

Maximilian Fuchs

Copenhagen Business School
Solbjerg Plads 3
DK-2000 Frederiksberg

maximilian-fuchs.github.io
+45 50 11 00 49
mfu.fi@cbs.dk

I am a PhD candidate in financial economics at Copenhagen Business School and a research fellow at the European Central Bank. I have experience in banking, insurance, and research. My interests lie at the intersection of financial markets and climate change with applications to asset pricing and policy.

EDUCATION

Visiting Scholar

New York University, Stern School of Business 2023 – Today
Sponsor: Johannes Stroebe

Ph.D., Financial Economics

Copenhagen Business School 2020 – Today
Advisors: Claus Munk, Jesper Rangvid

M.Sc., Finance and Investments

Copenhagen Business School 2018 – 2020
Exchange Semester: Shanghai Advanced Institute of Finance, China 2019
Thesis: Asset Allocation of Swiss Pension Funds in a Low Interest Rate Environment
Advisor: Marcel Fischer

B.Sc., Business Administration and Economics

University of Passau 2013 – 2017
Thesis: Value-at-Risk Measurement Performance during Crisis Periods
Advisor: Niklas Wagner

PROFESSIONAL EXPERIENCE

Research Fellow

European Central Bank, Frankfurt 2023 – Today

- Research in DG Macroprudential Policy and Financial Stability on the pricing of climate risks in banks' loan portfolios. A draft is available soon

Climate Stress Test Modelling, Trainee

European Central Bank, Frankfurt 2022 – 2023

- I contributed to the economy-wide climate stress test with analysis on bank exposure to climate risks
- Analyzed developments in the European energy sector around the Ukraine crisis for households and firms

Climate Risk Pricing

Allianz, Munich 2021

- I developed a model for the pricing of climate risks based on internal hazard models for, inter alia, sea level rise and river floods

Market and Counterparty Credit Risk, Student Analyst

Nordea Bank, Copenhagen 2018 – 2019

- I tested pre-transaction simulations to evaluate sensitivities on varying Value at Risk measurement methods
- I managed to improve the data lineage of fixed income and FX securities

SKILLS

Programming	Expert: PYTHON, STATA, L ^A T _E X, SQL Intermediate: DASH
Databases	WRDS, DATASTREAM, ORBIS, CRSP, COMPUSTAT, 13F, BLOOMBERG
Languages	Native: GERMAN Fluent: ENGLISH Basic: MANDARIN
PhD Coursework	Empirical Asset Pricing with Machine Learning Application, Advanced Asset Pricing, Advanced Corporate Finance, Advanced Financial Econometrics

RESEARCH INTERESTS

Climate Finance, Asset Pricing, Financial Stability, Insurance and Pension

RESEARCH IN PROGRESS

2. **Climate policy action and the pricing of bank loans** (with Martina Spaggiari)

Using granular credit register data of Euro area banks, information on borrowers' greenhouse gas emissions and their countries' degree of climate action, we study whether banks price climate-related policy risk in their corporate loan portfolios. We find the risk of moving to a low carbon economy is priced only when polluting borrowers face high levels of climate action. The pricing of such transition risk is driven by loans originated after the adoption of the Paris Agreement and more pronounced for long maturity loans. Benefiting from bank-level survey results, we show that this effect is larger in terms of scope and magnitude if loans are provided by green banks who indicate to consider climate risks in their pricing processes.

1. **Polluters are short-lived: climate risk and the timing of cash flows**

I construct a measure of cash flow duration at the firm level and link it to carbon emissions of the same firm. Firms that generate their cash flows in the near term emit more carbon, reflecting that short-term cash flows are relatively less exposed to regulatory climate risks. This relationship leads to high correlations of emission and duration premiums. Return differences are driven by emissions instead of duration and disappear after controlling for changes in investors' climate concerns. These changes, together with the novel link between duration and emissions, provide an intuitive empirical explanation for the recent underperformance of value.

Policy work:

1. **The Road to Paris: Stress Testing the Transition Towards a Net-Zero Economy.**

(with Tina Emambakhsh, Simon Kordel, Charalampos Kouratzoglou, Chiara Lelli, Riccardo Pizzeghello, Carmelo Salleo, and Martina Spaggiari) *ECB Occasional Paper, 2023*

TEACHING & SUPERVISION

Average Evaluation: 4.5/5

Investments , M.Sc. Finance and Investments Taught exercise classes and TA for Claus Munk	2021 – 2022
Financial Markets & Instruments , M.Sc. Finance and Strategic Management Taught exercise classes and TA for Claus Munk	2022
Capital Market Theory , M.Sc. Applied Economics and Finance Taught exercise classes and TA for Claus Munk	2021
Bachelor & Master Theses , Supervision of theses in sustainable finance M.Sc. Advanced Economics and Finance (1x), Applied Economics and Finance (5x), B.Sc. International Business (1x)	2022 – 2023

PRESENTATIONS

- | | |
|---|---------------|
| 6. Climate Change Center, European Central Bank* | June 2023 |
| 5. Copenhagen Business School | April 2023 |
| 4. DGMF Seminar, European Central Bank | January 2023 |
| 3. World Finance Conference, University of Turin | August 2022 |
| 2. Nordic Finance Network Workshop, Stockholm School of Economics | May 2022 |
| 1. PhD Seminar, Copenhagen Business School | November 2021 |

* indicates presentation by co-author

GRANTS

- | | |
|--|------|
| 4. William Demant Fonden | 2023 |
| 3. Augustinus Fonden | 2023 |
| 2. Otto Mønstedts Fond | 2023 |
| 1. Nordic Finance Network (NFN) Travel Grant | 2022 |
-

OTHER

Affiliation & Memberships Member of OS-Climate (2021): Open-source climate data and analytics Affiliated with the Danish Pension Research Center (PeRCent)

Volunteering Speed Up Buddy (since 2020): Mentoring of undergraduate students without academic background in their families
Help for Ukraine, with Birgitte Weber (since 2018) Collection and distribution of donations for children and families in need in Lviv, Ukraine

REFERENCES

Claus Munk
Professor of Finance
Copenhagen Business School
Solbjerg Plads 3
2000 Frederiksberg
Denmark
cm.fi@cbs.dk

Jesper Rangvid
Professor of Finance
Copenhagen Business School
Solbjerg Plads 3
2000 Frederiksberg
Denmark
jr.fi@cbs.dk