

## Carl Barkfeldt (Updated: October 2022)

Norwegian School of Economics  
Department of Accounting, Auditing and Law

Phone: +46 739 776 058  
E-mail: carl.barkfeldt@nhh.no

---

### EDUCATION

Ph.D. in Business Studies (Accounting and Finance), Uppsala University, Department of Business Studies, Sweden, 2016-2022

My doctoral dissertation – *Asset Mispricing* – is focused on capital markets, with an emphasis on machine learning and advanced statistics.

#### Courses

- Courses in Data Science (9 ECTS)
- Statistical Machine Learning (5 ECTS)
- Advanced Probabilistic (Bayesian) Machine Learning (5 ECTS)
- Deep Learning (5 ECTS)
- Courses in Econometrics and Statistics (30 ECTS)
- Courses in Mathematics (15 ECTS)
- Courses in Business Studies and Capital Market Research (30 ECTS)

M.Sc. in Economics and Business (Accounting and Finance), Stockholm School of Economics, Sweden, 2006-2012

Exchange Program, Richard Ivey School of Business, Canada, 2010

Undergraduate, Exchange Program, University of Western Ontario, Canada, 2009

Courses in Law and Logic, Stockholm University, Sweden, 2007-2009

### PROFESSIONAL EXPERIENCE

Assistant Professor (tenure track), Norwegian School of Economics, 2022–Ongoing

I am employed as an Assistant Professor at the Norwegian School of Economics, where my research and teaching focus on financial accounting.

Lecturer, Uppsala University, 2022

I worked as a Lecturer within the Department of Business Studies, and my teaching focuses on financial accounting.

Associate, Bonnier, 2014-2016

I worked in the Corporate Development and M&A team at Bonnier, a leading media conglomerate in the Nordic region.

Analyst, Nordea Corporate Finance, 2011-2014 (Internship, 2011)

I worked in the investment banking division at Nordea, a leading bank in the Nordic region.

Intern, Procuritas, 2010-2011

A private equity firm operating in the Nordic region. Collaboration and cooperation were essential parts of the work.

Analyst, Söderlind & Co, 2008-2010

A corporate finance boutique focusing on small companies in Sweden. Collaboration and cooperation were essential parts of the work.

## TEACHING EXPERIENCE

In general, my teaching focuses on financial accounting, including fundamental valuation (including banks and high-growth firms), cost of capital, value relevance, earnings management, econometrics (preparatory for thesis writing) and thesis supervision. My teaching included designing, preparing as well as giving lectures and leading seminars. As a teacher, I often relate the course material to my practical work experience in the financial industry (circa five years of experience in investment banking and corporate finance). This teaching style has been much appreciated by my students, both in terms of understanding the topics themselves as well as comprehending the practical usefulness. My total teaching experience corresponds to approximately six months of full-time teaching.

### Courses

Uppsala University, Department of Business Studies

- Financial Accounting (Externredovisning), 2FE414 (Bachelor)
- Economy, Accounting and Analysis (Ekonomi, redovisning och analys), 2FE032 (Bachelor)
- Supervisor for Bachelor's Thesis in Business Studies (in Accounting), 2FE983 (Bachelor)
- Supervisor for Master's Thesis in Business Studies (in Accounting), 2FE62, (Master)
- Accounting and Finance, 2FE411 (Bachelor)
- Managing the Growing Firm (Ledning av det växande företaget), 2FE885 (Master)
- Funding, Accounting and Control in Banks, 2FE834 (Master)
- Basic Corporate Finance (Grundkurs i företagsfinansiering), 2FE253 (Bachelor)

## WORKING PAPERS

1. "The Implied Cost of Capital: A Machine Learning Approach." C. Barkfeldt. *Presented at the FIRE Conference, Sigtuna, Sweden (Fall 2020).*

I implement and evaluate six popular machine learning algorithms<sup>1</sup> in order to forecast earnings for up to five years ahead based on a comprehensive set of predictor variables, including accounting, market, macro and industry variables. I show that machine learning algorithms can consistently outperform state-of-the-art benchmarks. In particular, I find that the machine learning algorithms Gradient Boosted Regression Trees and Artificial Neural Network (Deep Learning) produce the most reliable forecasts. Given the novelty of machine learning, the paper also describes each prediction algorithm as well as the entire machine learning pipeline for earnings forecasting (*i.e.* training, validation and testing).

2. "Accounting-Based Valuation and Market Efficiency Testing." C. Barkfeldt and R. Sandberg<sup>2</sup>. *Presented at the 42nd EAA Annual Congress, Paphos, Cyprus (Spring 2019) and FIRE Conference, Sigtuna, Sweden (Fall 2019).*

We implement fundamental values based on a highly flexible residual income valuation model that accommodates variation in the discount rates and abnormal earnings dynamics. The fundamental values are estimated on a firm-level to facilitate variability in both the cross-sectional and time-series dimensions. We represent the model in a state-space framework, and the estimation is done with the Kalman filter. Moreover, we find that a trading strategy based on the V/P-ratio is associated with abnormal returns based on the Fama-

---

<sup>1</sup> Elastic Net, Principal Component Regression, Partial Least Squares, Random Forest, Gradient Boosting and Artificial Neural Network (aka. Deep Learning).

<sup>2</sup> My main supervisor and Head of Centre for Data Analytics at Stockholm School of Economics.

French five-factor model. Given the high computational demand, the models were estimated in parallel on an Amazon Web Services cluster with a node count of several hundred.

3. “The Limits of Learning.” C. Barkfeldt.

I formulate a tractable analytical model and examine the bias-variance trade-off (or the Stein phenomena) in the context of investor learning. In particular, I analyze the implications on market prices and arbitrage opportunities.

4. “Estimating the Cost of Capital in Inefficient Markets.” C. Barkfeldt. *Presented at the FIRE Conference, Sigtuna, Sweden (Spring 2021).*

I compare different approaches to estimating the cost of capital and the robustness to market inefficiency in Monte Carlo simulations.

## **PROGRAMMING SKILLS**

- Advanced knowledge – Python (including the machine learning libraries; Scikit-learn, PyTorch, XGBoost, LightGBM, Optuna, Hyperopt, SciPy, Pandas, NumPy, etc.)
- Working knowledge – R, Matlab, Scala, Stata, VBA, Latex, Bash, and Amazon Web Services
- Databases and APIs – Compustat, CRSP, Bloomberg, FactSet, Thomson Reuter’s Eikon (incl. API) and Twitter API

## **LANGUAGE SKILLS**

- Swedish (Native)
- English (Advanced academic)