

Education

Doctor of Philosophy in Financial Econometrics, *Summa Cum Laude*

University of Piraeus, Greece, Department of Banking and Financial Management, Oct. 2010 – Jun. 2015

Dissertation title: “Essays on rationality, causality and explanation in economics and econometrics”

Master of Science in Mathematics & Finance, *Distinction*

Imperial College, UK, Department of Mathematics,

Oct. 2009 – Sep. 2010

M.Sc. project title: “Optimal strategies in soccer betting”, in collaboration with Man AHL and Betfair

Bachelor of Science in Mathematics

University of Athens, Greece, Department of Mathematics, (GPA: 7.6/10.0),

Sep. 2003 – Jun. 2009

Academic Experience

Department of Economics, University of Macedonia

Assistant Professor

Sep. 2022 – Present

- *Undergraduate Courses:* Statistics I & II, Financial Mathematics.

Athena Research and Innovation Center

Scientific Associate

Dec. 2021 – Present

- ERC Synergy Grant 2020 - Water Futures.

Department of Banking and Financial Management, University of Piraeus

Research Fellow

Sep. 2015 – Aug. 2022

- *Undergraduate Courses:* Applied Econometrics, Mutual Funds and Alternative Investments, Special Topics in Risk Management, International Financial Markets.
- *Postgraduate Courses:* Quantitative Methods, Portfolio Management.
- *PhD Courses:* Econometrics.
- *Seminars:* Bloomberg, Matlab, EViews, R and Gretl.

ICRE8: International Centre for Research on the Environment & the Economy

Senior Researcher

Mar. 2015 – Dec. 2018

- Climate change under uncertainty (Funding Body: ELKE AUEB)
- Decision making under ambiguity (Funding Body: ELKE AUEB)

Professional Experience

AssetWise Capital Management S.A.

Partner, General Manager

Jun. 2021 – Aug. 2022

- Strategic planning.
- Overseeing day-to-day operations and delegating responsibilities appropriately.
- Executive BoD member.
- Reviewing and improving organizational effectiveness by developing processes, overseeing

- employees, and creating innovative approaches for improvement.
- Fiduciary management and management of AssetWise's portfolios across mandates.

Head of Research & Portfolio Management Jan. 2020 – May. 2021

- Managed AssetWise's portfolios of individual clients, institutional clients and family offices.
- Executive BoD member.
- Fiduciary manager of the two largest occupational insurance funds in Greece.
- Consulted investment advisors on portfolio allocation and security selection.

Head of Research Jan. 2016 – Dec. 2019

- Supervised the design, development and implementation phases of various quantitative strategies for the selection of stocks, bonds and funds that constitute a significant part of the investment process.
- Designed and developed a real-time sentiment analysis visualization web tool using Twitter API, Apache Spark, Java and Python, to track sentiment and identify emerging investment themes worldwide.
- Developed a standalone investment platform (GUI) in Matlab that allows investment managers to make forecasts for various economic indicators using a wide range of econometric models, filter an initial universe of securities to identify interesting opportunities, build diversified portfolios using different optimization algorithms and generate reports.

Quantitative Analyst Jan. 2014 – Dec. 2015

- Developed and backtested a wide range of quantitative algorithms to identify investment opportunities.
- Developed numerous algorithms to automate the data processing, analysis and report building for the middle office.

EFG Eurobank

Research Associate Oct. 2010 – Dec. 2013

- Designed various econometric models for forecasting macroeconomic variables, equity, bond and commodity prices in EViews.
- Development and evaluation of various portfolio optimization strategies (Black-Litterman, CVAR) in R.
- Part of the team that developed a proprietary algorithm, in VBA, for rating and selecting mutual funds.

Skills

Machine Learning: linear models (linear regression, logistic regression, SVM), decision tree models (random forest, decision tree), neural networks, feature engineering, cross-validation, hyper-parameter tuning, ensemble methods (bagging, boosting, stacking)

Programming Languages: Python (numpy, pandas, scikit-learn, tensorflow, genism, nltk), R, Java, VBA

Statistical & Mathematical Packages: Matlab, EViews, Gretl, Mathematica

Databases & Financial Databases: MySQL, MongoDB, Bloomberg

Various: Apache Hadoop (Spark), Amazon's EC2, LaTeX, Microsoft Office

Languages: Greek (native), English (Certificate of Proficiency in English - Cambridge), German (Zentrale Mittelstufenprüfung)

Certificates

Chartered Financial Analyst (CFA), CFA Institute

Executive Certificate in Business Analytics: Decision Making Using Data, University of Cambridge, UK, Judge Business School

Private Equity and Venture Capital, Bocconi University, Coursera

Machine Learning, Stanford University, Coursera

Risk Management and Applications, University of Athens, E-learning

Academic Publications

Alternative Types of Ambiguity and their Effects on Climate Change Regulation (with Phoebe Koundouri, Nikitas Pittis, Nikolaos Englezos and Andreas Papandreou), *Open Res Europe*, 2:9 (<https://doi.org/10.12688/openreseurope.14300.1>), 2022. Research stemming from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme.

Ambiguity aversion, modern Bayesianism and small worlds (with Phoebe Koundouri, Nikitas Pittis, Nikolaos Englezos and Andreas Papandreou), *Open Res Europe*, 1:13 (<https://doi.org/10.12688/openreseurope.13196.1>), 2021. Research stemming from European Union's Horizon 2020 research and innovation programme. Among the top 50 articles on the platform.

Never Waste a Good Crisis: COVID-19, Macroeconomic Effects and the Way Forward (with Phoebe Koundouri and Nikitas Pittis), *Environmental and Resource Economics*, Volume 76, pages 447-517, 2020. Impact factor: 4.96 (2021).

Factor models of stock returns: GARCH Errors versus Time - Varying Betas (with Phoebe Koundouri, Nikolaos Kourogenis and Nikitas Pittis), *Journal of Forecasting*, Volume 35, Issue 5, pages 445-461, 2016. Impact factor: 2.63 (2021).

Working Papers

Counterfactual Prior, Bayesian Conditionalization and the Ellsberg Paradox (with Phoebe Koundouri and Nikitas Pittis).

Economic Policy Uncertainty and the Greek Economic Crisis (with Gikas Hardouvelis, Georgios Karalas and Dimitrios Karanastasis). Available at SSRN: <https://ssrn.com/abstract=3155172>. Presented at Stanford Institute for Theoretical Economics (SITE) on August 22, 2018.

The Rational Expectations Hypothesis within Bayesian Epistemology (with Nikitas Pittis).

Factor Models as "Explanatory Unifiers" versus "Explanatory Ideals" of Empirical Regularities of Stock Returns (with Phoebe Koundouri, Nikolaos Kourogenis and Nikitas Pittis).

Are Causes Reducible to Associations? The Inadequacies of "Granger Causality" (with Nikitas Pittis).

Do Media Affect the Aggregate Asset Allocation Decisions of U.S. Mutual Fund Investors?

Scholarships

Boston Consulting Group (2013-14), Attica Bank and Athens, International, Airport (2012-13), Hellenic Postbank (2011-12), EFG Eurobank (2010-11).

Selected Conferences & Seminars

6th International Conference on Applied Theory, Macro and Empirical Finance, 2022.

RCEA Conference on Recent developments in Economics, Econometrics and Finance, 2022.

Research Seminar Series, University of Macedonia, Department of Economics, 2021.

Uncertainty Seminar Series, ICRE8, 2015 & 2017.

DEOS Research Seminar Series, Athens University of Economics and Business, Department of International & European Economic Studies, 2014.

Academic Seminar Series, University of Piraeus, Department of Banking and Financial Management, 2011-2015.

Research Projects

Economic Policy Uncertainty Index: Construction and monthly update of economic policy uncertainty indices for Greece. Data available at http://www.policyuncertainty.com/HKKS_Monthly.html, <http://hardouvelis.gr/hkks-uncertainty-indices-for-greece/> and through Bloomberg Terminal.

ERC Synergy Grant 2020 - Water Futures: Development of a mathematical decision making framework to treat deep uncertainty and enable robust decision making with regards to the development of urban water systems under climate change and the selection of sustainability transition pathways.

Horizon 2020 Projects:

- **RECONNECT (Regional cooperation for the transnational ecosystem sustainable development):** Designed a choice experiment to assess the ecosystem services affected by the management of marine protected areas and a cost-benefit analysis to find the best possible intervention.
- **DAFNE:** Developed a theoretical framework to identify the impact of ambiguity aversion on decision making.

EIT Climate-KIC Projects: Involved in various research projects (DDP-Frame Phase, CE Beacons, X-KIC Water Scarcity and MEDFreeSUP). Data analysis, mathematical modeling and policy suggestions.

Data Science Competitions

M6 Financial Forecasting Competition (MOFC, sponsored by Google, Meta, J.P. Morgan and others): Forecasting the relative performance of stocks and ETFs and using such information to maximize investment returns. Ranked 2nd for the second quarter of the competition.

Optiver Realized Volatility Prediction (Kaggle data science competition): Forecast short-term volatility across stocks. Ranked in the top 5%.

Jane Street Market Prediction (Kaggle data science competition): Develop a quantitative trading strategy to maximize risk adjusted return. Ranked in the top 2%.

Help Navigate Robots (Kaggle data science competition): Recognize the floor surface by using data collected from Inertial Measurement Units (IMU sensors). Ranked in the top 5%.

Two Sigma: Using News to Predict Stock Movement (Kaggle data science competition): Use the content of news analytics to predict stock price performance and build a portfolio. Ranked in the top 25%.

Other

CFA Society Greece: Member of the University Relations Committee.