

Investments

Bachelor Seminar

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Winter Term 2019/2020

Requirements

- Preparation of a seminar paper in groups of up to 3
- Scope: 15/20/25 pages (depending on group-size)
- Independently perform empirical / quantitative analysis
- Use of appropriate statistics software
- Pure literature research is not sufficient
- Presentation of seminar paper in blocked seminar

Procedure

- Submission of preferences, until Wednesday, 17.07.2019 until 11:00 in office (Room 044, Building 1501)
- 18.07.2017, distribution of topics
- Binding registration, until Monday, 22.07.2016 until 11:00 in office (Room 044, Building 1501)
- The working time for the seminar starts Monday, 22.07.2019
- Submission of seminar papers until Wednesday, 20.11.2019 until 11:00 in office (Room 044, Building 1501)
- The presentations of the seminar papers are expected to be mid-December
- General information and registration form: <https://www.fmt.uni-hannover.de/de/lehre/seminare/bachelor/seminar-finance-investments-273012>
- Guideline for writing seminar papers:
https://www.fmt.uni-hannover.de/fileadmin/fmt/pdf/Richtlinien_zum_Erstellen_von_Seminar-_und_Abschlussarbeiten.pdf

1) Portfolio Optimization: Naive vs. Mean-variance

Task:

- Modern portfolio theory attempts to either maximize the portfolio expected return for a given risk or minimize the risk for a given level of expected return.
- Briefly describe the concept of the mean-variance optimization and compare its performance with the naive approach in an empirical analysis.

Literature:

- Brandt, M. W. (2009). Portfolio choice problems. *Handbook of Financial Econometrics*, 1, 269-336.
- DeMiguel, V., Garlappi, L., & Uppal, R. (2007). Optimal versus naive diversification: How inefficient is the $1/N$ portfolio strategy?. *Review of Financial Studies*, 22(5), 1915-1953.

2) Black-Litterman Model

Task:

- The Black-Litterman model allows the investor to integrate her views into the asset allocation decision.
- Empirically investigate the performance of the Black-Litterman model and compare it to other models.

Literature:

- Black, F., & Litterman, R. (1992). Global portfolio optimization. *Financial Analysts Journal*, 48(5), 28-43.
- He, G., & Litterman, R. (1999). The intuition behind Black-Litterman model portfolios. Available at SSRN 334304.

3) Commodity Investments

Task:

- Investigate and describe co-movements between indexed and non-indexed commodities to investigate the degree of financialization of commodities.
- Use their methodology to describe co-movement between other commodity markets and detect potential reasons for that co-movement.

Literature:

- Tang, K., & Xiong, W. (2012). Index investment and the financialization of commodities. *Financial Analysts Journal*, 68(6), 54-74.
- Le Pen, Y., & Sévi, B. (2017). Futures trading and the excess comovement of commodity prices. *Review of Finance*, 22(1), 381-418.

4) Portfolio Insurance

Task:

- Portfolio insurance is a strategy that reduces the losses of a portfolio via hedging strategies.
- Describe the constant proportion portfolio insurance (CPPI) by Black and Jones (1987) and Perold (1986), that introduces a simple strategy: Invest a constant multiple of a cushion in the risky asset up to the borrowing limit.
- Empirically evaluate the properties of the strategy and compare it to other portfolio insurance strategies.

Literature:

- Leland, H. E. (1980). Who should buy portfolio insurance?. *The Journal of Finance*, 35(2), 581-594.
- Black, F., & Perold, A. (1992). Theory of constant proportion portfolio insurance. *Journal of Economic Dynamics and Control*, 16(3-4), 403-426.

5) Return Seasonalities

Task:

- Keloharju et al. (2016) find return autocorrelation at full-year lags throughout asset classes.
- Explain why asset returns should or should not exhibit seasonal patterns.
- Perform an empirical analysis using assets/portfolios of your choice (e.g. country indices, industry portfolios, etc.).

Literature:

- Heston, S. L., & Sadka, R. (2008). Seasonality in the cross-section of stock returns. *Journal of Financial Economics*, 87(2), 418-445.
- Keloharju, M., Linnainmaa, J. T., & Nyberg, P. (2016). Return seasonalities. *The Journal of Finance*, 71(4), 1557-1590.

6) Week of the month effect induced by option expiry

Task:

- Stivers and Sun (2013) find high returns during weeks in which stock and index options expire. They relate this pattern to a reduction in short-stock hedge positions.
- Analyze this pattern using an appropriate sample and additionally test if the magnitude of the effect is even more pronounced in the last month of a quarter.

Literature:

- Stivers, C., & Sun, L. (2013). Returns and option activity over the option-expiration week for S&P 100 stocks. *Journal of Banking & Finance*, 37(11), 4226-4240.

7) Momentum Crashes

Task:

- Momentum refers to abnormal returns of long-short portfolios that buy past winners and sell past losers.
- This strategy applied to sorted portfolios seems to break down after market downturns.
- Investigate, if this pattern is also present in industry portfolios, which have been shown to explain individual stock momentum.

Literature:

- 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.
- Moskowitz, T. J., & Grinblatt, M. (1999). Do industries explain momentum?. *The Journal of Finance*, 54(4), 1249-1290.
- Daniel, K., & Moskowitz, T. J. (2016). Momentum crashes. *Journal of Financial Economics*, 122(2), 221-247.

8) Volatility Targeting

Task:

- A simple strategy that attempts to keep portfolio variance constant.
- Implement the strategy for a non US-stock sample (other asset class/other country) and analyze the risk profile (Maximum draw down, tail risk, etc.) and/or compare it to a similar approach like risk-parity.

Literature:

- Moreira, A., & Muir, T. (2017). Volatility-Managed Portfolios. *The Journal of Finance*, 72(4), 1611-1644.
- Harvey, C. R., Hoyle, E., Korgaonkar, R., Rattray, S., Sargaison, M., & Van Hemert, O. (2018). The impact of volatility targeting. *The Journal of Portfolio Management*, 45(1), 14-33.
- Liu, F., Tang, X., & Zhou, G. (forthcoming). Volatility-Managed Portfolio: Does It Really Work?. *The Journal of Portfolio Management*.

How to write a good seminar paper

- Set your deadlines starting from the end.
- Summarise your readings.
- Use reliable sources (Datastream, NOT yahoo finance; papers, NOT wikipedia)
- You can find papers on google scholar (access to published papers in the uni network).
- Interpret your results and relate them to previous research.

How to maximize the learning effect

- Why? What you learn now, saves you valuable time when you write your thesis.
- Use R instead of Excel.
- Attend Programming for Finance but start coding before.
- Comment your code.
- Use LaTeX instead of Word.
- Write in English, not German.