



Marie Skłodowska-Curie
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DCU (Business School)
Dublin City University

DCU Business School is looking to host an experienced researcher via funding through Marie Skłodowska-Curie Individual Fellowships. In order to secure funding, the experienced researcher must develop a proposal with the host for the September 9th, 2020 deadline.

Organisation Description

DCU is a comparatively young but ambitious Irish university whose distinctive mission is to transform lives and societies through education, research, innovation and engagement. This is accomplished by discovering, analysing, expanding, and disseminating knowledge, by developing creative and critical thinking and by fostering skills and learning. Excellence in DCU education and research activities has led to its ranking in the top of 1.5% of universities globally. The University is consistently ranked among the top young universities globally, appearing in the QS Top 50 under 50, and Times Higher (THE) Top 100 under 50. DCU has twice been named Sunday Times 'University of the Year' (2004, 2010).

DCU Business School is distinguished by achieving AACSB accreditation in 2016 (one of only three Schools in Ireland). DCU Business School engages in research collaborations and activities locally, nationally and internationally, with academic colleagues and industry, so that its research appropriately impacts on its key stakeholders.

Project idea and researcher opportunities

Research Field: Finance

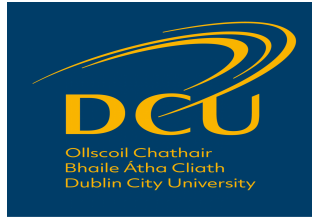
Title of Research Topic: Non-Normal (Higher Order Moment) Asset Price Behaviour

Short Overview: This research will investigate alternative non-normal dynamic models of asset prices and their application to a number of important industry related issues including hedge funds, pension funds and optimal portfolio selection. To-date, modelling of the leptokurtic distribution of financial asset price movements has primarily concentrated on modelling the time-varying nature of the conditional variance (as in the GARCH-type framework). By using methods that have the potential to capture tail risk, such as the residual augmented least squares method, it is possible to model asset prices and derivatives. The approach would have wide application to risk management, portfolio selection and option pricing, for example, higher order moments and risk factors; performance of hedge funds and pensions; stochastic volatility and option pricing.

Theoretical modelling and econometric estimation techniques developed within this research project will form not only the basis for the market-led applications but also for the scientific applications. The aim is to model financial markets by developing micro-economic models of the market, devising and examining stochastic processes with properties which



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qualitatively match market behaviour; by creating statistical tests which will compare such models with real financial markets data, and by using such models in portfolio management. A batch of alternative estimation procedures, such as L-estimators, M-estimators, R-estimators, will be used to distinguish between alternative micro-economic models; including conditional non-normal modelling, such as co-skewness and co-kurtosis.

Researcher Requirements

- The researcher must fulfil the MSCA-IF mobility and experienced researcher requirements.¹
- Applicants should have a PhD (or more than 4 years of research experience) in a relevant area of Finance or related discipline and demonstrate a promising track record of early research achievements.
- Interest and experience in research in empirical asset pricing and applied econometrics.
- Advanced knowledge and experience in using the statistical software R.

Application procedure

The applicant should provide:

1. A short CV
2. A one-page research proposal
3. A short statement with indication of why DCU and DCU Business School would be the best host institution for your research project

Contact information

If you are interested in applying for a MSCA-IF with Professor Liam Gallagher (Professor of Finance) DCU Business School, please email Dr Liam Gallagher (liam.gallagher@dcu.ie) and Dr Ines Perić (ines.peric@dcu.ie) as early as possible.

¹ **MSCA-IF mobility:** The researcher must not have resided or carried out the main activity (work, studies, etc.) in the country of the beneficiary for more than 12 months in the 3 years immediately before the call September 9th deadline (flexible 36 months in the 5 previous years if eligible for career restart or reintegration fellowship <https://www.iua.ie/irish-marie-curie-office/funding-calls/individual-fellowships/>)

Experienced researcher requirements: The researcher must have at least 4-years full time research experience or hold a doctorate before the September 9th deadline.