**Discipline**: General (especially accounting, finance, and management)

## 1. Language

English

## 2. Title

Empirical Corporate Sustainability Research

## 3. Lecturer

Prof. Dr. Peter Limbach (University of Bielefeld and CFR, Cologne)

## 4. Date and Location

October 4-7, 2027
Universität Bielefeld

## 5. Course Description

### 5.1 Abstract and Learning Objectives

In the realm of Environmental, Social, and Governance (ESG) factors, this course delves into the empirical issues and literature critical for understanding today's sustainability landscape and research. Amid pressing global challenges — such as biodiversity loss, climate change, inequity and human rights issues, and risks of digitalization — there is a growing recognition among firms, investors, and policymakers of the critical importance of integrating ESG criteria into decision-making processes. In response, academics have started producing tons of empirical research, which often grapple with considerable, partly ESG-specific issues of statistical inference. This course draws on research in the fields of accounting, economics, finance, and management to discuss a variety of pivotal ESG topics and to address the need for rigorous, data-driven ESG analyses. The course lays a sound foundation for your own sustainability research and can help you prepare for your future job.

Specific learning objectives:

- Understand the basics of sustainability (ESG) topics and applied empirical research
- Get an overview of the vast recent empirical ESG research and its theoretical concepts
- Dive into particularly important topics and current research papers
- Dive into the most important ESG-specific issues regarding data and econometrics
- Discuss conceptual and empirical issues of general ESG research topics and specific papers
- Improve your econometric as well as presentation and discussion skills
- Discuss and develop new research ideas

5.2 Content

Day 1-2: Basics

- The basics of empirical research
  - e.g., endogeneity, fixed effects and diff-in-diff, IV regressions standard errors
- Specific issues in empirical ESG research
  - e.g., dynamic endogeneity, identification, reusing natural experiments, valid instruments
- The basics of ESG
  - e.g., carbon emissions (absolute vs. intensities), ESG ratings, materiality, S and G pillar metrics
- ESG data and data issues
  - e.g., ESG data (incl. free E, S and G pillar data), issues with ESG ratings and emissions data, sustainability reports vs. other sources, using text to derive ESG measures

Day 2-3: ESG research I – ESG

- ESG ratings
- ESG-based pay and managerial myopia
- ESG disclosure, regulation, and climate change policies
  - e.g., (non-)disclosure regulation, voluntary disclosure, carbon pricing (i.e., ETS and carbon taxes) and carbon leakage, anti-ESG movements
- ESG and financial stakeholders
  - e.g., analysts, carbon returns, costs and benefits of ESG, investor engagement, risk and return, SRI and ESG investing, sustainable debt
- ESG and non-financial stakeholders
  - e.g., customers and employees, communities and political polarization
- Deep dives: Student presentations
  - Taking a closer look at important research papers
- Q&A and discussion of avenues for future research

Day 3-4: ESG research II – The Three Pillars

- The E pillar
  - e.g., biodiversity, carbon damages, climate change exposure, decarbonization investments and divestments, firm-specific carbon leakage, greenwashing
- The S pillar
  - e.g., diversity, equity, and inclusion (DEI), diversity washing, misbehavior, worker safety
- The G pillar and risks of digitalization
  - e.g., board representation and gender quotas, board composition, CEOs and TMTs, cybersecurity, voting
- The interplay of E, S, and G pillars
  - ESG trade-offs, the role of governance for the E and S pillars
- Deep dives: Student presentations
  - Taking a closer look at important research papers
- Q&A and discussion of avenues for future research
- Writing a very short research proposal and/or mock abstract (if time is left)

5.3 Schedule (including start and end time)

The course will be taught on four subsequent days, with four classes per day. Some classes will include deep dive presentations, Q&A sessions, and discussions about avenues for future research.

09:00 – 10:30: Lecture
10:30 – 10:50: Break
10:50 – 12:30: Lecture
12:30 – 13:50: Lunch Break
13:50 – 15:30: Lecture
15:30 – 16:00: Break
16:00 – 17:30: Lecture

On the first day (Monday), the course will start at 10:00 (and end at 18:30) so that at least some participants will have the opportunity to travel to Bielefeld on that very day.

5.4 Course format

On the first day, the instructor covers the necessary basics regarding both ESG and empirical research. In each class on the following three days, the instructor will use published and working papers in accounting, economics, finance, and management to present essential concepts, empirical approaches and flaws, and research findings regarding important ESG topics. Course participants will present assigned papers, with the presentations serving as deep dives on essential topics. The presentations shall include a summary of the paper as well as a short critical discussion of the contribution and empirical execution of the paper to spur further discussion in the classroom. After the course, those students who need to receive a grade for the course will have to write a research proposal on their own research idea.

## 6. Preparation and Literature

6.1 Prerequisites

Course participants should have significant interest in sustainability issues and empirical research, basic knowledge of empirical methods, and a background in business administration or economics or a related background (e.g., business informatics or industrial engineering). Specific knowledge in accounting, finance or management is helpful.

6.2 Essential Reading Material


- Edmans, A., 2023, Applying economics – not gut feel – to ESG, *Financial Analysts Journal* 79, 16-29.
- Hendratama, T., Broadstock, D.C., Sulaeman, J., 2023, ESG data primer: Current usage and future applications, SGFIN Whitepaper Series #2023-02.
- Grewal, J., Serafeim, G., 2020, Research on corporate sustainability: Review and directions for future research, *Foundations and Trends in Accounting* 14, 73-127.
- Larcker, D., Tayan, B., Watts, E., 2021, Seven myths of ESG, Stanford Closer Look Series.
- Nordhaus, W.D., 2018, Climate change: The ultimate challenge for economics, Nobel Prize Lecture, December 8, 2018.

Plus one of the following papers that will be assigned to course participants for deep dive presentations:

- Ahn, B.H., Patatoukas, P.N., Skiadopoulos, G.S., 2024, Material ESG alpha: A fundamentals-based perspective, *The Accounting Review* 99, 1-27.
- Baker, A., Larcker, D., McClure, C., Saraph, D., and Watts, E. (2024), Diversity washing, *Journal of Accounting Research*, Forthcoming.
- Bartram, S., Hou, K., and Kim, S. (2022), Real effects of climate policy: Financial constraints and spillovers, *Journal of Financial Economics* 143, 668-696.
- Bian, B., Li, J., and Li, K. (2023), Does mandating women on corporate boards backfire?, Working Paper University of British Columbia Sauder School of Business.
- Colmer, J., Martin, R., Muuls, M., Wagner, U.J., 2024, Does pricing carbon mitigate climate change? Firm-level evidence from the European Union Emissions Trading System, *Review of Economic Studies*, Forthcoming.
- Duchin, R., Gao, J., and Xu, Q. (2024), Sustainability or greenwashing: Evidence from the asset market for industrial pollution, *Journal of Finance* 80, 699-754.
- Fiechter, P., Hitz, J.-M., and Lehmann, N. (2022), Real effects of a widespread CSR reporting mandate: Evidence from the European Union's CSR Directive, *Journal of Accounting Research* 60, 1499-1549.
- Flammer, C., Hong, B., and Minor, D. (2019), Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes, *Strategic Management Journal* 40, 1097-1122.
- Fuchs, M., Stroebel, J., Terstegge, J., 2024, Carbon VIX: Carbon price uncertainty and decarbonization investments, Working paper, NYU.
- Hartzmark, S., and Shue, K. (2024), Counterproductive sustainable investing: The impact elasticity of brown and green firms, Working Paper Yale School of Management.
- Heitz, A., Wang, Y., and Wang, Z. (2024), The power of the people: Labor unions and corporate social responsibility, *Review of Finance* 28, 1833-1879.
- Houston, J., Lin, C., Shan, H., and Shen, M. (2023), How does ESG shape consumption?, Working Paper University of Florida Warrington College of Business.
- Leippold, M., Sautner, Z., and Yu, T. (2024), Corporate climate lobbying, ECGI Finance Working Paper N° 960/2024.
- Qian, C., Crilly, D., Lin, Y., Zhang, K., Zhang, R., 2023, Short-selling pressure and workplace safety: Curbing short-termism through stakeholder interdependencies, *Organization Science* 34, 358-379.
- Zhang, S. (2024), Carbon returns across the globe, *Journal of Finance* 80, 615-645.

6.3 Additional Reading Material

- Acemoglu, D., Akcigit, U., Hanley, D., Kerr, W., 2016, Transition to clean technology, *Journal of Political Economy* 124, 52-104.
- Angrist, J.D., Pischke, J.-S., 2009, Mostly harmless econometrics, Princeton University Press, New Jersey.
- Delmas, M., Blass, V.D., 2010, Measuring corporate environmental performance: The trade-offs of sustainability ratings, *Business Strategy and the Environment* 19, 245-260.

- Eccles, R.G., Miller Perkins, K., Serafeim, G., How to become a sustainable company, *MIT Sloan Management Review* 53, 43-50.
- Edmans, A., 2024, Rational sustainability, *Journal of Applied Corporate Finance* 36, 8-15.
- Giglio, S., Kelly, B., Stroebel, J., 2021, Climate finance, *Annual Review of Financial Economics* 13, 15-36.
- Gillan, S.L., Koch, A., Starks, L., 2021, Firms and social responsibility: A review of ESG and CSR research in corporate finance, *Journal of Corporate Finance* 66, 101889.
- Gillingham, K., Stock, J., 2018, The cost of reducing greenhouse gas emissions, *Journal of Economic Perspectives* 32, 53-72.
- Kolasa, T., Sautner, Z., 2024, Institutional investors and the fight against climate change, Swiss Finance Institute Research Paper Series No 24-26.
- Roberts, M.R., Whited, T., 2013, Endogeneity in empirical corporate finance, in: Constantinides, G.M., Harris, M., Stulz, R.M. (eds), Handbook of the economics of finance, Vol. 2A, Elsevier, Amsterdam.
- Starks, L., 2023, Presidential address: Sustainable finance and ESG issues—Value versus values, *Journal of Finance* 78, 1837-1872.
- Timilsina, G.R., 2022, Carbon taxes, *Journal of Economic Literature* 60, 1456-1502.
- Tol, R.S.J., 2023, Social cost of carbon estimates have increased over time, *Nature Climate Change* 13, 532-536.


Numerous additional papers will be discussed in the course and will be provided to course participants.

6.4 To prepare

In preparation for the course, students need to read the essential reading material and the assigned paper for their deep dive presentation. Students must prepare a 15-minute presentation of the assigned paper, which shall include a summary of the paper (i.e., motivation, theory, methodology, key results, learning – ca. eight slides) and a short assessment of the paper's contribution and empirical execution (one slide each). Also, students shall send in three questions concerning the empirics or concepts of ESG. The questions and presentations must be submitted no later than two days before the course starts.

## 7. Administration

7.1 Max. number of participants

20 participants

7.2 Assignments

See 6.4: Prepare a presentation and send in questions. Also, active course participation is mandatory.

7.3 Exam

Active course participation and the in-class presentation counts towards 50% of the course grade. A research proposal, which can be handed-in up to two weeks after the course ends, counts towards the other 50% of the course grade.

Students can submit their own research proposal in written format. The proposal must be about a student's own research idea on a course-related topic. It should span at least five pages (but not exceed

seven pages) (Times New Roman, font size 12, double-spaced) and must include an introduction with a convincing motivation, a rigorous literature review, a data section (which describes how to obtain data), a concrete plan of empirical tests (including identification), and a conclusion that names take-aways. A mock abstract will be helpful but is not mandatory.

7.4 Credits

The course corresponds to a scope of 6 LP/ECTS

## 8. Working Hours

| **Working Hours** | **hours** |
|---|---|
| Reading of essential and additional reading material | 32h |
| Preparation of in-class presentation and questions | 32h |
| Active participation during lectures | 25h |
| Review of lecture content and follow-up work on course days (read up on topics) | 16h |
| Write-up of research proposal | 75h |
| **SUMME** | **180 h** |