Chair of International Finance

Master's Theses – HWS2021

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Organization

- All necessary information (including topic descriptions) can be found on our chair's website https://www.bwl.uni-mannheim.de/en/ruenzi/teaching/master-courses/masters-theses/
- General information on the allocation procedure can be found on the website of the finance area https://www.bwl.uni-mannheim.de/en/finance/teaching/master/masters-theses/
- Contact details for general questions: Kai Mäckle, maeckle[at]bwl.uni-mannheim.de
- These slides will also be uploaded on the first website (chair website)
- Advisors:
  - Fabian Gamm: gamm[at]bwl.uni-mannheim.de
  - Santanu Kundu: kundu[at]bwl.uni-mannheim.de
  - Kai Mäckle: maeckle[at]bwl.uni-mannheim.de
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What are the prerequisites?

- You are a master student within the MMM program.
- You have successfully **completed at least one seminar** at one of the finance chairs (FIN 7XX) or are just about to complete it.
- Some knowledge of statistics and econometrics is useful and participants should be motivated to undertake empirical work. Knowledge acquired in the courses CC502 Applied Econometrics and Stata in Finance might be particularly useful.
- You are available in the time period from September to January.

Upcoming Schedule

- 09.09.2021 – 17.09.2021: Submission of Priority Lists (Ilias, link on finance area website)
- 22.09.2021: Topics Allocation Announcement (finance area website)
- 22.09.2021 – 27.09.2021: Registration Period
- 27.09.2021: Starting Date
- 27.01.2022, 12 pm: Submission of Master's Thesis

Please pay attention to the deadlines! Make sure you have sufficient time to write your paper!

Colloquia

- There will be **two block seminars**. The (preliminary!) dates for these seminars are
  - tba
  - tba
- The block seminars provide a platform to discuss the structure of your thesis, present (first) empirical results, raise questions, and to further stimulate your research.
- Participation in the block seminars is **mandatory** for all students.
- The colloquia are not graded.

How to apply?

- **Submit your priority list and transcript online** by the deadline (link to Ilias on the finance area website).
- You can combine topics from different chairs.
  - E.g. First preference: "3rd Topic, Chair of Prof. Ruenzi";
  - Second preference: "5th Topic, Chair of Prof. Spalt";
  - Third preference: "4th Topic, Chair of Prof. Theissen"
- Please only choose topics you are really willing to work on.
- The allocation of topics is generally based on the grade of the finance seminar (FIN 7XX).
- The allocation is competitive and the assignment of a topic cannot be guaranteed.

How do we grade?

- Supervision of the thesis by Prof. Ruenzi and the assigned advisor.
- Grading:
  - 100% - Paper
- Own (empirical) contribution will be rewarded.
- Plagiarism: No excuse policy
- If you do not pass or do not hand in your thesis, you must(!) write your thesis at our chair **the next semester**. This is a rule by the examinations' office.
- Formal requirements:
  - 50 pages (±10%) (without appendix)
  - Language: English
  - Detailed formal requirements: See the guidelines provided on our website.

General remarks on the topics

- We will be offering a total of nine topics.
- All topics are **empirical topics** (as are almost all Master‘s theses in the Finance Area).
- Most topics have a common structure: replication and extension.
- How do I get the **data**?
  - Accessible databases at the University of Mannheim
  - Data provided
  - Open source data from the internet / other researchers
- Which **software** should I use?
  - We recommend the use of Stata (due to features and support)
  - A license can be provided for the writing period
  - Other software can also be used upon agreement with your advisor (but you have to manage this all by yourself)

R1: Opioids and the Housing Market

Advisor: Kai Mäckle

Classification: Empirical Topic

Motivation:

- The opioid epidemic has claimed the lives of more than 450,000 people between 1999 and 2018
- Given its tremendous death toll, unsurprisingly, the opioid epidemic has caught the attention of major news outlets as well as academic research
- For example, prior research highlights real economic consequences in terms of reduced labor force participation, a deterioration of municipal finances, and depressed growth rates of firms from affected areas
- Custódio et al. (2021) investigate the effect of the opioid crisis on real estate prices. They document that county-level opioid prescription rates correlate negatively (positively) with house prices (delinquency rates)
- They also show that laws intended to limit the abuse of opioids lead to substantial increases in house prices

Tasks:

- Replication: the student should broadly replicate the main findings of Custódio et al. (2021)
- Extension I: is expected to explore whether the results of Custódio et al. (2021) hold when taking a broader set of policies into account
  - Policies: OxyContin reformulation, must-access Prescription Drug Monitoring Programs, and Pill Mill laws
- Extension II: extent the analysis to other economic outcome variables like labor force participation or aggregate production

Data:

- Data will be provided or is publicly available

R2: Prescription Opioids and Equity Markets: Evidence from PDMPs

Advisor: Kai Mäckle

Classification: Empirical Topic

Motivation:

- The opioid epidemic has claimed the lives of more than 450,000 people between 1999 and 2018
- Given its tremendous death toll, unsurprisingly, the opioid epidemic has caught the attention of major news outlets as well as academic research
- Opioid (ab)use might have various consequences for local financing conditions or firm performance
- Ho and Jiang (2019) explore the causal channel linking opioid prescription rates and firms' returns.
- Using several different empirical strategies, the results confirm that county-level opioid prescription rates have a negative impact on the asset price of firms headquartered in that county. Moreover, policies aimed at curbing opioid demand seem to impact asset prices positively.

Tasks

- Replication: broadly replicate the major findings Ho and Jiang (2019). Are there significant differences in firm performance based on the regional exposure to opioid prescription rates?
- Extension:
  - Stability check: investigate how the results change when considering portfolio sorts based on opioid supply data instead of opioid prescription data as done in Ho and Jiang (2019).
  - Explore whether there is a connection between the staggered passage of state-laws aimed at reducing opioid prescriptions and asset prices

Data

- CRSP/Compustat and publicly available data sources

R3: Knowledge Diffusion through Friendship Networks

Advisor: Kai Mäckle

Classification: Empirical Topic

Motivation:

- Social networks like Facebook, Twitter, or LinkedIn influence various social and economic outcomes like innovation, job search, social mobility, voting behavior, public health, international trade, migration patterns, or consumer preferences.
- In the past: data availability issues
- In 2018, Bailey et al. (2018a) introduced the publicly available "Social Connectedness Index," which captures the social connectedness between geographic regions based on friendship links on Facebook
- This innovation in data availability has spurred a growing literature on the economics of social networks.
- Recent studies focus on, e.g., housing markets (Bailey et al., 2018b; Bailey et al., 2019), access to capital (Kuchler et al., 2020a), the spread of Covid-19 (Kuchler et al., 2020b), Earned Income Tax Credit claiming behavior (Wilson, 2020), or knowledge diffusion (Diemer and Regan, 2020)

Tasks

- Replication: broadly replicate the major findings Diemer and Regan (2020). Does patenting activity spread through friendship networks?
  - Stability check: use conditional logit models instead of linear probability models
- Extension: explore whether one can foster the causal interpretation of the results by implementing instrumental variable regressions
  - Possible instruments for social connections: historical railway routes or interstate freeway connections

Data

- Publicly available or will be provided

R4: Climate Change and Return Predictability

Advisor: Santanu Kundu

Classification: Empirical Topic

Motivation

- The pricing of climate change risks in financial markets is important
  - Not only critical for allocating capital for a green transition, but
  - It also plays a key role in avoiding losses on savings and investments due to climate change.
  - Growing interest from academics and policy makers in understanding the extent to which climate change risks are priced into various financial markets.
- Hong, Li & Xu (2019) find that the severity of drought is not efficiently priced into stock markets.
  - Choi, Gao & Jiang (2020) seems to suggest that the pricing of climate change risks depends on whether investors pay attention to global warming.
  - Moreover, it is not clear to what extent the drought risk measured by Hong et al. (2019) reflects the risks associated with climate change itself.

Task:

The aim of the thesis is two-fold:

- Replicate the relevant findings of Hong et al., (2019). Do you also find evidence of market inefficiency?
- Investigate whether such return predictability exists in predicting international stock market premium by considering a time varying country-level climate change vulnerability index.

Data: Refinitiv-Datastream, Publicly available.

R5: Democracy and Stock Returns

Advisor: Santanu Kundu

Classification: Empirical Topic

Motivation

- Political economy has always played an important role in promoting business
  - a democratic political environment facilitates economic rights and thus leads to economic growth Friedman (1962)
  - Democracy also helps create checks and balances as well as flow of information, which are critical to the success of a free market economy
- Duong, Goyal, Kallinterakis, & Veeraraghavan (2021) find that underpricing of IPOs is lower in democratic countries.
  - Suggests that democracy helps facilitate the financing of new ventures, which is critical to the growth of an economy.
  - While democracy can help reduce IPO underpricing, it can also have an impact on stock returns.

Task:

The aim of the thesis is two-fold:

- Replicate the relevant findings of Duong et al., (2021). Do you also find evidence that democracy lowers IPO underpricing?
- Investigate whether democratic countries have higher or lower market risk premia.

Data: Refinitiv-Datastream, SDC Platinum and Publicly available.

R6: Adverse events and risk aversion

Advisor: Sven Vahlpahl

Classification: Empirical Topic

Motivation:

- Individuals respond emotionally to events that are not affecting them in an economically meaningful way.
- Also professional investors, who are typically assumed to be more rational and supposedly less affected by emotions.
- The large amount of assets under management of mutual funds (23 trillion USD (2017)) makes their biases have a potentially large effect on the financial markets → Economically important to understand their behavior
- Previous studies focus on events like natural disasters (Bernile et al., 2021), but other types of events also warrant consideration.
- Mass shootings have a traumatic effect not only on victims, but also on the wider community (Lowe & Galea, 2017).
- Thus, these events also have the potential to affect mutual fund managers and make them more risk averse.

Tasks

- Replication: Main findings of Bernile et al. (2021): Do natural disasters lead to a higher risk aversion of mutual fund managers?
  - Do the findings also hold for funds investing in the US?
- Extension: Employ similar methodology to study the effect of mass shootings.

Data

- Publicly available or will be provided

R7: Terrorist attacks, aviation disasters and mutual fund flows

Advisor: Sven Vahlpahl

Classification: Empirical Topic

Motivation:

- Individuals respond emotionally to events that are not affecting them in an economically meaningful way.
- Terrorist attacks are an example of such an event, because they spark fear in a population.
- Fear has been linked to risk aversion in financial markets, even if the fear is caused by something else (Guiso et al., 2018).
- The change in risk aversion has been found to affect capital flows into and out of mutual funds (Wang & Young, 2020).
- Similarly, aviation disasters also spark fear among individuals and could thus be argued to have a similar effect.

Tasks

- Replication: Main findings of Wang & Young (2020): Do mutual fund flows reflect risk aversion after terrorist attacks?
- Extension: Can a similar effect be shown for aviation disasters?

Data

- Publicly available or accessible for students at the University of Mannheim

R8: Patent Quality, Stock Returns, and Investor Underreaction

Advisor: Fabian Gamm

Classification: Empirical Topic

Motivation

- The quality of patents obtained by US companies varies substantially in their qualities
- Investors should consider this properly when valuing new patents
- Patents granted by busy examiners exhibit lower quality on average → easier to accept than to reject a patent (Oh and Kim, 2017)
- However, investors seem to underreact to this lower quality → examiner busyness of firms' patents negatively predicts future stock returns (Shu et al., 2021)
    - Prices corrected when investors learn about the true quality of the patents over time

Tasks

- Replication: Replicate the main findings Shu et al. (2021). Are busy patent examiners more likely to issue patents that are of low quality? Do firms that get patents issued by busy examiners have lower future stock returns?
- Extension:
    - What are potential moderators of this effect? (e.g. institutional ownership)
    - Examine alternative variation in the grant rates of patents (examiner leniency, sharing of personal characteristics, e.g. gender or ethnicity).

Data

- CRSP/Compustat and publicly available data sources (e.g. PatEx)

R9: Algorithmic Trading and Acquisition of Information

Advisor: Fabian Gamm

Classification: Empirical Topic

Motivation

- It is often argued that the recent increase in algorithmic trading improves price efficiency.
  - Quickly incorporate new information into market prices
- However, there might also be dark side of this development because there are two dimensions of price discovery
  1. Incorporating existing information into prices
     - Algorithmic trading is good
  2. Acquiring new information
     - Algorithmic trading makes it less attractive for investors to engage in **costly** information acquisition
- Consistently, Weller (2018) finds that price informativeness **before** value-revealing disclosures (e.g. earnings announcements) decreases if there is more algorithmic trading activity in a stock

Tasks

- Replication: Replicate the main findings Weller (2018). Do stocks with high algorithmic trading activity have less informative prices before earnings announcements?
- Extension:
  - Is there indeed less information acquisition in the pre-announcement period? (SEC Edgar downloads, Bloomberg)
  - Extend the findings to other value-relevant corporate events (dividend, M&A or product announcements)

Data

- CRSP/Compustat and publicly available data sources

Final Remarks

- Visit our website

  https://www.bwl.uni-mannheim.de/en/ruenzi/teaching/master-courses/masters-theses/

- There you will find a detailed description of every topic.
  - To make an informed choice briefly look at the most important parts of the most important paper of the respective topic (e.g. Introduction, main figure, main table)
- Pay attention to the deadlines (application via Ilias).