Report for Luca Sitzia

Based on the submitted documentation, I confirm that the candidate, Dr. Luca Sitzia, who applied for the competition for the academic title of Assistant Professor in the field of Quantitative Finance, meets all formal requirements prescribed by the relevant laws and guidelines, including the Higher Education Act and the regulations set forth by University of Donja Gorica.

Level of Education

Dr. Luca Sitzia has demonstrated a strong academic background, earning a PhD in Economics, Statistics, and Social Sciences.

He completed primary, secondary and high school in Cuneo, Italy. He graduated at Turin Polytechnic school in 2005 (Laurea) and 2007 (Laurea Specialistica). He worked on his thesis in cooperation with University of Washington (US), where he spent 3months visiting and advancing in his research.

He enrolled into the PhD program of Vilfredo Pareto School of Economics in 2008, where he focused on the curriculum of Statistics and Finance. During Phd, he completed extensive international training following advanced course in Economics, Finance, Statistics and Social Sciences. He spent one year in Paris enrolling at Université Paris Est Marne La Vallée where took a master in Applied Probability and Finance.

He participated to international research projects cooperating with Universitée d'Evry; he also followed the Finance Summer School in Ulm. Among other activities devoted to foster research and cooperation among PhD students, he was in the organization committee of the "Italian Doctoral Workshop in Economics and Policy Analysis" at Collegio Carlo Alberto (Torino).

In 2011 he defended his doctoral theses "Three essays on incomplete markets" at the faculty of Economics of University of Turin.

He covered the position of Research Assistant at Università di Torino for one year, proceeding in his research and cooperation with colleagues. At the same time, he has been asked to hold courses and tutorships to Master students, covering various topics such as stochastic calculus, numerical methods and programming labs, mathematics and finance.

His academic record and international exposure provide a solid foundation for his research and teaching career.

At the University of Donja Gorica, he is engaged as a lecturer in Quantitative Finance from 2011

Scientific Research Work

Dr. Luca Sitzia's research encompasses quantitative finance and risk management, with specific focus on statistical and stochastic modeling and machine learning applications. He has published several articles in high-ranking international journals, covering topics from modeling applications in finance to risk management frameworks. His active involvement in international research projects demonstrates his contribution to the global financial research community.

The two publications "Cumulative distribution of the stretching of vortical structures in isotropic turbulence" and "Large fluctuations of the nonlinearities in isotropic turbulence. Anisotropic filtering analysis" refer to the research activity that L.Sitzia performed during university in Polytechnic school, analyzing the statistical properties of fluid dynamics vortices, based on big data numerical simulation of turbulent flows.

Within his PhD theses "Three essays on incomplete markets" he started focusing on finance topics. In fact, this theses discussed the mathematical modeling of several types of incompleteness that are present in the financial markets, contributing to the study of the effects of optimization under partial information, and of the consequences of transactions costs on market efficiency. Part of the theses constitutes a contribution to the publication "The role of the information in the financial markets" as part of the Bachelier papers.

Even during his professional career in banking and risk management, he cooperated with academic researchers. In particular, he worked on the publication of "Multi-curve HJM modelling for risk management", where he contributed to propose and analyze a consistent model set up of interest rates, able to describe the multiplicity of rate curves available in the market, and suitable to be applied in the pricing of risk measures.

In recent years Dr. Sitzia's activity focuses on advanced modeling tools and machine learning techniques, with specific applications in finance and banking.

In the recent paper "A Neural Network Approach for the Estimation of Mortgage Prepayment Rates" he proposes, together with co-authors, an innovative prediction model based on Neural Network estimation, to forecast the propensity of customers to repay their loan before natural maturity.

As an expert in behavioral models, he is also participated to the publication of the "AIFIRM position paper on Interest Rate Risk in the Banking Book" where the latest developments of the market trends and regulatory landscape related to the interest rate risk for banks are discussed.

He is invited speaker to various seminars at Universities as well as international Industry meetings, as expert in behavioral modeling, machine learning and risk management.

Professional Work

Dr. Sitzia has substantial professional experience, holding a senior position at UniCredit Bank, where he leads projects on quantitative risk management. His work in regulatory projects, and his participation to international working groups as representative of the bank, such as ISDA and AFME, shows his commitment to advancing both academic and professional standards in the financial industry.

He joined several international conferences, such as the "KVA and CVA Forum" (2016) in London on collateral exchange and modeling, or the "QuantMinds and RiskMinds conference" (2023) in London, on the latest trends in finance and risk management.

In his professional activity, he takes part to various international events, roundtables and working groups. He has been providing seminars on "Behavioural Modelling and Artificial Intelligence in Financial Risk" at Università di Torino (2023 and 2024) where he introduces the topic of behavioral modeling to university students. He has been invited to the conference on "Tools of Behavioural Finance between Academia and Financial Markets" at Università di Milano (2023), to contribute to the discussion around behavioral finance between industry and academic research.

Recently he has been invited among the panelists of the "Discussion on Artificial Intelligence in Banking" in UniCredit (2024), to discuss risks and opportunities of the evolving Artificial Intelligence landscape.

Pedagogical Abilities

As a long-term instructor at the University of Donja Gorica, Dr. Sitzia has continuously demonstrated his pedagogical skills, teaching courses in Quantitative Finance. When preparing the seminars, he leverages on a comprehensive experience of tutorships, lessons, courses and labs that he has provided to students of various levels and background, throughout his career.

His course development integrates theoretical foundations with real-world applications, reflecting his comprehensive approach to teaching. His dedication to student success is evident through his commitment to mentoring and curricular innovation. He adapted the lessons to the evolution of the course format through time, and to the challenges posed by remote learning due to Covid pandemic.
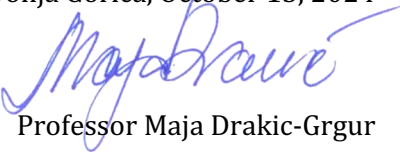
Verification of Scoring - Summary of Total Number of References by Fields of Activity and Points

Field of Activity	Number of Points
1. Scientific Research Activity	16.8
2. Professional Activity	18
Total	34.8

Opinion for Election to Title

Based on the documentation and results achieved by Dr. Luca Sitzia in teaching, scientific research, and professional work, I propose that he be appointed to the academic title of Assistant Professor in the field of Quantitative Finance. His qualifications and experience make him an excellent candidate for this position.

University of Donja Gorica, October 15, 2024

Professor Maja Drakic-Grgur