

Sabbatical/Research Leave Application 2025–26

Dr. Barry Quinn

Personal Details

Field	Details
Name	Dr. Barry Quinn
Staff Number	3045662
Core Disciplinary Research Group	Finance and Financial Technology
Fellow/Associate Fellow of M1.0	Yes
Present Appointment and Date of Appointment	Senior Lecturer in Finance, Technology and Data Science, appointed 2020
Date of First Appointment at QUB	01/10/2010

Details of Previous Sabbatical Leave

Dr. Barry Quinn has previously been awarded sabbatical leave for six months, 2018.

Period of Sabbatical Leave Applied For

Requested Period: Semester 1, 2025 (Monday, 4 August 2025 – Friday, 2 January 2026)

Plans to Be Away from Belfast

- **Placement Location:** Momentum One Zero, Belfast
- **Proposed Duration:** Full sabbatical period
- **Contingency:** Remote collaboration with Momentum One Zero staff and local fintech firms as necessary.

Current Commitments in Teaching and Administration

Teaching Commitments:

- AI and Trading
- Advanced Financial Data Analytics

Administrative Commitments:

- Co-Director, Finance and AI Research Lab
- Member, Academic Centre of Excellence for Cyber Security Education
- Lead Developer for QBS online analytics platform (Q-RaP)
- Programme Director for PG Cert in Fintech (starting 2025)

Coverage Plan:

- **Teaching:** Dr. Quinn has discussed teaching arrangements with his line manager. It has been agreed to reduce his teaching load to one module, while a former PhD student with expertise in the subject area will cover the larger module, ensuring continuity and quality. Preparatory materials for Semester 2 teaching will be developed in advance.
- **Administration:** Interim leadership for the Finance and AI Research Lab will be managed by a senior colleague in consultation with the Head of School.

Proposed Programme of Work

Title: Advancing Fintech Research and Building Cross-Disciplinary Partnerships in Northern Ireland

Overview: The proposed sabbatical will focus on two interconnected objectives: (1) producing high-quality academic publications in fintech, and (2) developing a cross-disciplinary research programme with local fintech firms, leveraging Momentum One Zero's unique position as a hub for financial technology innovation.

Programme Goals:

1. High-Quality Publications:

- Develop and submit two academic journal articles to top-tier ABS3/ABS4-ranked journals. Key themes include regulatory technology (RegTech) innovations, the application of AI to systemic risk in financial markets, and the development of a unifying theory of market manipulation for trader surveillance.

Topics include:

- AI adoption and regulatory compliance, a collaboration with FinTech SMEs such as Funds Axis Ltd and Pytillia Ltd.

- Safety and Assurance in Finance, co-led with Citigroup Belfast Tech Site Lead Carla McGlynn, focusing on market manipulation and trader surveillance.

2. Cross-Disciplinary Research Development:

- Collaborate with Momentum One Zero to identify research priorities relevant to local fintech firms, including AI-driven regulatory compliance and safe and assured AI anomaly detection for financial services.
- Organise workshops with local firms and Queen's University colleagues in computer science, data science, and law to scope interdisciplinary projects.

3. Mentorship and Knowledge Transfer:

- Engage PhD students in Momentum One Zero initiatives, providing real-world application opportunities for their research.
- Develop practical frameworks for integrating fintech innovation into academic teaching resources at Queen's University Belfast.
- Develop of a simulation-based module in trading, focusing on trader surveillance and market manipulation.

Measurable Outcomes

1. Academic Outputs:

- Submission of at least two peer-reviewed journal articles to leading ABS3/ABS4 journals by the end of the sabbatical period.
- Co-authorship opportunities with collaborators at Momentum One Zero.

2. Grant Development:

- Preparation of a major grant application for Innovate UK or UKRI, focusing on AI applications in fintech and interdisciplinary market manipulation analytics projects.

3. Capacity Building:

- Creation of a detailed research roadmap for collaboration between Queen's University Belfast and local fintech firms.
- Draft proposals for new MSc teaching modules based on research outcomes.

4. Public Engagement:

- Organisation of an international symposium hosted at Momentum One Zero, showcasing the intersection of academic research and fintech innovation, targeting local and international stakeholders.

Special Circumstances

There are no special circumstances requiring consideration.

Recent Research Activity

- **Publications:** 13 peer-reviewed outputs, including one ABS4 and ten ABS3-ranked papers. Recent highlights:
 - *Evolutionary Multi-Objective Optimisation for Portfolio Selection (IEEE Transactions on Evolutionary Computation, ABS4).*

Consultation

Director of Research Consultation: [Simon to complete]

Teaching and Administrative Arrangements Consultation: [Gareth to complete]

Signed: Dr. Barry Quinn

Date: 29/11/2024