MAGNUS HANSSON

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EDUCATION

University of Gothenburg, Gothenburg *Expected 2023*
PhD in Financial Economics
PhD course work in theoretical and empirical finance at Swedish House of Finance
Advisors: Erik Hjalmarsson and Andreas Dzemski

Lund University, Lund *June 2017*
MS in Economics
Thesis: "On stock return prediction with LSTM networks"

Lund University, Lund *June 2017*
BS in Mathematics
Thesis: "Feedforward neural networks with ReLU activation functions are linear splines"

Jönköping University, Jönköping *June 2014*
BS in Economics
Thesis: "Do thicker labor markets produce more matches?"
Exchange semester at University of St.Gallen
Participant in Model UN at the United Nations New York
Scholarship for top 5% GPA
Swedbank scholarship for study achievements

WORK EXPERIENCE

Combine Control Systems September 2017 - August 2018
Data science engineer *Gothenburg, Sweden*

· Artificial neural network modelling for virtual engine testing.
· Building a data analysis pipeline.

Jönköping University April 2016 - November 2016
Research Assistant *Remote*

· Programming a GARCH-Copula framework in R.

Nordea Bank Summers 2012, 2013, 2014
Analyst *Gothenburg, Sweden*

· Summer analyst at corporate retail.

TEACHING EXPERIENCE

PhD Micro I	Teacher Assistant 2019-2021, University of Gothenburg
MS Financial Econometrics	Teacher Assistant 2019-2022, University of Gothenburg
MS Intro Matlab	Teacher 2019-2022, University of Gothenburg
BS Thesis Advisor	Teacher 2021, University of Gothenburg

PRESENTATIONS

Computational and Financial Econometrics	King's College London, 2021
Machine Learning meets Econometrics (MLECON)	Virtual, 2021
GU Finance Seminar	University of Gothenburg, 2021
GU PhD Conference	University of Gothenburg, 2021

TECHNICAL STRENGTHS

Methods	Econometrics, Machine Learning, NLP, Numerical Analysis
Computer Languages	Python, Julia, R, Matlab, Bash, TypeScript/JavaScript, Stata
Tools	Linux/Unix, Vim, LaTeX

DISSERTATION CHAPTERS

Evolution of topics in central bank speech communication

This paper studies the content of central bank speech communication from 1997 through 2020 and asks the following questions: (i) What global topics do central banks talk about? (ii) How do these topics evolve over time? I turn to natural language processing, and more specifically Dynamic Topic Models, to answer these questions. The analysis consists of an aggregate study of nine major central banks and a case study of the Federal Reserve, which allows for region specific control variables. I show that: (i) Central banks address a broad range of topics. (ii) The topics are well captured by Dynamic Topic Models. (iii) The global topics exhibit strong and significant autoregressive properties not easily explained by financial control variables.