Prof. Barry Quinn

Finance Leader | AI & Data Science Expert

Contact Information

Prof. Barry Quinn | Professor of Finance & Financial Technology
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Ulster University Business School, Belfast, N. Ireland | Born: 10 July 1973

Executive Summary

Professor Barry Quinn is Professor of Finance & Financial Technology at Ulster University Business School and Director of the Centre for Finance and Responsible Technology. The Centre is guided by three pillars: statistical rigour and intellectual humility; practical industry relevance; and responsible algorithmic innovation.

Barry is a Chartered Statistician and views econometrics as an applied statistical science. He focuses on decision-relevant evidence for markets, risk, and compliance—making assumptions explicit, quantifying uncertainty, and stress-testing results before drawing conclusions. He values methods that are transparent, reproducible, and auditable in real operational settings.

Before entering academia, Barry worked in financial markets, specialising in currency trading and liquidity management. He holds a PhD in Finance and an MSc in Artificial Intelligence (Distinction) from Queen's University Belfast, and works with external partners to ensure that research translates into robust practice rather than prototypes.

Core Value Proposition: - **Industry Experience**: Former currency trader and liquidity manager at Janus Henderson Investors - **Academic Excellence**: 14 peer-reviewed publications, Chartered Statistician - **Technology Leadership**: AI/ML expert with MSc in Artificial Intelligence (Distinction) - **Business Impact**: £2.4M+ research funding, multiple successful industry partnerships including collaborative doctoral partnerships

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Key Expertise & Skills

Technical Competencies

- **Econometrics as applied statistical science**: explicit assumptions, uncertainty quantification, stress-testing
- **Financial statistical learning**: time-series ML, anomaly detection, decision support for markets and trading

- **Causal analysis**: causal inference and causal ML for evaluation and decision-making under uncertainty
- **Risk analytics**: tail risk, stress testing, scenario analysis
- **Reproducible data science**: ETL, feature engineering, and governance for models used in operational contexts
- **Programming**: R, Python, statistical software development

Business Applications

- **Risk Management**: Systemic risk assessment, VaR modeling, stress testing
- **Regulatory Compliance**: AI-driven compliance solutions, computational approaches to financial regulation
- **Trading & Markets**: Currency trading, liquidity management, market microstructure
- **Strategic Analytics**: ESG analytics, performance measurement, scenario analysis

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Professional Experience

Business Impact & Industry Partnerships

Recent Major Projects (£2M+ Value)

PhD Scholarships - Centre for Finance and Responsible Technology (2025) | *£360K Department of the Economy NI* - Three PhD scholarships to establish the Centre for Finance and Responsible Technology - Two collaborative doctoral partnerships with local firms: Pytillia and Napier AI - Building research capacity in computational approaches to financial regulation

AI-Driven Regulatory Compliance (2024-2025) | *£250K UKRI/InnovateUK* - Partnership with Funds Axis Ltd developing AI solutions for investment management compliance - Reducing regulatory burden through automated compliance monitoring

Financial Risk Analytics Platform (2021-2023) | *£180K InnovateUK KTP* - Developed advanced tail risk and stress testing analytics with Funds Axis Ltd - Created commercial-grade VaR modeling and scenario analysis tools

AI Retail Analytics (2017-2019) | *£150K InnovateUK KTP* - Machine learning and predictive analytics for retail business optimization - Delivered measurable ROI improvements through advanced analytics

Industry Advisory & Consulting

- **Pytillia** - Collaborative Doctoral Partnership (PhD scholarship, £120K, 2025)
- **Napier AI** - Collaborative Doctoral Partnership (PhD scholarship, £120K, 2025)
- **Financial Conduct Authority** Tech Sprint Mentor (2023-present)
- **Citigroup Belfast** - Anomaly detection for trading data (2022-2023)
- **Multiple industry partnerships** - Computational approaches to financial regulation and compliance solutions

Education & Professional Credentials

Key Achievements & Recognition

Awards & Recognition

- **1st Place** - CFA European Quantitative Finance Awards (2018)
- **Advanced Data Science Professional** - Royal Statistical Society (2023)
- **Teaching Fellow** - Higher Education Authority (2012)

Research Impact

- **14 peer-reviewed publications** in top-tier finance and technology journals
- **£2.4M+ research funding** from UKRI, InnovateUK, Department of the Economy NI, and industry partners
- **International recognition** - invited speaker at major finance conferences

Leadership & Innovation

- **Director** - Centre for Finance and Responsible Technology (2024-present)
- **Co-founder** - Queen's Student Managed Fund (managing real investment portfolio)
- **Programme Director** - MSc Quantitative Finance (2018-2022)

Working Papers (Selected)

- Dai, Yongsheng, Quinn, Barry, Kearney, Fearghal, Wang, Hui (Submitted). *Amplifying Market Manipulation Detection Signals*. Submitted to *Economics Letters*. Manuscript EL66561.
- Dai, Yongsheng, Quinn, Barry, Kearney, Fearghal, Liu, Weilong, Spence, Ivor, Rafferty, Karen, Wang, Hui (Submitted). *Detecting Market Manipulation with Dual-branch Self-supervised Learning: A Unified Framework Integrating Frequency-informed Anomaly Synthesis and Domain-Specific Features*. Submitted to *Information Processing and Management*. Manuscript IPM-D-25-06138.
- Quinn, Barry (2023). *Explaining AI in Finance: Past, Present, Prospects*. arXiv preprint arXiv:2306.02773.
- Hannon, James (Corresponding Author), French, Declan, Quinn, Barry, O'Hagan, Adrian (Submitted). *Geospatial modeling of vehicle crime in Northern Ireland using computer vision to identify environmental factors*. Submitted to *Insurance: Mathematics and Economics*. Manuscript IME-D-25-00419.

Value Proposition for Industry

Immediate Impact Areas

1. **AI-Driven Risk Management**: Leverage cutting-edge ML for enhanced risk analytics
2. **Computational Approaches to Financial Regulation**: Develop data-driven compliance and monitoring solutions using advanced statistical and machine learning methods

3. **Market Intelligence**: Apply advanced analytics to trading and investment strategies
4. **Strategic Innovation**: Bridge academic research with practical business applications

Unique Differentiators

- **Proven Industry Track Record**: Real trading floor experience combined with academic rigor
- **Research-to-Practice Pipeline**: Translate cutting-edge research into business solutions
- **Regulatory Expertise**: Deep understanding of financial regulation and compliance
- **Technology Leadership**: At forefront of AI/ML applications in finance

Available for: Board positions, strategic consulting, research partnerships, executive roles in financial technology and computational approaches to financial regulation

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References and detailed project portfolios available upon request