme) downside funding liquidity risk provide a risk premium.

Requirements:

The empirical work for this topic requires the use of optimization software (Matlab), statistical software (e.g. Stata), manipulation of data and the application of econometric methods. Some experience in this area would be helpful. In particular, the student should be willing to acquire programming skills in Matlab, which are necessary in order to estimate tail dependence.

Introductory Literature:

Ang, A.; Chen, J.; Xing, Y. (2006): Downside Risk, Review of Financial Studies, 19, pp. 1191-1239.

Chabi-Yo, F.; Ruenzi, S.; Weigert, F. (2014): Crash-Sensitivity and the Cross-Section of Expected Stock Returns, Working Paper.

Acharya, V.V.; Pedersen, L.H. (2005): Asset Pricing with Liquidity Risk, *Journal of Financial Economics*, 77, pp. 375-410.

Ruenzi, S.; Ungeheuer, M.; Weigert, F. (2013): Extreme Downside Liquidity Risk, Working Paper.

Brunnermeier, M.K.; Pedersen, L.H. (2009): Market Liquidity and Funding Liquidity, *Review of Financial Studies*, 22(6), pp. 2201-2238.

Fontaine, J.S.; Garcia, R.; Gungor, S. (2015): Funding Liquidity, Market Liquidity and the Cross-Section of Stock Returns, Working Paper.

Asness, C.S.; Moskowitz, T.J.; Pedersen, L.H. (2013): Value and Momentum Everywhere, *The Journal of Finance*, 68, pp. 929-985.





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TOPIC R6: Asset Pricing Anomalies and Attention in Developed and Emerging Markets

Classification:	Empirical topic
Advisor:	Lena Jaroszek (your advisor will be on a research stay abroad during your thesis, which
	will require communication via Skype)

Stambaugh, Yu and Yuan (2012) find that asset pricing anomalies are stronger when sentiment is high (when beliefs about future cash flows and risks tend to be unfounded). However, in order for sentiment to play a role for a stock, investors first need to know about and focus on a stock, i.e. there needs to be 'attention' with respect to this stock. However, it is not clear whether high levels of attention should attenuate or amplify asset pricing anomalies. Comparing developed and emerging markets Jacobs (2015) analyses an aggregate mispricing measure and finds that contrary to the wide-held notion that market efficiency is lower in emerging markets asset pricing anomalies alleviated in emerging markets.

The aim of this master thesis is to replicate one or more asset pricing anomalies and subsequently analyze the interaction between each anomaly and attention for the U.S. stock market as well as for at least two emerging markets. As an illustration, the momentum anomaly's high average returns result from predictably high (low) next year returns of last year's winner (loser) stocks. By sorting stocks first by attention, and then by their performance during the last year, one can analyze how the momentum strategy's success varies with attention (for an analysis of the interaction between media coverage and momentum, see Hillert, Jacobs and Müller, 2014). As a proxy for attention on the firm level, Google search volumes should be used. The analysis is to be conducted for the U.S. and a selection of emerging markets in order to analyze whether the finding by Jabos (2015) of lower mispricing in emerging markets can (partly) be attributed to country differences in attention.

Requirements:

We expect the candidate to show a sound knowledge of the theory of asset pricing and econometric analyses. The empirical work requires the use of databases such as CRSP/Compustat and Datastream (access will be provided). Also, Google search volumes will have to be downloaded and prepared using automated data handling procedures. The candidates should feel comfortable in the use of a statistical software program (such as Stata) or in acquiring this knowledge.

Introductory Literature:

Jacobs, Heiko (2015): Don't judge the book by its cover: Market development and mispricing, Working Paper.

Hillert, Alexander, Heiko Jacobs, and Sebastian Müller. (2014) Media makes momentum, Review of Financial Studie, 27, pp. 3467-3501.

Stambaugh, Robert F., Jianfeng Yu, and Yu Yuan (2012): The Short of It: Investor Sentiment and Anomalies, Journal of Financial Economics, 104, pp. 288-302







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TOPIC R7: Are Asset Pricing Anomalies Driven by Income Inequality?

Classification:	Empirical topic
Advisor:	Lena Jaroszek (your advisor will be on a research stay abroad during your thesis, which
	will require communication via Skype)

Comparing developed and emerging markets Jacobs (2015) analyses an aggregate mispricing measure and finds that contrary to the wide-held notion that market efficiency is lower in emerging markets, asset pricing anomalies are alleviated in emerging markets. These findings may (partly) be driven by differing investor clienteles participating in the stock markets of developed and emerging markets. Lettau, Ludvigson and Ma (2015) show that the wealthiest U.S. households have different exposure to the value and momentum anomalies compared to the bottom 90 percent of the stock wealth distribution. Asset pricing anomalies may therefore be attributable to differences in the income distribution.

The aim of this master thesis is to replicate one or more asset pricing anomalies and subsequently analyze the interaction of changing income inequality over time in each country and comparing income inequality and asset pricing anomalies across countries. The analysis is to be conducted for the U.S. and at least two emerging markets in order to analyze whether the finding by Jabos (2015) of lower mispricing in emerging markets can (partly) be attributed to country differences in income inequality.

Requirements:

We expect the candidate to show a sound knowledge of the theory of asset pricing and econometric analyses. The empirical work requires the use of databases such as CRSP/Compustat and Datastream (access will be provided). Also, income inequality measures have to be downloaded and prepared using the World Top Income Database . The candidates should feel comfortable in the use of a statistical software program (such as Stata) or in acquiring this knowledge.

Introductory Literature:

Jacobs, Heiko (2015): Don't judge the book by its cover: Market development and mispricing, Working Paper.

Lettau, Martin, Sydney C. Ludvigson, and Sai Ma (2014): Capital Share Risk and Shareholder Heterogeneity in US Stock Pricing, National Bureau of Economic Research Working Paper No. w20744.

Stambaugh, Robert F., Jianfeng Yu, and Yu Yuan (forthcoming): Arbitrage Asymmetry and the Idiosyncratic Volatility Puzzle, The Journal of Finance.





