Seminar in Financial Markets
FSS 2024

UNIVERSITY OF MANNHEIM
Business School

Chair of Finance – Prof. Dr. Erik Theissen

AACSB ACCREDITED · EFMD EQUIS ACCREDITED · ASSOCIATION OF MBAS ACCREDITED

Seminar Topics

- **Presentation is downloadable on our website:**

https://www.bwl.uni-mannheim.de/en/theissen/teaching/master-courses/seminars/

Chair of Finance

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- **Address:**
  - L 9, 1-2
  - Secretary: third floor (“3. OG“)
  - Assistants: second, fourth, and fifth floor

- **Office hours:**
  - By appointment
  - General questions: Please visit our homepage first
  - Secretary: Mo-Fr 09.00 – 12.00 am

- **Research:**
  - Market Microstructure
  - Empirical Asset Pricing
  - Blockchain & Cryptocurrency

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Assignment of Seminar Topics

- **Prerequisites:**
  - We recommend CC 502 Applied Econometrics as a prerequisite.
  - One core course (FIN 5XX) from the Area “Banking, Finance, and Insurance”.
  - Please note that a FIN 6XX course is not (!) enough.

- The assignment of topics is carried out jointly by the chairs of the Area “Banking, Finance, and Insurance”.

- Assignment of topics will be based on your grades in the Area “Banking, Finance, and Insurance” and your priority list.

Time Schedule

- **Application period:**
  - Thursday, 30.11.2023 – Friday, 15.12.2023
- **Topics Allocation Announcement and Starting Date:**
  - Wednesday, 03.01.2024
- **Submission deadline:**
  - Wednesday, 28.02.2024 (8 weeks)
- **Seminar presentations**
  - Thursday, 07.03.2024 + Friday, 08.03.2024 (in person)

Stata and Database Tutorials

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FIN 604 – Stata in Finance

- Short crash course on how to write an empirical paper using Stata and the databases offered at the University of Mannheim

- **Next date:**
  - Thursday, 04.01.2023 – Tuesday, 09.01.2023

- **Registration:**
  - For participation in class, please join the Ilias group. To participate in the exam, in addition registration for the exam in portal 2 is necessary.

- **Further information is available under the following link:**

https://www.bwl.uni-mannheim.de/theissen/lehre/masterlehre/fin-604-stata-in-finance/

Guide to Scientific Writing

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- **An information sheet on writing a seminar paper or a master thesis is provided on our website:**

https://www.bwl.uni-mannheim.de/media/Lehrstuehle/bwl/Theissen/Lehre/Guidelines_Masterthesis_2022.pdf/flipbook

Important Remarks

- **Plagiarism policy:**
  - Your seminar thesis will be analyzed by plagiarism detection software (Turnitin).
  - Our chair has a **zero-tolerance policy** regarding plagiarism.
  - Students who submit plagiarized work will be graded with 5.0.

- **Language quality:**
  - Grading of your seminar thesis takes also into account the language quality.
  - Linguistic shortcomings negatively impacts your final grade.
  - The seminar thesis can be either written in English or German.

- **Literature in foreign languages:**
  - Please only include literature that is written either in English or German.

Data Storage

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- **Disclaimer:**
  - You are responsible for your data. It can always happen that your computer breaks down, is stolen, or damaged in any other way. However, you are responsible for having a backup of your thesis and your progress. Please make sure that you have enough backups. There will be no extensions of the deadline. (Even if we were willing to grant you an extension of the deadline, we are not allowed to.)

- **Backups:**
  - Mail
  - Dropbox
  - USB drive/external hard drive
  - Cloud
  - …

Seminar Topics

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Questions ???

T1. What Happened to AT1 Bonds During the CS Crisis?

Erik Theissen

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Topic Description

- Additional Tier 1 bonds (AT1 bonds) are a form of contingent capital bonds. They are converted to equity when a bank fails. The size of the AT1 market is about 250 billion USD. AT1 bonds are risky (there are first in loss allocation) but offer high yields when the bank does well.
- During the breakdown of Credit Suisse (CS) in early 2023 the AT1 bonds of Credit Suisse were completely written off (i.e., wiped out) rather than converted to equity, whereas the equity of the bank survived. While this apparently was in line with Suisse law and the bond conditions, it came as a surprise to many.
- The objective of this paper is to analyze a sample of AT1 bonds and analyze empirically whether the CS breakdown significantly affected their valuation.
- A possible approach is a difference-in-difference analysis with other bonds as a control sample, plus an event study on bank equity.

Requirements

The empirical work requires the use of databases (e.g. Eikon). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

T1. What Happened to AT1 Bonds During the CS Crisis?

Erik Theissen

Starting References

- Bolton, P., A. Kartasheva and W. Jiang (2023): The Credit Suisse CoCo Wipeout: Facts, Misperceptions, and Lessons for Financial Regulation. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4450098
- Paz Valbuena, J. and H. Eidenmüller (2023): Bailout Blues: the Write-Down of the AT1 Bonds in the Credit Suisse Bailout. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4431170

T2. Out-of-Sample Return Prediction With the Market Model

Erik Theissen

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Topic Description

- In event studies and other applications, expected returns are often estimated by a market model where stock returns (or excess returns) are regressed on market (excess) returns. Out-of-sample return forecasts are then obtained using the model parameters (i.e., slope and intercept)
- Because the return forecast includes the intercept, it implicitly assumes that any "abnormal" performance of the stock in the estimation window will persist in the forecasting period. If the market model is the correct asset pricing model and the market is informationally efficient, this should not be the case.
- The objective of this paper is to use a large sample of US equities and compare the forecasting error of forecasts with inclusion and exclusion of the estimation window alpha.
- The forecast errors can be compared by descriptives (such as MAE and RMSE) and by formal tests such as the standard and extended Diebold Mariano test.

Requirements

The empirical work requires the use of large databases (i.e. CRSP). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

Starting References

- Diebold, F.X. and R.S. Mariano. (1995). Comparing Predictive Accuracy. Journal of Business and Economic Statistics, 13: 253-63.
- Harvey, D., S. Leybourne, and P. Newbold. (1997). Testing the Equality of Prediction Mean Squared Errors. International Journal of Forecasting, 13: 281-91.

T3. International Stock Returns, Momentum, and Individualism

Can Yilanci

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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. In sharp contrast to this concept, strategies that buy past winner stocks and sell past loser stocks generate significant positive returns (Jegadeesh and Titman, 1993). This effect is commonly known as the momentum effect. According to Fama, momentum poses the strongest challenge to the efficient markets hypothesis. Hence, it is important to understand *why* momentum exists.
- Chui, Titman, and Wei (2010) show that individualism is positively associated with the magnitude of momentum profits. They define individualism as "the degree to which people focus on their internal attributes, such as their own abilities, to differentiate themselves from others." Does this mean that only countries with high individualism scores show significant momentum returns?
- The aim of the thesis is to replicate the main findings of Chui, Titman and Wei (2010) for an extended time period. Additionally, the student should use a factor model to adjust for risk. The student should gain an in-depth understanding of one of the most famous and robust asset pricing anomalies.

Requirements

The empirical work requires the use of large databases (i.e. CRSP and Compustat). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

Starting References

- Jegadeesh, N., Titman, S. (1993). Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency. The Journal of Finance, 48(1), 65–91.
- Chui, A. C. W., Titman, S., Wei, K. C. J. (2010). Individualism and Momentum around the World. The Journal of Finance, 65(1), 361–392
- Hammerich, U. (2019). Price, Cultural Dimensions, and the Cross-Section of Expected Stock Returns. Working Paper

T4. International Stock Returns and Betting-against-Beta

Can Yilanci

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Topic Description

- The CAPM of Sharpe (1964) and Lintner (1965) provides a framework on how to measure the relation between expected returns and risk (Fama and French, 2004).
- One premise of the CAPM is that investors hold the same portfolio, i.e. the one with the highest expected return per unit of risk, and use leverage according to their preferences (Frazzini and Pedersen 2014).
- There are two ways to construct a high-beta portfolio:
  a) buy low beta stocks and use leverage or
  b) buy high-beta stocks
- If investors cannot use leverage, they will buy high-beta stocks. However, if many constrained investors want to buy the same stocks, they will bid-up these high-beta stocks (Frazzini and Pedersen 2014). A betting-against-beta factor (BAB) that is long low-beta assets and short high-beta assets earns on average positive returns (Frazzini and Pedersen 2014).
- The aim of the thesis is to replicate the main findings of Frazzini and Pedersen (2014) (the stock-related part only!) for an international sample of developed countries. Moreover, the student should gain an in-depth understanding of the CAPM.

Requirements

The empirical work requires the use of large databases (i.e. CRSP and Compustat). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

Starting References

- Fama, F., French, K. (2004). The Capital Asset Pricing Model: Theory and Evidence. Journal of Economic Perspectives. 18(3), 25-46
- Frazzini, A., Pedersen, L. (2014). Betting against beta. Journal of Financial Economics. 111(1). 1-25
- Novy-Marx, R., & Velikov, M. (2022). Betting against betting against beta. In Journal of Financial Economics (Vol. 143, Issue 1, pp. 80–106)

T5. Are ETFs different from stocks for algorithmic traders?

Chen Lin

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Topic Description

- The concept of trading securities via algorithmic programs in principle does not discriminate one asset class over another as far as trading strategies on these assets are programable. Researchers have independently documented the proliferations of algorithmic trading in equities (Boehmer et al, 2021), currencies (Chaboud et al, 2014), commodities (Hu et al, 2020) and cryptocurrencies (Alla et al, 2021). Yet the attention is limited on how algorithmic trading is implemented across assets.
- Some very descriptive evidence suggests the level of algorithmic trading is different in ETFs and in stocks. For example, a blogpost from the US SEC shows that the ratio between trading to order submissions is dramatically different for ETFs and corporate stocks. The discrepancy extends to a few alternative algorithmic trading proxies.
- The aim of this seminar thesis is to 1) document systematically the differences in the level of algorithmic trading between ETFs and stocks using the proxies discussed in Weller (2018), and 2) empirically investigate to what extend the differences can be explained by observable characteristics such as known and directly observable security characteristics such as prices, bid-ask spread.

Requirements

The empirical work requires the use of large databases (i.e. <CRSP, COMPUSTAT, MIDAS>). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

T5. Are ETFs different from stocks for algorithmic traders?

Chen Lin

UNIVERSITY OF MANNHEIM
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Starting References

- Brian M. Weller, Does Algorithmic Trading Reduce Information Acquisition?, The Review of Financial Studies, Volume 31, Issue 6, June 2018, Pages 2184–2226, https://doi.org/10.1093/rfs/hhx137
- Boehmer, E., Fong, K., & Wu, J. (2021). Algorithmic Trading and Market Quality: International Evidence. Journal of Financial and Quantitative Analysis, 56(8), 2659-2688. doi:10.1017/S0022109020000782
- Chaboud, A.P., Chiquoine, B., Hjalmarsson, E. and Vega, C. (2014), Rise of the Machines: Algorithmic Trading in the Foreign Exchange Market. The Journal of Finance, 69: 2045-2084. https://doi.org/10.1111/jofi.12186
- Zhepeng Hu, Teresa Serra & Philip Garcia (2020) Algorithmic quoting, trading, and market quality in agricultural commodity futures markets, Applied Economics, 52:58, 6277-6291, DOI:10.1080/00036846.2020.1789060
- Alla A. Petukhina, Raphael C. G. Reule & Wolfgang Karl Härdle (2021) Rise of the machines? Intraday high-frequency trading patterns of cryptocurrencies, The European Journal of Finance, 27:1-2, 8-30, DOI: 10.1080/1351847X.2020.1789684
- SEC, Trade to Order Volume Ratios, 2013, https://www.sec.gov/marketstructure/research/data-highlight/trade-order-volume-ratios

T6. On the Predictability of Index Membership

Chen Lin

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Topic Description

- Stock indices nowadays play critical role in the financial markets. Typically, indices reshuffle their constituents, removing unqualified stocks and placing them with qualified one. While researchers have investigated the effect of index membership on these stocks selected and removed, only a limited number of studies looks at whether the reshuffle events are predictable, or they are surprises to the market. An answer to this question could aid the debate on whether the documented index effect is driven by information or by demand shocks.
- The aim of this seminar thesis is therefore to empirically investigate to what extend stocks included in or excluded from one major stock index can be predicted. The candidate indices are the S&P 500 index and the NASDAQ 100 index. As a thought-experiment example, the student could use all relevant information by the end-Jun 2020 to predict the S&P 500 index constituents by end-Sept 2020. The same exercise could be repeated every three month. As a result, a conclude could be drawn on the how predictable the S&P 500 index membership is three-month-ahead. The student is welcome to experiment both statistical and machine learning models for the prediction task.

Requirements

The empirical work requires the use of large databases (i.e. <CRSP, COMPUSTAT, REFINITIV>). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA).

T6. On the Predictability of Index Membership

Chen Lin

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Business School

Starting References

- Elliott, W.B., Van Ness, B.F., Walker, M.D. and Warr, R.S. (2006), What Drives the S&P 500 Inclusion Effect? An Analytical Survey. Financial Management, 35: 31-48. https://doi.org/10.1111/j.1755-053X.2006.tb00158.x
- Pyemo N. Afego, Effects of changes in stock index compositions: A literature survey, International Review of Financial Analysis, Volume 52, 2017, Pages 228-239, ISSN 1057-5219, https://doi.org/10.1016/j.irfa.2017.06.004
- Shleifer, A. (1986), Do Demand Curves for Stocks Slope Down?. The Journal of Finance, 41: 579-590. https://doi.org/10.1111/j.1540-6261.1986.tb04518.x
- Denis, D.K., McConnell, J.J., Ovtchinnikov, A.V. and Yu, Y. (2003), S&P 500 Index Additions and Earnings Expectations. The Journal of Finance, 58: 1821-1840. https://doi.org/10.1111/1540-6261.00589

T7. Good Volatility, Bad Volatility and Volatility Persistence

Hongting Jiang

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Topic Description

- There has been a long debate on whether the stock volatility repeats itself. Researchers have different findings on whether and to which extent the stock volatilities are persistent.
- Recent literature introduces a nuanced approach, categorizing volatilities into "good" (upside volatility) and "bad" (downside volatility), revealing that the latter exhibits better predictive power for future volatilities. The observed divergence in predictability could be possibly attributed to the different persistence of good and bad volatilities.
- In this thesis, the student will (1) empirically test the persistence of stock volatilities and their components; (2) compare the persistence of the good and bad volatility; (3) investigate whether the persistence of good and bad volatility explains their predictability on stock realized volatilities.

Requirements

The empirical work requires the use of large databases (i.e CRSP). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

Starting References

- Chen, Xilong, and Eric Ghysels. "News—good or bad—and its impact on volatility predictions over multiple horizons." The Review of Financial Studies 24, no. 1 (2011): 46-81.
- Fleming, Jeff, and Chris Kirby. "Long memory in volatility and trading volume." Journal of Banking & Finance 35, no. 7 (2011): 1714-1726.
- Poterba, James M., and Lawrence H. Summers. The persistence of volatility and stock market fluctuations. No. w1462. National Bureau of Economic Research, 1984.
- Patton, Andrew J., and Kevin Sheppard. "Good volatility, bad volatility: Signed jumps and the persistence of volatility." Review of Economics and Statistics 97, no. 3 (2015): 683-697.
- Schwert, G. William. "Why does stock market volatility change over time?." The journal of finance 44, no. 5 (1989): 1115-1153.

T8. Lottery-Like Mutual Funds

Hongting Jiang

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Topic Description

- It is well documented that the stocks that share the same characteristics as lotteries, denoted as lottery-like stocks, are overpriced by the stock market.
- Notably, Kumar (2009) and other scholars have highlighted the market tendency to overprice stocks exhibiting traits such as large skewness, high extreme returns, and low nominal prices. This inclination implies the prevalence of lottery preference among stock market participants.
- This trend also affects mutual funds. Agarwal et al. (2022) finds that the mutual fund managers also strategically include lottery-like stocks in their portfolios, catering to the investors with lottery preference. This raises the pivotal question whether lottery-like stock returns disseminate in the mutual fund payoff arose, in other words, whether there are lottery-like mutual funds, and what are the performance of such funds.
- This thesis aims to contribute to the ongoing discussion by conducting empirical analyses to examine lottery-related traits in mutual funds. Additionally, it seeks to identify correlations between the presence of lottery-like characteristics in mutual funds and their performance .

Requirements

The empirical work requires the use of large databases (i.e CRSP). The databases are readily accessible for affiliates of the University of Mannheim. The candidate should feel comfortable in the use of a statistical software program (such as STATA) and econometric methods.

T8. Lottery-Like Mutual Funds

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Starting References

- Agarwal, Vikas, Lei Jiang, and Quan Wen. "Why do mutual funds hold lottery stocks?." Journal of financial and quantitative analysis 57, no. 3 (2022): 825-856.
- Bali, Turan G., Nusret Cakici, and Robert F. Whitelaw. "Maxing out: Stocks as lotteries and the cross-section of expected returns." Journal of financial economics 99, no. 2 (2011): 427-446.
- Chevalier, Judith, and Glenn Ellison. "Risk taking by mutual funds as a response to incentives." Journal of political economy 105, no. 6 (1997): 1167-1200.
- Kumar, Alok. "Who gambles in the stock market?." The journal of finance 64, no. 4 (2009): 1889-1933.