

## Undervisningsportfolio

**1. Undervisnings-CV: Oversigt over undervisnings- og vejledningsopgaver med angivelse af fagområder, omfang, undervisningsniveau (bachelor, kandidat, efter-/videreuddannelse, ph.d.). Type af undervisningsform angives, f.eks. forelæsning, holdundervisning, øvelse, vejledning, eksamination, censur, fjernundervisning, internetbaseret undervisning og evaluering af undervisning. Undervisningssprog angives.**

I have been working as Assistant Professor in AAUBS since June 2019. From September 2019 to March 2022, I have been responsible for 4 full courses offered by the School in the Master of Finance, and Economics. I also carry out supervision and additional tasks in relation to the Master of Finance. The complete list of courses I taught during my assistant professorship and before are listed and explained below:

- Empirical Finance, AAUBS, spring 2021, 2022. I am the course founder, module coordinator, and only teacher for this 5 ECTS mandatory course of the Master of Finance program. This course presents important statistical and econometric techniques for the analysis of financial data, with a focus on asset pricing. The teaching method is weekly 2-hour lectures followed by seminar sessions where the students are expected to actively participate. The course language is English. The examination is carried out by an oral exam supported by a written assignment, where the students have to use empirical financial data. The module is continuously evaluated by the Study Management. Due to the high amount of excellent positive student evaluations, the module was awarded the Best Module of Spring 2021 at AAUBS.
- Quantitative Methods in Finance, AAUBS, fall 2020, 2021, 2022. I am the course founder, module coordinator, and only teacher for this 10 ECTS mandatory course of the Master of Finance program. The aim of the module is to provide students with the tools necessary to conduct quantitative applications within the broad areas of finance. This module is based on Problem Based Learning, and the evaluation is based on a project to be developed by collaboration between the students and the lecturer. The teaching method is biweekly 2-hour lectures followed by supervision sessions. The course language is English. The module is continuously evaluated by the Study Management and excellent positive student evaluations have been obtained after every semester.
- Econometrics III, AAUBS, fall 2019, 2020, 2021, 2022. I am the module coordinator and only teacher for this 5 ECTS mandatory course of the Master of Economics program. The aim of the module is to teach the students to understand and apply the methods needed to interpret and work with economic time series. The teaching method is weekly 2-hour lectures followed by seminar sessions. The examination is carried out by an oral exam supported by a written assignment, where the students have to apply the techniques in economic data. The course language is English and Danish. The module is continuously evaluated by the Study Management and positive student evaluations were obtained.
- Financial Data Analysis, AAUBS, fall 2022. I am the course co-founder and co-module coordinator for this 5 ECTS mandatory course of the Master of Finance. The teaching method is based on weekly lectures, and the evaluation is based on specified assignments. This is a new course starting in the fall semester of 2022.
- Supervision of master's theses in finance, AAUBS, 2022. I am currently supervising 4 groups of Master's theses in Finance. The topics range from forecasting stock price volatility, portfolio analysis with volatility models, and the forecasting of energy prices.
- Supervision of semester projects: Scientific Challenges in Finance and Business Cooperation, AAUBS, 2021. I have supervised students for their semester projects in the modules Scientific Challenges in Finance, and Business Cooperation. Both are mandatory modules of the Master of Finance. Scientific Challenges in Finance is a PBL based module in which the student further explores a scientific topic within finance. Business Cooperation is an application of the finance education techniques in a company.
- Supervision of Bachelor theses in finance and economics, AAUBS, 2021, 2022. I have supervised several Bachelor theses at the Economics and Business Administration (HA) education. The topics were on stock evaluation and predictability. I supervised several Bachelor theses at the Economics Bachelor (Oecon) in 2020. The topics were monetary policy decisions and interest rates modeling.
- Academic evaluator for the applicants of Master of Finance, AAUBS, 2020, 2021, 2022. I have evaluated the academic qualifications of the applicants to the Master of Finance. This includes, for example, an analysis if the applicant's Bachelor degree is compatible to the requirements of admission in the Master of Finance. I have evaluated around 90 applicants per year.
- Teaching experiences during the PhD: During my PhD at Aarhus University, I worked as a seminar instructor for 4 courses: Time Series Econometrics (Spring 2016), Econometrics I (Fall 2016, 2017), and Quantitative Economics (Spring 2017). These courses were offered to the Master of Economics and the Bachelor of Economics and Business Administration students. I was responsible for grading compulsory assignments. The language of instruction was English.
- Teaching experiences before the PhD: Before starting my PhD program, I worked as a full-time Teaching Fellow at Federal University of Santa Catarina (Brazil) from April 2013 to December 2014. I had full responsibility for 9 semestral courses at bachelor level to Economics or Business students. The courses were: Microeconomics I (Spring 2013), Financial Markets (4 times between 2013 and 2014), International Economics (Fall 2013), Public Sector Economics (Spring 2014), Introduction to Economics (Fall 2014), Topics in Finance (Fall 2014). The teaching method for these courses was generally 90-minute lectures twice a week and optional exercises. The language of instruction was Portuguese (Brazil). In addition to the lecturing activities, I have participated in numerous Bachelor theses defenses as a member of the assessment committee.

**2. Administration og ledelse af uddannelse: Erfaring med uddannelsesledelse og –koordinering. Oversigt over studieadministrative opgaver, eksempelvis medlem af studienævn, studieleder, semesterkoordinator, fagkoordinator, akkreditering m.v. Erfaringer med planlægning af uddannelsesafvikling. Erfaring med udvikling af uddannelser. Deltagelse i udvalg, kommissioner m.m. vedr. uddannelse.**

I have full responsibility as module coordinator for the courses Empirical Finance, Quantitative methods in Finance, Econometrics III, and Financial Data Analysis. Moreover, I have completely planned and designed these courses session by session. I have actively participated in the Finance Research Group to help design and create the Master of Finance. Finally, I have been academic evaluator for applicants to the Master of Finance.

**3. Formel pædagogisk uddannelse: Oversigt over gennemførte universitetspædagogiske kursusforløb, PBL-kurser, workshops, udviklingsprojekter, kollegial supervision o.l. Udtalelse fra universitetspædagogikum. Deltagelse i konferencer om pædagogik og didaktik. Dokumentation i form af kursusbeviser, udtalelser m.m. vedlægges.**

I obtained formal pedagogical training from completing the Adjunktpædagogikum (university pedagogical programme for assistant professors) at AAU Learning Lab in 2020. The university pedagogical programme is 10 ECTS points. I have participated in the following activities during the Adjunktpædagogikum:

-5 compulsory courses: (1) Teaching at a PBL University; (2) Planning and Implementation of Group Instruction; (3) The Use of IT and Media for Learning and Teaching; (4) The PBL Group – Collaboration, Process and Supervision; (5) Planning, Development and Quality Assurance of Study Programmes.

- 3 electives courses: (1) Research Integration; (2) Copyright and plagiarism; (3) Digital Scholarship in University Pedagogy.

- Pedagogical/didactic supervision and teaching observation by an expert supervisor as well as a pedagogical supervisor: I was supervised by Lasse Bork (AAU Finance) and Antonia Scholkmann (AAU Learning) and had several meetings and teaching observations with them.

- English language certification: Completed in October 2020.

- Collegial sparring in small study groups, including observation of each other's teaching: I had several meetings and teaching observations with assistant professors colleagues from AAUBS.

- Producing a project report as a problem based learning: A project on PBL and online teaching in the finance education. An important element of the Adjunktpædagogikum is supervision and teaching observations. I had the opportunity to have several meetings with Lasse Bork and Antonia Scholkmann and they attended several of my lectures. Their feedback has given me many insights on how to improve my overall lecturing and my classroom management.

The pedagogical course was completed with a project report as problem based learning. I chose to discuss my experience in online teaching from a PBL perspective. I discussed challenges in online teaching, online supervision and my own evaluation of these competences. A positive evaluation from my supervisors on my report and my performance in the program is attached to this portfolio.

**4. Andre kvalifikationer: Bidrag til konferencer, debatindlæg, videnskabelige artikler om pædagogiske emner m.v. Kollegasupervision, redaktørarbejde, erfaring som mentor og anden kompetenceudvikling.**

I have participated in several conferences and workshops regarding teaching during my Assistant Professorship in AAUBS and at PhD level. For example, there were several workshops as part of the curriculum of the Adjunktpædagogikum. Moreover, I have cooperated with colleagues of the Finance group in joint peer supervision. Their feedback has provided important insights regarding my teaching style and presentation.

**5. Pædagogisk udvikling og forskning: Udvikling af nye kurser, undervisningsmateriale, undervisnings- og eksamensformer eller andet udviklingsarbejde. Didaktisk og pædagogisk forskning. Samarbejde med eksterne samarbejdspartnere.**

I have extensive experience with the development of new courses. I have been the sole responsible for creating the courses Empirical Finance, and Quantitative Methods in Finance, which are compulsory modules of the Master of Finance. I have written their module description, selected learning objectives, written the syllabus etc. I have also decided on the teaching method, and the examination process according to guidelines from the Study Administration. Given the positive evaluations from students, I believe I have been successful in the development of courses and teaching materials. I was also co-responsible for the development of the Financial Data Analysis course. I have written half of the module description and learning objectives. Finally, I am module coordinator for the Econometrics III course, having written its module description, selected learning objectives, written the syllabus etc. I have obtained positive student evaluations not only in my lecturing, but also in the curriculum of the courses. Overall, students have been satisfied with the size and logical order of the curriculum. For example, in Empirical Finance 2021, 73% were either satisfied or very satisfied with the logical order of the topics presented in the module.

## **6. Udtalelser om undervisningskompetencer fra foresatte og kolleger.**

### **Undervisningsevalueringer og eventuelle udmærkelser for undervisningsvaretagelse.**

I have obtained positive teaching evaluation in all my courses. For example, the Empirical Finance course was awarded the best module of Spring 2021 due to its very positive evaluations from students. Great evaluations were also obtained in Quantitative Methods in Finance and Econometrics III. I summarize below some metrics from the most recent available teaching evaluations:

-Empirical Finance, 2021: 93% good or very good in teacher's ability to communicate the knowledge. 76% good or very good in teacher's level of preparation and engagement. 86 % have benefited much and sufficiently from the module.

- Quantitative Methods in Finance, 2021: 75% good or very good in teacher's ability to communicate the knowledge. 80% good or very good in teacher's level of preparation and engagement. 100 % have benefited much and sufficiently from the module.

- Econometrics III, 2021: 75% sufficient or good in teacher's ability to communicate the knowledge. 75 % have benefited much and sufficiently from the module. Some student statements from the evaluations:

The teaching evaluation for Quantitative Methods in Finance Fall 2021 is attached to this portfolio. Positive evaluations were also obtained in my supervision skills in project modules. For example, in Scientific Challenges in Finance all students evaluated me as a very good supervisor.

Although I have obtained positive evaluations in all my courses, I recognize there are things to improve through every student evaluation. For example, I have learned that I should make slides and lectures available more in advance. I have tried when possible to upload lecture notes at least 2 days in advance. I also learned that I sometimes speak too fast and move around too much in class. I have tried to be mindful of these characteristics. I take student evaluations very seriously and try to learn from them and constantly improve my teaching. As another example, I have learned from the Quantitative Methods in Finance evaluation that the structure of supervision sessions should be more concentrated. Students want more sessions in the middle or end of the semester. I plan to implement such modification for the Fall 2022 semester. I have also received good feedback in my teaching skills from colleagues. My supervisors in the Adjunktpædagogikum were satisfied with my good and clear progression in teaching skills. They vouch for my openness and self-assessment to improve my teaching and communication. They were also happy with my close interactions with students.

## **7. Evt. personlige refleksioner og initiativer: Personlige overvejelser knyttet til undervisning og vejledning, ønsker til og planer for pædagogisk videreudvikling, planer for opfølgning på undervisningsevalueringer m.v. Refleksioner over eget pædagogiske arbejde, dets målsætninger, metoder og gennemførelse. I refleksionen analyseres og motiveres dine pædagogiske aktiviteter i forhold til din pædagogiske forståelse og de studerendes læring. Tanker om undervisningsformen på Aalborg Universitet, der har et stort indhold af gruppeorganiseret projektarbejde og problembaseret læring (PBL).**

My teaching philosophy is to reach a balance in my courses between theory and practice. My goal is to present the right amount of technicalities necessary for the students to carry out independent learning with critical thinking. Thus, they should be able to apply the methods and use them correctly in real-world problems. I believe the students should be capable of efficiently understanding the theoretical and practical aspects. In this sense, in every class I try to present some real-world applications.

My teaching method is a mix of lectures and exercise (seminar) sessions. I believe this combination works well as the students must apply the techniques that I present in the lecturing part. Every class should at certain degree work with some application of empirical data. My courses thus have a focus on the use of data, i.e. empirical, and implementation using relevant software. In this sense, the application is very important for the learning process. The examination process also takes into account the practical aspects of the learning process. I usually require students to answer a written assignment before the oral examination. The purpose of the written assignment is to make students work with technical methods with real-world data and draw relevant conclusions. In a broader sense this applies the ideas from PBL. Then, in the oral examination they answer theoretical and more practical questions.

I take all student and colleague evaluations very seriously and try to implement changes as soon as possible in my courses. Students mentioned in 2020 that they would like more applications during the lectures. I took this into account in 2021. In the future, I will also make changes in the supervision sessions in Quantitative Methods in Finance, so more supervision sessions are scheduled in the middle and end of the semester. I am constantly evaluating my courses and supervision to make improvements every year.

I have experience with Problem Based Learning through my employment at AAU and the pedagogical courses in the Adjunktpædagogikum. In the beginning, I found it a bit difficult to understand this learning framework because it differs from what I learned in Aarhus University and Federal University of Santa Catarina. However, I have learnt a lot during the pedagogical course and applying PBL in practice. Therefore, I now feel comfortable with how it works and how to implement it in my courses. For example, I apply PBL in the Quantitative Methods in Finance course via project and supervision. However, it is a constant learning process, and I am very interested in further developing my pedagogical skills.

I try to constantly develop my pedagogical skills, for example with participation in courses and seminars when relevant. I plan to continue developing my teaching and supervision skills further as Associate Professor. All in all, I find it very rewarding to teach students, and I am extremely motivated to present high-quality teaching and supervision. Finally, I am very interested in participating in more pedagogical courses and to continue learning the Problem Based Learning method applied by Aalborg University.

8. Andet.