

Bachelor Thesis Topics FSS 2022

Chair of Finance – Prof. Dr. Erik Theissen



Chair of Finance (I)

- **Address:**
 - L 9, 1-2
 - Secretary: third floor (“3. OG“)
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- **Office hours:**
 - By appointment
 - General questions: Please visit our homepage first
 - Secretary: Mo-Fr 09.00 – 12.00 am

Chair of Finance (II)

- **Research at the Chair of Finance**
 - a) Market Microstructure
 - b) Empirical Asset Pricing
 - c) Blockchain & Cryptocurrency

T1. Meme Numbers and Cryptocurrency Trading

Stefan Scharnowski

Topic Description

- Research in financial markets oftentimes focuses on prices, while trade sizes and trading volume receive less attention. One exception is the phenomenon of trade size clustering which describes the empirical observation that the size of trades is not randomly distributed across all possible values, but that some trade sizes are more frequent than others. For example, many traders prefer round trade sizes (e.g., 100 shares) to odd trade sizes (e.g., 103 shares).
- A natural question is then how traders in cryptocurrency markets behave with respect to their trade sizes. Since the crypto market is less mature and attracts many retail traders, it is reasonable to assume that trade sizes also exhibit patterns not explained by standard economic theory.
- Of particular interest in this context is the question of whether crypto traders set trade sizes according to what we can call “meme numbers”, which have special meanings in the crypto and other subcultures. These numbers could for example be 42, 420, 666, or 1337.
- The goal of this thesis is to empirically study these patterns in trade sizes in cryptocurrencies. After compiling a list of potential meme numbers and collecting a dataset of crypto trades, the observed frequency of trades of these sizes needs to be compared to their expected frequency. Potential extensions are then to study how these trades are related to volatility and returns or to analyze differences across cryptocurrencies, in particular with respect to so called meme cryptocurrencies.
- The empirical analysis should be conducted in Stata (or alternatively in R). While no prior programming experience is required, the student is expected to familiarize themselves with a statistical software when starting to work on the thesis.

T1. Meme Numbers and Cryptocurrency Trading

Stefan Scharnowski

Starting References

- Alexander, G. J., & Peterson, M. A. (2007). An analysis of trade-size clustering and its relation to stealth trading. *Journal of Financial Economics*, 84(2), 435–471. <https://doi.org/10.1016/j.jfineco.2006.02.005>
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T2. Decentralized Finance

Stefan Scharnowski

Topic Description

- Decentralized finance (DeFi) utilizes technological innovations such as distributed ledgers to facilitate financial services without trusted central authorities. The market has grown substantially over the past two years.
- Some key DeFi ingredients are decentralized applications build from smart contracts and stablecoins – cryptocurrencies pegged to fiat currencies.
- DeFi applications include decentralized exchanges that facilitate trading without a central authority and thus constitute a novel alternative to centralized exchanges. DeFi lending provides platforms for making and taking loans without any intermediaries. Staking and liquid staking are alternatives to mining by committing capital to secure blockchain networks.
- The aim of this thesis is to provide an overview of DeFi, including technological backgrounds, new applications, and associated risks.

T2. Decentralized Finance

Stefan Scharnowski

Starting References

- Zetsche, D. A., Arner, D. W., & Buckley, R. P. (2020). Decentralized finance. *Journal of Financial Regulation*, 6(2), 172-203. <https://doi.org/10.1093/jfr/fjaa010>
- Meyer, E., Welpel, I. M., & Sandner, P. G. (2021). Decentralized Finance—A systematic literature review and research directions. <https://dx.doi.org/10.2139/ssrn.4016497>
- Lehar, A., & Parlour, C. A. (2021). *Decentralized exchanges*. working paper, University of Calgary and University of California, Berkeley. <https://dx.doi.org/10.2139/ssrn.3905316>
- Mohan, V. (2022). Automated market makers and decentralized exchanges: a DeFi primer. *Financial Innovation*, 8(1), 1-48. <https://link.springer.com/article/10.1186/s40854-021-00314-5>
- Aspris, A., Foley, S., Svec, J., & Wang, L. (2021). Decentralized exchanges: The “wild west” of cryptocurrency trading. *International Review of Financial Analysis*, 77, 101845. <https://doi.org/10.1016/j.irfa.2021.101845>

T3. Sports and Financial Markets

Stefan Scharnowski

Topic Description

- Do sporting events such as soccer matches impact financial markets? There are two main channels through which match outcomes may affect financial assets.
- First, match outcomes reveal potentially new club-specific information, which then might elicit a reaction by traders. Studies investigating this channel typically consider the individual stock price reactions of listed clubs.
- In the second channel, match outcomes may influence investor sentiment and mood in general, not just with respect to a specific club's stock, but also regarding other assets. For example, Edmans (2007) find that national stock markets decline after national soccer teams lose in international tournaments.
- The aim of this thesis is to provide an overview of the academic literature on the impact of sporting events on financial markets.

T3. Sports and Financial Markets

Stefan Scharnowski

Starting References

- Zuber, R. A., Yiu, P., Lamb, R. P., & Gandar, J. M. (2005). Investor–fans? An examination of the performance of publicly traded English Premier League teams. *Applied Financial Economics*, 15(5), 305–313. <https://doi.org/10.1080/0960310042000338713>
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- Klein, C., Zwergel, B., & Henning Fock, J. (2009). Reconsidering the impact of national soccer results on the FTSE 100. *Applied Economics*, 41(25), 3287–3294. <https://doi.org/10.1080/00036840802112471>
- Palomino, F., Renneboog, L., & Zhang, C. (2009). Information salience, investor sentiment, and stock returns: The case of British soccer betting. *Journal of Corporate Finance*, 15(3), 368–387. <https://doi.org/10.1016/j.jcorpfin.2008.12.001>
- Scholtens, B., & Peenstra, W. (2009). Scoring on the stock exchange? The effect of football matches on stock market returns: an event study. *Applied Economics*, 41(25), 3231–3237. <https://doi.org/10.1080/00036840701721406>
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- Ashton, J. K., Gerrard, B., & Hudson, R. (2011). Do national soccer results really impact on the stock market? *Applied Economics*, 43(26), 3709–3717. <https://doi.org/10.1080/00036841003689762>
- Bernile, G., & Lyandres, E. (2011). Understanding Investor Sentiment: The Case of Soccer. *Financial Management*, 40(2), 357–380. <https://doi.org/10.1111/j.1755-053X.2011.01145.x>
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- Fung, K. W. T., Demir, E., Lau, C. K. M., & Chan, K. H. (2015). Reexamining sports-sentiment hypothesis: Microeconomic evidences from Borsa Istanbul. *Journal of International Financial Markets, Institutions and Money*, 34, 337–355. <https://doi.org/10.1016/j.intfin.2014.11.015>

T4. High-Frequency Trading

Stefan Scharnowski

Topic Description

- Trading nowadays happens at incredible speeds in many financial markets, oftentimes measured in nanoseconds. High-frequency trading (HFT) firms use advanced technologies like microwave or laser connections, custom-build microchips, and proprietary trading algorithms.
- While there is a public debate on the impact of trading at such speeds, it is still unclear what exactly the effects of ever-increasing trading speeds are. Some argue that those that cannot keep up with these speeds will be taken advantage of by the fastest traders. Others argue that increasing speed improves risk management capabilities of market makers. But even if the overall effects on the trading process are minor, there still are investment costs associated with the arms race of investing in technology to increase speeds.
- The aim of this thesis is to summarize the academic literature on the effects of high-frequency trading on market quality.

T4. High-Frequency Trading

Stefan Scharnowski

Starting References

- Menkveld, A. J. (2016). The economics of high-frequency trading: Taking stock. *Annual Review of Financial Economics*, 8, 1-24.
- Brogaard, J., Hendershott, T., & Riordan, R. (2014). High-frequency trading and price discovery. *The Review of Financial Studies*, 27(8), 2267-2306.
- Menkveld, A. J. (2013). High frequency trading and the new market makers. *Journal of financial Markets*, 16(4), 712-740.
- Kirilenko, A., Kyle, A. S., Samadi, M., & Tuzun, T. (2017). The flash crash: High-frequency trading in an electronic market. *The Journal of Finance*, 72(3), 967-998.
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- Carrion, A. (2013). Very fast money: High-frequency trading on the NASDAQ. *Journal of Financial Markets*, 16(4), 680-711.
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- Baldauf, M., & Mollner, J. (2020). High-frequency trading and market performance. *The Journal of Finance*, 75(3), 1495-1526.

T5. Social Media and Financial Markets

Stefan Scharnowski

Topic Description

- One of the fundamental tasks of financial markets is to incorporate news into prices. News can relate to anything that potentially impacts the value of an asset: earnings announcements, rumors regarding mergers, changes in interest rates or other macroeconomic variables, ... and may be communicated via many different channels.
- A relatively new source of information (and channel of information distribution) is social media. Social media channels may be used by individuals in important positions or by firms to communicate to and with the public. For example, there is evidence that financial markets reacted to tweets by Donald Trump and that cryptocurrencies do the same when Elon Musk tweets.
- At the same time, social media feeds provide a way of measuring investor attention and their sentiment towards certain assets. This was particularly visible during the GameStop short squeeze, driven by retail traders that coordinated via the message board Reddit.
- The aim of this thesis is to summarize the academic literature on the impact of social media posts on financial markets.

T5. Social Media and Financial Markets

Stefan Scharnowski

Starting References

- Sun, A., Lachanski, M., & Fabozzi, F. J. (2016). Trade the tweet: Social media text mining and sparse matrix factorization for stock market prediction. *International Review of Financial Analysis*, 48, 272–281. <https://doi.org/10.1016/j.irfa.2016.10.009>
- Agrawal, S., Azar, P. D., Lo, A. W., & Singh, T. (2018). Momentum, Mean-Reversion, and Social Media: Evidence from StockTwits and Twitter. *The Journal of Portfolio Management*, 44(7), 85–95. <https://doi.org/10.3905/jpm.2018.44.7.085>
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- Dredze, M., Kambadur, P., Kazantsev, G., Mann, G., & Osborne, M. (2016). How Twitter is changing the nature of financial news discovery. *Proceedings of the ACM SIGMOD International Conference on Management of Data, 01-July-20*. <https://doi.org/10.1145/2951894.2951903>
- Anand, A., & Pathak, J. (2022). The role of Reddit in the GameStop short squeeze. *Economics Letters*, 211, 110249.
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- Broadstock, D. C., & Zhang, D. (2019). Social-media and intraday stock returns: The pricing power of sentiment. *Finance Research Letters*, 30, 116-123.
- Duz Tan, S., & Tas, O. (2021). Social media sentiment in international stock returns and trading activity. *Journal of Behavioral Finance*, 22(2), 221-234.

T6. Cryptocurrency Market and Sentiment

Yanghua Shi

Topic Description

- There are currently a number of researches focusing on different aspects of relationships between cryptocurrency market and market sentiment.
- The thesis should contain a comprehensive literature review about this by searching for, evaluating and understanding a variety of related literature. From the identified literature, the student should identify the research streams, based on which the literature review should be structured. Thereby, the student should also identify the debates and gaps in the research.
- At the end, the student should summarize the current state of art and give suggestions to the future research direction of this field.
- The student should also cross-reference literature from other fields whenever appropriate.

T6. Cryptocurrency Market and Sentiment

Yanghua Shi

Starting References

- Anamika, Madhumita Chakraborty, and Sowmya Subramaniam. "Does sentiment impact cryptocurrency?." *Journal of Behavioral Finance* (2021): 1-17.
- Colianni, Stuart, Stephanie Rosales, and Michael Signorotti. "Algorithmic trading of cryptocurrency based on Twitter sentiment analysis." *CS229 Project 1.5* (2015).
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- Dyhrberg, Anne Haubo. "Bitcoin, gold and the dollar—A GARCH volatility analysis." *Finance Research Letters* 16 (2016): 85-92.
- Kyriazis, Nikolaos, Stephanos Papadamou, and Shaen Corbet. "A systematic review of the bubble dynamics of cryptocurrency prices." *Research in International Business and Finance* 54 (2020): 101254.
- Katsiampa, Paraskevi. "Volatility estimation for Bitcoin: A comparison of GARCH models." *Economics Letters* 158 (2017): 3-6.
- Lamon, Connor, Eric Nielsen, and Eric Redondo. "Cryptocurrency price prediction using news and social media sentiment." *SMU Data Sci. Rev* 1.3 (2017): 1-22.
- Sovbetov, Yhlas. "Factors influencing cryptocurrency prices: Evidence from bitcoin, ethereum, dash, litcoin, and monero." *Journal of Economics and Financial Analysis* 2.2 (2018): 1-27.

T7. Neurofinance

Yanghua Shi

Topic Description

- With new technologies such as functional magnetic resonance imaging (fMRI), we can observe the brain, which is center of decision making. Such development in technology gives rise to the new field: neurofinance.
- The thesis should contain a comprehensive literature review about neurofinance by searching for, evaluating and understanding a variety of related literature. From the identified literature, the student should identify the research streams, based on which the literature review is to be structured. Thereby, the student should identify the debates and gaps in the research.
- The thesis should contain cross-reference literature from other fields whenever appropriate.
- At the end, the student should summarize the current state of art and give suggestions to the future research direction of this field.
- With what (s)he learned from the literature review, the student may choose to briefly describe the design of an experiment.

T7. Neurofinance

Yanghua Shi

Starting References

- Grabenhorst, Fabian, István Hernádi, and Wolfram Schultz. "Prediction of economic choice by primate amygdala neurons." *Proceedings of the National Academy of Sciences* 109.46 (2012): 18950-18955.
- Harlé, Katia M., and Alan G. Sanfey. "Social economic decision-making across the lifespan: An fMRI investigation." *Neuropsychologia* 50.7 (2012): 1416-1424.
- Peterson, Richard L. "Neuroeconomics and neurofinance." *Behavioral finance* (2010): 73-93.
- Srivastava, Mrinalini, et al. "What's in the brain for us: a systematic literature review of neuroeconomics and neurofinance." *Qualitative Research in Financial Markets* (2020).
- Tseng, K. C. "Behavioral finance, bounded rationality, neuro-finance, and traditional finance." *Investment Management and Financial Innovations* 3, Iss. 4 (2006): 7-18.
- Vasile, Dedu, and Turcan Ciprian Sebastian. "Neurofinance—getting an insight into the trader's mind." *Neuroscience* 27.31 (2007): 8159-8160.

T8. Are real world arbitrage activities arbitrage?

Chen Lin

Topic Description

- Arbitrage activities are critical power to ensure the law-of-one-price holds in the financial market. However, real world arbitrage activities rarely meet the text book definition of arbitrage (i.e. no capital requirement, positive profit, no risk).
- Even if text book arbitrage do exist in the real world, measuring them can be difficult because obvious pricing gaps do not typically last very long.
- The aim for this thesis is to investigate a few particular types of common arbitrage activities, describe the arbitrage mechanism at work, and in particular discuss:
 - Do these types of arbitrages activities meet the text book arbitrage definition? If not, which conditions are violated?
 - How do academic researchers identify these arbitrage activities?
 - What impacts have been identified by these arbitrage activities?
- A good starting point is to classify researches based on the underlying assets, i.e. arbitrage between index products and portfolios (Box et al. 2021), between the spot and the future markets (Ederington et al. 2021), between cross-listed stocks such ADRs and the home country stocks (Rösch et al. 2021), and in cryptocurrency markets (Makarov et al. 2020)

T8. Are real world arbitrage activities arbitrage?

Chen Lin

Starting References

- Travis Box, Ryan Davis, Richard Evans, Andrew Lynch, Intraday arbitrage between ETFs and their underlying portfolios, Journal of Financial Economics, Volume 141, Issue 3, 2021, Pages 1078-1095, <https://doi.org/10.1016/j.jfineco.2021.04.023>.
- Ederington, L., Fernando, C., Holland, K., Lee, T., & Linn, S. (2021). Dynamics of Arbitrage. Journal of Financial and Quantitative Analysis, 56(4), 1350-1380. <https://doi:10.1017/S0022109020000204>.
- Dominik Rösch, The impact of arbitrage on market liquidity, Journal of Financial Economics, Volume 142, Issue 1, 2021, Pages 195-213, <https://doi.org/10.1016/j.jfineco.2021.04.034>.
- Igor Makarov, Antoinette Schoar, Trading and arbitrage in cryptocurrency markets, Journal of Financial Economics, Volume 135, Issue 2, 2020, Pages 293-319, <https://doi.org/10.1016/j.jfineco.2019.07.001>.

T9. Tracking the DAX, how good can you do?

Chen Lin

Topic Description

- The index tracking problem is to use the fewest number of stocks while approximate a stock index as good as possible. The difficulty lies in the conflicting objectives: fewest stocks and least tracking errors. This problem is particularly relevant because index funds compete for delivering the best index tracking with lowest costs.
- A number of solutions has been proposed, such as stratified sampling (i.e. picking industry leaders only), or factor-based index tracking (Corielli & Marcellino 2006, Jiang & Perez 2021)
- The student should
 - define a clear objective (loss function) with assumptions, for example the standard deviation of the return differential
 - set up a simple benchmark (such as randomly pick up 5 DAX stocks and weight them by their market capitalization)
 - experiment alternative index tracking methods, compare how different methods maximizing the objective, and potentially discuss where the improves come from
- Historical members of the DAX index can be provided. Returns for individual DAX stocks are available via EIKON.

T9. Tracking the DAX, how good can you do?

Chen Lin

Starting References

- Francesco Corielli, Massimiliano Marcellino, Factor based index tracking, Journal of Banking & Finance, Volume 30, Issue 8, 2006, Pages 2215-2233, <https://doi.org/10.1016/j.jbankfin.2005.07.012>.
- Pan Jiang, M. Fabricio Perez, Follow the leader: Index tracking with factor models, Journal of Empirical Finance, Volume 64, 2021, Pages 337-350, <https://doi.org/10.1016/j.jempfin.2021.10.002>.
- CFA Study Guide, <https://cfastudyguide.com/portfolio-construction/>

T10. Idiosyncratic Volatility Puzzle

Hongting Jiang

Topic Description

- The idiosyncratic volatility (IVOL) describes the volatility in stock returns that is not related to market systematic volatilities. Asset pricing theory either predicts that IVOL is positively correlated with stock returns (see, for example, Robert Merton (1987)) or that there is no correlation between IVOL and stock returns. However, Ang, Hodrick, Xing, and Zhang (2006) documents a negative correlation between IVOL and returns, which is named as idiosyncratic volatility puzzle.
- Many papers, including Ang et al. (2006) and follow-ups, attempted to explain the IVOL puzzle. Candidate explanations include risk compensation (Bali and Cakici, 2008; Avramov et al. 2013), market frictions (Boehme et al. 2009; Stambaugh et al. 2015) and information (Jiang, et al. 2009; Ang et al. 2009) ... Yet, there is no consensus that whether we can explain this puzzle.

Student's Task

- The main tasks of this thesis include: (i) To survey the literature on the idiosyncratic volatility puzzle and in great details (ii) To summarise and classify the empirical findings, and give comments

T10. Idiosyncratic Volatility Puzzle

Hongting Jiang

Starting References

- Ang, Andrew, Robert J. Hodrick, Yuhang Xing, and Xiaoyan Zhang. "The cross-section of volatility and expected returns." *The journal of finance* 61, no. 1 (2006): 259-299.
- Ang, Andrew, Robert J. Hodrick, Yuhang Xing, and Xiaoyan Zhang. "High idiosyncratic volatility and low returns: International and further US evidence." *Journal of Financial Economics* 91, no. 1 (2009): 1-23.
- Bali, Turan G., and Nusret Cakici. "Idiosyncratic volatility and the cross section of expected returns." *Journal of Financial and Quantitative Analysis* 43, no. 1 (2008): 29-58.
- Hou, Kewei, and Roger K. Loh. "Have we solved the idiosyncratic volatility puzzle?." *Journal of Financial Economics* 121, no. 1 (2016): 167-194.
- Jiang, George J., Danielle Xu, and Tong Yao. "The information content of idiosyncratic volatility." *Journal of Financial and Quantitative Analysis* 44, no. 1 (2009): 1-28.
- Stambaugh, Robert F., Jianfeng Yu, and Yu Yuan. "Arbitrage asymmetry and the idiosyncratic volatility puzzle." *The Journal of Finance* 70, no. 5 (2015): 1903-1948.

T11. Name-based bias in stock market

Hongting Jiang

Topic Description

- Not every information is informative for stock prices. If some piece of information does not relate with the fundamental values of the firm, it should not result in any difference in stock prices.
- Controlling for firm characteristics, names should have no impact on the stock returns. However, a branch of literature documents various biases related to the names: Stock prices or stock returns do reflect to the names. A well-known example is the significant positive returns after changing the name to “.com” during dot-com bubble. This name-related bias is a seemingly violation to the efficient market hypothesis.

Student's Task

- The task of this thesis is twofold: First, the student should survey the literature on the empirical findings related to name-based bias in great details. Second, basing on the existing literature, the student should answer the question: which types of names are preferable for the investors and give her/his own comments.

T11. Name-based bias in stock market

Hongting Jiang

Starting References

- Anderson, A.G. and Larkin, Y., 2019. Does noninformative text affect investor behavior?. *Financial Management*, 48(1), pp.257-289.
- Corbet, Shaen, Yang Hou, Yang Hu, Brian Lucey, and Les Oxley. "Aye Corona! The contagion effects of being named Corona during the COVID-19 pandemic." *Finance Research Letters* 38 (2021): 101591.
- Cooper, M.J., Dimitrov, O. and Rau, P.R., 2001. A rose. com by any other name. *The Journal of Finance*, 56(6), pp.2371-2388.
- Durham, G. and Santhanakrishnan, M., 2016. Ticker fluency, sentiment, and asset valuation. *The Quarterly Review of Economics and Finance*, 61, pp.89-96.
- Itzkowitz, Jennifer, Jesse Itzkowitz, and Scott Rothbort. "ABCs of trading: Behavioral biases affect stock turnover and value." *Review of Finance* 20, no. 2 (2016): 663-692.
- Xing, X., Anderson, R.I. and Hu, Y., 2016. What 's a name worth? The impact of a likeable stock ticker symbol on firm value. *Journal of Financial Markets*, 31, pp.63-80.

T12. Understanding Momentum and Time Series Momentum

Mengnan Wu

Topic Description

- Momentum refers to the phenomenon that past winners earn higher returns than past losers in the cross section. Time series momentum refers to the predictability of the past 12-month return on the next one-month return (Moskowitz et al., 2012).
- Why should momentum persist? Previous literature proposes the possibility of investor misreaction due to behavioral biases. Some recent papers provide a new understanding for momentum and time series momentum. Ehsani and Linnainmaa (2019) document that momentum in individual stock returns emanates from momentum in factor returns. Most factors are positively autocorrelated. Zhang (2022) documents that momentum and time series momentum in currencies, which cannot be explained by currency factors, only summarize the autocorrelation of currency factors. The paper shows both the cross-sectional and time series momentum originate from systematic returns and factors exhibit strong momentum.
- The aim of the thesis is to review the literature on equity market momentum and currency momentum. The student should distinguish between cross-section momentum and time series momentum, and provide a comprehensive survey on the non-behavioral explanations of the phenomenon.

T12. Understanding Momentum and Time Series Momentum

Mengnan Wu

Starting References

- Zhang, S. (2022). Dissecting currency momentum. *Journal of Financial Economics*, 144(1), 154-173.
- Huang, D., Li, J., Wang, L., & Zhou, G. (2020). Time series momentum: Is it there?. *Journal of Financial Economics*, 135(3), 774-794.
- Ehsani, S., & Linnainmaa, J. T. (2019). Factor momentum and the momentum factor (No. w25551). *National Bureau of Economic Research*.
- Moskowitz, T. J., Ooi, Y. H., & Pedersen, L. H. (2012). Time series momentum. *Journal of Financial Economics*, 104(2), 228-250.

T13. Uncertainty, Risk, and Volatility

Mengnan Wu

Topic Description

- Although most of the literature still speaks in broad brush terms about “uncertainty” or “risk”, carefully defining the nature of risk is quite important. Risk, uncertainty, and volatility measures differ along multiple dimensions, including the method of calculation, the underlying outcome, the horizon at which they are calculated, and whether or not they can be observed/calculated in real time.
- Some measures are, by construction, limited to characterize particular types of uncertainty at particular horizons.
- The thesis is aim to provide a survey of measures of uncertainty, risk, and volatility that have been proposed recently in the literature, introducing their conceptual distinctions. The thesis should categorize the measures based on the construction method, summarize how they are constructed, their relative advantages in usage, and their effects on financial market outcomes, with a focus on large uncertainty spikes, such as those appearing concurrently with the outbreak of COVID-19.

T13. Uncertainty, Risk, and Volatility

Mengnan Wu

Starting References

- Bollerslev, T., Tauchen, G., & Zhou, H. (2009). Expected stock returns and variance risk premia. *The Review of Financial Studies*, 22(11), 4463-4492.
- Drechsler, I., & Yaron, A. (2011). What's vol got to do with it. *The Review of Financial Studies*, 24(1), 1-45.
- Miescu, M., & Rossi, R. (2021). COVID-19-induced shocks and uncertainty. *European economic review*, 139, 103893.
- Aït-Sahalia, Y., Matthys, F., Osambela, E., & Sircar, R. (2021). When Uncertainty and Volatility Are Disconnected: Implications for Asset Pricing and Portfolio Performance. (No. 29195). *National Bureau of Economic Research*.

T14. Marketwide Price Pressure

Mengnan Wu

Topic Description

- The price pressure hypothesis (PPH) states that there is a temporary price effect induced by large transactions. Previous literature has used the investor flows to and from mutual funds as a source of exogenous price pressure. If the required sales from individual investors are sufficiently large, the funds' liquidity needs may put downward pressure on prices that is unrelated to the fundamental value of the underlying stocks. The flow-induced trading, across mutual funds, can have a significant impact on individual stock returns and drive stock prices temporarily away from their information-efficient benchmarks (Coval and Stafford, 2007).
- The growth of passive investment strategies has led many funds to hold vast swaths of the market. A consequence of this growth is that the aggregate stock market return reflects price pressure. Dividend-payment dates provide no new information related to the dividend payout and entail large transfers of cash. In this context, the impact of dividend payments is considered as a driver of predictable purchases.
- The thesis is aim to provide a comprehensive survey on the theory of price pressure hypothesis and the evidence of price pressure on the market level, for instance, the aggregate dividend payouts induced price pressure.

T14. Marketwide Price Pressure

Mengnan Wu

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T15. Heuristics Use in Analyst Forecasts

Can Yilanci

Topic Description

- Heuristics are principles that “reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations” (Kahneman and Tversky, 1974). One of these heuristics is the so-called adjustment and anchoring. People often make estimates by “starting from an initial value that is adjusted to yield the final answer”. However, the adjustment is often insufficient. Thereby, the use of heuristics may lead to systematic errors. We know that the attention of financial analysts is limited but they have to cover a wide range of different companies. This raises the question whether analysts (unwillingly) rely on the use of heuristics when they make forecasts.
- A multitude of studies documents that analysts indeed rely on heuristics. Ashour and Hao (2019) and Campbell and Sharpe (2009) document an anchoring bias. Analysts anchor their earnings forecast too much towards the industry median and analysts anchor consensus forecasts too much towards previous releases. Hirshleifer et al. (2021) provides evidence for a first impression bias. Analysts are more optimistic (pessimistic) if a firm does particularly good (bad) during the year before the analyst starts following the firm. What other heuristics and biases do analysts show?

Student’s Task

- The aim of this thesis is to summarize the academic literature on heuristics use in analyst forecasts. In particular, the student should (i) review literature that documents the heuristics use of analysts and (ii) review literature that documents further behavioral biases of analysts.

T15. Heuristics Use in Analyst Forecasts

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T16. To Sell or Not to Sell? The Disposition Effect Reconsidered

Can Yilanci

Topic Description

- Investors sell stocks trading at a gain too soon and hold stocks trading at a loss too long (Shefrin and Statman, 1985). This effect is commonly known as the disposition effect. Surprisingly, the disposition effect has been documented for both retail (Odean, 1998; Grinblatt and Keloharju, 2001) and institutional investors (Grinblatt and Keloharju, 2001; Frazzini, 2006). As showing a disposition effect hurts the performance of investors, it is important to understand causes and effects of the disposition effect.
- It is not clear yet what causes the disposition effect. Odean (1998) views the disposition effect as an implication of the prospect theory of Kahneman and Tversky (1979). However, more recent studies consider different explanations for the disposition effect. For instance, Barberis and Xiong (2012) consider realization utility, Chang et al. (2016) focus on cognitive dissonance, An et al. (2019) use hedonic mental accounting, and Bernard et al. (2021) consider market states. So what actually causes investors to show a disposition effect?

Student's Task

- The aim of the thesis is twofold. First, the student should review literature that documents the disposition effect across different investor classes. Second, the student should group the various explanation approaches in appropriate groups and highlight the most promising explanation approaches. In particular, the student should focus on the most recent studies (e.g. Barberis and Xiong, 2012; Chang et al., 2016; An et al., 2019; Bernard et al., 2021).

T16. To Sell or Not to Sell? The Disposition Effect Reconsidered

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Starting References

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T17. The Momentum Effect Reconsidered: No Return Comes Without A Risk?

Can Yilanci

Topic Description

- Weak form market efficiency is that all information in the time series of past prices is reflected in the current price (Fama, 1970). Hence, analyzing past prices should not allow to predict future returns. However, there is ample evidence for the existence of a momentum effect in stock returns. Jegadeesh and Titman (1993) document for the US equity market that past winner stocks tend to outperform past loser stocks over the next couple of months. A momentum effect has also been documented for a large number of other countries (e.g. see Chui et al., 2010). Thereby, momentum remains of relevance for academic research even today because it poses a strong challenge to the efficient markets hypothesis.
- We do not know why momentum exists. Existing literature considers various explanation approaches for the existence of momentum. Factor models like the Fama and French 3-factor and 5-factor models (Fama and French 1996, 2016) fail to explain momentum. Griffin et al. (2003) and Cooper et al. (2004) also show that macroeconomic risk variables cannot explain momentum returns. Barberis et al (1998) and Daniel et al. (1998) built behavioral models that explain momentum returns by considering investor sentiment, investor overconfidence, and biased self-attribution. Does that mean momentum profits exist because investors are irrational? Have momentum profits persisted over time? And does this mean that markets are not efficient?

Student's Task

- The student's task is to answer the questions raised above. More specifically, the student's task is threefold. First, the student should survey existing literature about the momentum effect. Second, the student should group the various explanation approaches in appropriate groups (e.g. behavioral, risk-based, market frictions). Third, the student should evaluate the different explanation approaches and highlight implications for the efficient markets hypothesis.

T17. The Momentum Effect Reconsidered: No Return Comes Without A Risk? Can Yilanci

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