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### **Current Positions:**

Professor of International Finance and Banking, Athens University of Economics and Business, Dept. of International and European Economic Studies, Athens University of Economics and Business.

Tutor at the Greek Open University, Business Administration Program.

# **Previous Positions:**

2003-2012, Associate Professor of International Finance and Banking, Athens University of Economics and Business.

2003-12 and 2013-14, Tutor at the Greek Open University, Business Administration Program.

1996-2003, Assistant Professor of International Finance and Banking, Athens University of Economics and Business.

1992-94, Lecturer in Econometrics and Finance, Reading University.

1988-92, Teaching Assistant, London School of Economics, London University.

1989-92, Teaching Assistant, Birkbeck College, London University.

# Research Positions:

1991-93, Research Consultant, Banque Paribas, Capital Markets Group, London.

1989-92, Research Assistant, London School of Economics, Financial Markets Group.

# Degrees:

1992, Ph.D. in Econometrics and Finance, Birkbeck College,
University of London, UK, "The Analysis of Continuous Time
Exchange Rate Data: Testing and Information Processing".
1989, Msc in Econometrics and Mathematical Economics, London
School of Economics, University of London, UK.

1987, Certificate in Economics and Econometrics, Southampton University, UK.

1986, B.Sc. in Mathematics, National and Kapodistrian University of Athens, Athens, Greece.

#### Research Interests:

Asymptotic Expansions, Time Series Non-linear Models, Econometric Applications in Finance, Asset Pricing Models, Market Efficiency.

# Publications in International Journals:

- (2019) "Finite Sample Theory and Bias Correction of Maximum Likelihood Estimators in the EGARCH Model" (with D. Kyriakopoulou), Journal of Time Series Econometrics, Volume11, Issue 1.
- 2) (2018) "On the Validity of Edgeworth Expansions and Moment Approximations for Three Indirect Inference Estimators" (with S. Arvanitis), <u>Journal of Econometric Methods</u> 7-1, DOI 10.1515/jem-2015-0009
- 3) (2016) "Estimation and Properties of a Time-Varying EGARCH(1,1) in Mean Model" (with S. Anyfantaki), Econometric Reviews 35, 293-310.
- 4) (2015) "A Class of Indirect Inference Estimators: Higher Order Asymptotics and Approximate Bias Correction" (with S. Arvanitis), Econometrics Journal 18, 200-241.
- 5) (2014) "Valid Locally Uniform Edgeworth Expansions for a Class of Weakly Dependent Processes or Sequences of Smooth Transformations" (with S. Arvanitis), Journal of Time Series Econometrics 6, 183-235.
- 6) (2013) "Edgeworth and Moment Approximations: The Case of MM and QML Estimators for the MA(1) Models" (with D. Kyriakopoulou), Communications in Statistics-Theory and Methods 42, 1713-1747, DOI: 10.1080/03610926.2011.597919.
- 7) (2011) "Estimation and Properties of a Time-varying GQARCH(1,1)-M Model" (with S. Anyfantaki), Journal of Probability and Statistics, vol. 2011, Article ID 718647, 39 pages, 2011. doi:10.1155/2011/718647.
- 8) (2007) "UK Stock Market Efficiency and the Risk Premium" (with G. Vasilellis), <u>Multinational Finance Journal</u> 11, 97-122.

- 9) (2004) "An event study analysis of outward foreign direct investment: the case of Greece" (with F. Filippaios, and M. Papanastassiou), <u>International Journal of the Economics of Business</u> Vol. 11/3, 329-348.
- 10) (2004) "Time Dependence and Moments of a Family of Time-Varying Parameter GARCH in Mean Models" (with S. Arvanitis), <u>The Journal of Time Series Analysis</u> 25, 1-25.
- 11) (2002) "Moments and Dynamic Structure of a Time-Varying-Parameter Stochastic Volatility in Mean Model", <u>The Econometrics Journal</u> 5.2, 345-357.
- 12) (1998) "Testing Asset Pricing Models: the Case of Athens Stock Exchenge" (with S. Parissi) Multinational Finance Journal, 2, 189-223. Best Paper Award, 1998 issue.
- 13) (1998) "Testing for GARCH Effects: A One-sided Approach" (with E. Sentana) <u>Journal of Econometrics</u>, 86, 97-127.
- 14) (1998) "An EM Algorithm for Conditionally Heteroskedastic Factor Models" (with E. Sentana) <u>Journal of Business and Economic Statistics</u>, 16.3, 357-361.
- 15) (1996) "The Interaction between Frequency of Market Quotations, Spread, and Volatility in the Foreign Exchange Market" (with C. Goodhart), <u>Applied Economics</u>, 28, 337-386.
- 16) (1993) "Observations on the Swiss Franc/Dollar Spot Rate, via Quotations on the Reuters Screens" (with C. Goodhart), <u>Financial Markets and</u> <u>Portfolio Management 7.</u>
- 17) (1992) "Observations on the European Currency Unit/Dollar Spot Rate, via Quotations on the Reuters Screens" (with C. Goodhart), <u>ECU</u> Newsletter, June.
- 18) (1992) "Observations on the Dutch Guilder/Dollar Spot Rate, via Quotations on the Reuters Screens" (with C. Goodhart), <u>Bank-en Effectenbedriif</u>, June.
- 19) (1991) "Reuters Screen Images of the Foreign Exchange Market Continued: The Yen/Dollar and the Pound/Dollar Spot Market" (with C. Goodhart), The Journal of International Securities Markets, Spring.
- 20) (1990) "Reuters Screen Images of the Foreign Exchange Market: The Deutschemark/Dollar Spot Market" (with C. Goodhart), <u>The Journal of</u> International Securities Markets, Winter.

#### Books:

1) (2019) "Financial Econometrics" (in Greek) AUEB edition.

#### Other Publications:

- (2004) "Conditional Heteroskedasticity in Mean Models" (with S. Arvanitis) in <u>Quantitative Methods in Finance in Honor of Prof. A. Kintis</u>, Editor A. Refenes, Typothito, 2004.
- 2) (1999) "Central Limit Theorem for Squared MA Infinity Process" Problem 99.6.1 in Econometric Theory, 1999, p.901.
- 3) (1994) "Risk and Return in January: Some UK Evidence" (with E. Sentana and M. Shah) in <u>Econometric Analysis of Financial Markets</u>, Editors: J. Kaehler and P. Kugler, Physica-Verlag, 1994.
- 4) (1993) "No Evidence of Chaos but Some Evidence of Multifractals in the Foreign Exchange and Stock Markets" (with C. Vassilicos and F. Tata) in <u>Application of Fractals and Chaos. The Shape of Things</u>, Editors: A.J. Crilly, R.A. Earnshaw and H. Jones, Springer-Verlag, 1993.

# International Conferences:

- 16/12/2022: International Conference on Non-Linear Econometrics and Endogeneity Athens, Greece, "Estimation of Asymmetric Stochastic Volatility in Mean".
- 25-29/8/2014: Econometric Society European Meeting 2014 (ESEM) Toulouse, France, "A New Class of Indirect Inference Estimators: Higher Order Asymptotics and Approximate Bias Correction".
- 27-31/8/2012: **Econometric Society European Meeting** 2012 (ESEM) Malaga, Spain, "A New Class of Indirect Estimators: Higher Order Asymptotics and Approximate Bias Correction".
- 17-19/12/2011: **Computational and Financial Econometrics** (CFE11) London, UK, "Estimation of a Time-Varying EGARCH(1,1)-AR(1)-M Model".
- 29-31/10/2009: **Computational and Financial Econometrics** (CFE 09) Limassol, Cyprus, "Estimation of a time-varying GQARCH-M Model".
- 13/12-15/12/2007: **18<sup>th</sup> EC<sup>2</sup> Meeting**, Faro, Portugal, "The Asymptotic Expansions of MM and ML Estimators for MA(1) Models with Mean".
- 22/5-25/5/01: **The Econometrics of Financial Markets**, Delphi. Organizing Committee.

- 13/7-15/7/2000: **ESRC Econometric Study Group Annual Conference**, Bristol. "The Autocorrelation Function of Conditionally Heteroskedastic in Mean Models".
- 29/8-2/9/1998: **Econometric Society European Meeting**, Berlin, "UK Stock Market Efficiency and the Risk Premium". Also Chairperson in "Financial Econometrics II" Section IX-EC-210.
- 29/5-31/5/1998: International Conference in Economic Integration and Transformation, Toronto, "Testing Asset Pricing Models: The Case of Athens Stock Exchange".
- 24/8-28/8/1992: **Econometric Society European Meeting**, Brussels, "An EM Algorithm for Conditionally Heteroskedastic Factor Models".
- 30/3-2/4/1992: **Royal Economic Society Annual Meeting**, London, "An EM Algorithm for Conditionally Heteroskedastic Factor Models".
- 2/9-6/9/1991: **Econometric Society European Meeting**, Cambridge, "Testing for GARCH Effects: A One-sided Approach".

### Coauthors' Presentations

- 2012 Econometric Society European Meeting, Malaga Spain, "Stochastic Expansions and Moment Approximations for Three Indirect Estimators" (by S. Arvanitis.
- 2012 Econometric Society European Meeting, Malaga Spain, "Estimation and Properties of a Time-Varying EGARCH(1,1) in Mean Model" (by S. Anyfantaki)
- 2011 Seminar Series Dept. of Economics, University of Ioannina, "A New Class of Indirect Estimators and Bias Correction" (by S. Arvanitis)
- 2010 Seminar Series Dept. of Economics, Athens University of Economics and Business, "Stochastic Expansions and Moment Approximations for Three Indirect Estimators" (by S. Arvanitis)
- 10-12/12/2010 Computational and Financial Econometrics (CFE10) London, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 10-12/12/2010 Computational and Financial Econometrics (CFE10) London, "Estimation of time-varying GARCH-M models" (by S. Anyfantaki)
- 17-22/8/2010 European Meeting of Statisticians (EMS), Piraeus, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)

- 22-23/7/2010 Conference in Honour of Sir David F. Hendry, St. Andrews, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 7-11/7/2010 9<sup>th</sup> Conference on Research on Economic Theory & Econometrics (CRETE), Tinos, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 28/6-2/7/2010 10<sup>th</sup> International Vilnius Conference on Probability Theory and Mathematical Statistics, Vilnius, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 10-13/6/2010 The Rimini Conference in Economics and Finance (RCEF), Rimini, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 2009 Seminar Series Dept. of Economics University of Cyprus, "Stochastic Expansions and Moment Approximations for Three Indirect Estimators" (by S. Arvanitis)
- 20-31/10/2009 Conference on Computational and Financial Econometrics (CFE09), Limassol, "Estimation of time-varying GARCH-M models" (by S. Anyfantaki)
- 20-31/10/2009 Conference on Computational and Financial Econometrics (CFE09), Limassol, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 8-12/7/2009 8<sup>th</sup> Conference on Research on Economic Theory & Econometrics (CRETE), Tinos, "Edgeworth Expansions of the QMLEs in the EGARCH(1,1) Model" (by D. Kyriakopoulou)
- 2008 Seminar Series Dept. of Banking and Financial Management, University of Piraeus, "Stochastic Expansions and Moment Approximations for Three Indirect Estimators" (by S. Arvanitis)
- 11-14/7/2008 7<sup>th</sup> Conference on Research on Economic Theory & Econometrics (CRETE), Naxos, "Asymptotic Expansions of the MM and QML Estimators in the First Order Moving Average with Mean Models" (by D. Kyriakopoulou)
- 13-15/12/2007 EC<sup>2</sup> Meeting, Faro Portugal, "Asymptotic Expansions of the MM and QML Estimators in the First Order Moving Average with Mean Models" (by D. Kyriakopoulou)

2009-2010, Theory and Applications of Indirect Estimators Asymptotic Expansions, *Sponsor:* Basic Research Funding Program, PEVE 2. 2015-2016, Original Academic Publications, *Sponsor:* AUEB

# Refereeing for International Journals:

Communications in Statistics-Theory and Methods, Econometric Theory, Economica, Journal of Economics and Finance, Journal of Econometrics, Journal of Financial Econometrics, Journal of Statistical Theory and Practice, Multinational Finance Journal.

# Working Papers:

(2023) "Statistical Properties of Two Asymmetric Stochastic Volatility in Mean Models"

(2023) "Indirect Inference Estimation of Asymmetric Stochastic Volatility Models"

2014, "A Class of Indirect Inference Estimators: Higher Order Asymptotics and Approximate Bias Correction (Revised)" (with S. Arvanitis),

http://wpa.deos.aueb.gr/docs/GMR2star-revis.pdf

2014, "On the Validity of Edgeworth Expansions and Moment Approximations for Three Indirect Inference Estimators" (with S. Arvanitis) http://wpa.deos.aueb.gr/docs/bias-ii-ee.pdf

2013, "Asymptotic Normality of the QML Estimator of the EGARCH(1,1) Model" (with D. Kyriakopoulou)

http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2236055

2013, "On the Validity of Edgeworth Expansions and Moment Approximations for Three Indirect Estimators (Extended Revised Appendix)" (with S. Arvanitis) http://wpa.deos.aueb.gr/docs/bias-ii-revis-jspi-ta.pdf

2012, "Estimation and Properties of a Time-Varying EGARCH(1,1) in Mean Model" (with S. Anyfantaki)

http://wpa.deos.aueb.gr/docs/ar egarch2 new2.pdf

2011, "Stochastic Expansions and Moment Approximations for Three Indirect Estimators" (with S. Arvanitis), <a href="http://wpa.deos.aueb.gr/docs/bias-ii-f.pdf">http://wpa.deos.aueb.gr/docs/bias-ii-f.pdf</a>

2011, "A New Class of Indirect Estimators and Bias Correction" (with S. Arvanitis), http://wpa.deos.aueb.gr/docs/GMR2star.pdf

2011, "Bias Correction of ML and QML Estimators in the EGARCH(1,1) Model" (with D. Kyriakopoulou) <a href="http://wpa.deos.aueb.gr/docs/paper-bias-correction-oct.pdf">http://wpa.deos.aueb.gr/docs/paper-bias-correction-oct.pdf</a>

2004, "Aspects of the Geometry of Indirect Inference" (with S. Arvanitis).

2002, "GMM Bias of an Asymmetric Stochastic Volatility in Mean Model: A Monte Carlo Study" (with S. Arvanitis).

2002, "Moments and Dynamic Structure of a Time-Varying-Parameter Stochastic Volatility in Mean Model", D.P. 02-02, Intern. and Europ. Economic Studies, AUEB.

2001, "How does the Future Change our Past Views of the Present" (with E. Sentana).

2001, "A Family of Time-Varying Generalized Stochastic Volatility in Mean Models: Time Dependence and Higher Moments" (with S. Arvanitis) paper presented at CEMFI and University Carlos 3<sup>rd</sup> de Madrid (October 2001).

2000, "The Autocorrelation Structure of Conditionally Heteroskedastic in Mean Models", DEOS D.P. 00-07, www.aueb.gr/users/demos/WorkingPapers/hetln-dp.pdf

# Teaching:

Mathematics I (1<sup>st</sup> year undergraduate)

Quantitative Methods in Finance (undergraduate)

Econometric Applications in Finance (undergraduate, Masters)

Econometrics (Masters)

Econometric Theory (PhD)

Corporate Finance (Masters)

Financial Econometrics with Applications to International Finance (MSc) 2010-11, 2012-13

Econometric Topics (PhD) 2009-10, 2010-11, 2011-2012

### Ex-PhD students:

Sofia Anyfantaki (2011), currently in Research Division, Hellenic Competition Commission. PhD title: An Econometric Investigation of the Risk-Return Relationship.

Dimitra Kyriakopoulou (2011), currently in Research Division, Hellenic Competition Commission. PhD title: Asymptotic Expansions of Econometric Estimators in Time Series Models

Stelios Arvanitis (2003), currently Assistant Professor, Dept. Economics, Athens University of Economics and Business. PhD title: Properties concerning Models exhibiting Time Varying Volatility and Indirect Inference Estimators.

### PhD committee:

November 2014: Eudoxia Kakarantza "The use of refined asymptotic methods to correct the size of t and F tests in systems of econometric equations" Dept. of Economics, University of Ioannina.

March 2015: Xiuping Mao "Asymmetric Stochastic Volatility Models" Dept. of Statistics, University of Carlos III de Madrid.

July 2015: Panagiotis Samartzis "Essays on Rationality, Causality and Explanation in Economics and Econometrics" Dept. of Banking and Financial Management, University of Piraeus.

December 2015: Alexandros Louka "Essays on Limit Theorems for Martingale Transforms with Heavy-Tailed Innovations and the Limit Theory of the QMLE in Conditionally Heteroskedastic Models", Dept. of Economics, AUEB.

# Teaching notes:

Notes on Time Series Models (4<sup>th</sup> year undergraduates and MSc students) <a href="http://www.aueb.gr/users/demos/time\_series.pdf">http://www.aueb.gr/users/demos/time\_series.pdf</a>

Notes on Probability Theory and Statistics (MSc and PhD students) <a href="http://www.aueb.gr/users/demos/pro-stat.pdf">http://www.aueb.gr/users/demos/pro-stat.pdf</a>

Notes for September Statistics course (MSC in Banking and Finance students Professional) <a href="http://www.aueb.gr/users/demos/mbasta.pdf">http://www.aueb.gr/users/demos/mbasta.pdf</a>

Notes on Vector Spaces (1<sup>st</sup> year undergraduate students) http://www.aueb.gr/users/demos/vectors.pdf

# Languages

Greek (native speaker), English (excellent), French (medium)

### Administrative Positions:

2017-2020 Member of the Council of ADIP

2018-2019 Director of the (Executive) MSc in Banking and Finance.

2013-2018 Head of the Department

2005-2018 Vice Director of the (Executive) MSc in Banking and Finance.

2004-13: Director of EUROLAB, a Departmental Computer Lab.

2004-13 Departmental Director of the Students Internship Program.

2006-2007: Vice Head of the Department.

1997-2004: Vice Director EUROLAB.

# Other Professional Positions:

2001-2012: Independent Member of the Board of Directors, Rilken SA.