

#### DOCTORAL RESEARCH

"Finite-Sample Sign-Based Procedures In Linear And Non-Linear Statistical Models: With Applications To Granger Causality Analysis"

My thesis consists of three essays on hypothesis testing and Granger causality analysis. The main topics under consideration are: (1) exact pointoptimal sign-based inference in linear and non-linear predictive regressions with a financial application; (2) sign-based measures of causality in the Granger sense with an economics application.

### WORK EXPERIENCE

OCT 2016 - JULY 2019 (PT)

# **Durham University** Teaching Assistant

I was responsible for leading the seminars for the following modules: Introduction to Financial Econometrics [2nd year UG], Fundamentals of Finance [PG] and Development Economics [3rd year UG]. I successfully maintained a highly positive feedback from both students and module leaders throughout my three years of teaching experience, as a result of which I was frequently approached by the university to partake in other teaching opportunities.

PRESENT, FROM AUG 2016 (PT)

### Aix-Marseille School of Economics Researcher

I undertook a part-time appointment at Aix-Marseille School of Economics, the aim of which was to assess the impact of executive constraints on the volatility and risk of listed firms in the MENA region. However, due to constraints imposed by my doctoral studies, the project was briefly halted until very recently.

JULY 2014 - SEPT 2014 (FT)

# Lowes Financial Management Investment Analyst Intern

In this summer job I was tasked with assessing the performance of funds and analyzing their respective strategies. I accomplished this by employing various methods, such as using performance ratios as well as ensuring that investment objective of the funds were aligned with the needs of our clients. I was further involved with researching the Peer-to-Peer lending market in the UK, its future prospects and investment opportunities.

FEB 2012 - AUG 2012 (FT)

## Southern Cross Healthcare Group PLC Credit Controller

I was involved in the solvent wind down of the Southern Cross Healthcare Group. I worked closely with the administrators of the company (namely Grant Thornton) and remained as the last controller to ensure a smooth transition of the care homes to the their new healthcare provider. 23A Graham Road, London, W4 5DR, UK

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British Citizen

#### **EDUCATION**

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Ph.D. in Econometrics 2015 - 2020

**Business School** 

Durham University, UK

M.Sc. in Economics & Finance 2014 - 2015

RANKED IST IN THE COURSE

**Business School** 

Durham University, UK

M.A. in International Financial Analysis 2012 - 2013

RANKED 2ND IN THE COURSE

**Business School** 

Newcastle University, UK

B.A. (HONS) in Accounting & Finance 2007 - 20II

**Business School** 

Newcastle University, UK

#### **AWARDS**

2016 Funding Award - Doctoral Office

Durham University

Outstanding Performance - Economics & Finance 2015

Durham University

Best Overall Performance - Finance Programs 2015

Durham University

#### CONFERENCES

Oral Presentation in Rabat (Morocco)

The Econometric Society - Africa

Oral Presentation in Cotonou (Benin) 2018 The Econometric Society - Africa

Oral Presentation in Seville (Spain) 2.016

Computational and Financial Econometrics

### **WORKING PAPERS**

Dufour, J.-M., Taamouti, A., Nobari, K. Exact pointoptimal sign-based tests for predictive linear and non-linear regressions Working Paper,

"Predictors of stock returns are often highly persistent with innovations that are correlated with the disturbances in the predictive regression of returns, which leads to invalid inference using the conventional tests. We propose point-optimal sign-based tests in the context of linear and nonlinear models that are valid in the presence of stochastic regressors. The proposed tests are exact, distribution-free, and robust against heteroskedasticity of unknown form. Further, they may be inverted to build confidence regions for the parameters of the regression function."

**Nobari, K.** Pair-copula constructions of point-optimal sign-based tests for predictive linear and non-linear regressions *Working Paper*,

"We extend the flexibility of the exact point-optimal sign-based tests by considering the entire dependence structure of the signs and building feasible test statistics based on pair copula constructions of the sign process. In a Monte Carlo study, we compare the performance of the proposed tests based on pair copula constructions by comparing its size and power to those of certain existing tests that are intended to be robust against heteroskedasticity. The simulation results maintain the superiority of our procedures to existing popular tests."

**Nobari, K.** Sign-based measures and tests of Granger causality *Working Paper*,

"We propose sign-based measures of Granger causality based on the Kullback-Leibler distance that quantify the degree of causalities. Furthermore, we show that by using bound-type procedures, Granger non-causality tests between random variables can be developed as a byproduct of the sign-based measures. The tests are exact, distribution-free and robust against heteroskedasticity of unknown form. We further suggest the VAR sieve bootstrap to reduce the bias and obtain bias-corrected estimators. A Monte Carlo simulation study reveals that the bootstrap bias-corrected estimator of the causality measures produce the desired outcome. Furthermore, the tests of Granger non-causality based on the signs perform well in terms of size control and power."

#### ADDITIONAL SKILLS

CERTIFICATES Passed CFA Level II Exam – CFA Institute

Qualified Financial Risk Manager - GARP

LANGUAGES Fluent in English, Persian and Russian

with an intermediate knowledge of Italian

INTERESTS Played the piano for 7 years and received

brief vocal training at the Rimsky-Korsakov conservatoire in St. Petersburg (Russia). In addition, I enjoy cooking and attending

classical concerts in my spare time.

## **COMPUTER LITERACY**

WORKING KNOWLEDGE Python, Microsoft Office, Fortran

Computer Hardware & Support

WORKING EXPERIENCE Matlab, R, LTEX, Linux, VBA,

High Performance Computing (SLURM), Stata, Eviews, SPSS

### **REFERENCES**

#### Professor. Abderrahim Taamouti

POSITION Professor in Economics

EMPLOYER Business School

Durham University

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WEBPAGE Prof. Abderrahim Taamouti

#### Dr. Majid Al Sadoon

POSITION Associate Professor in Economics

EMPLOYER Business School

Durham University

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## Professor. Jose Olmo

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EMPLOYER Economics Department

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