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RegTech and SupTech: Disruptive Technology in Reporting, Regulation and Supervision

21–24 May 2019, Royal Berkshire Hotel, England

Course Chair

Kimmo Soramäki, Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, *Journal of Network Theory in Finance*

Series Advisor

Charles Goodhart, Professor Emeritus, London School of Economics

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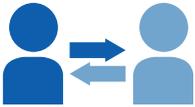
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Central Banking Publications

For over 25 years Central Banking Publications has been a trusted provider of independent, authoritative and relevant information, commentary and analysis to the central banking community. Central Banking's events division is the leading independent organiser of public policy seminars/training courses for the official sector. Since 1999, Central Banking has hosted roundtable seminars and training courses for over 6,000 senior policymakers from central banks, ministries of finance and financial regulatory agencies around the world. Senior officials from more than 140 countries have attended these meetings over the past decade and a half.

Dear Delegate,

In 2019, disruptive technological innovation continues to transform financial systems – and the regulatory and supervisory regimes that protect them. Cryptocurrencies are forcing regulators and supervisors to take sides, cyber threats bring new dimensions to systemic risk, and digitalisation is generating revolutionary platforms for financial crime and fraud.

Against this backdrop, central bankers increasingly recognise they can no longer afford to be fast followers. Indeed, proactive application of advanced technologies like Machine Learning or DLT also opens up unprecedented regulatory and supervisory possibilities. RegTech and SupTech offer new tools and frameworks to accelerate risk-based reporting, monitor systemic risk as well as supervise financial institutions based on Big Data. Increasingly, central bankers recognise that in order to make the most of these emerging opportunities, significant change is needed: at methodological, technical and institutional levels.

This seminar, 'RegTech and SupTech: Disruptive Technology in Reporting, Regulation and Supervision' is designed to equip delegates with the tools to meet these and other current challenges facing central bankers, regulators and supervisors with an active interest in regulatory and supervisory technology.

The roster of expert speakers will combine practical central banking experience and expertise in the technical aspects as well as views from private sector experts and leading thinkers from academia.

All discussions will be held in roundtable format to encourage participants to share their experiences and debate the pressing issues in their field.

This format, as more than 6,000 central bankers and regulators can attest, encourages delegates to quiz panellists, raise issues and discuss solutions to the specific challenges they face.

We look forward to welcoming you to Windsor on May 21.

Yours sincerely,

Kimmo Soramäki, Course Chair
Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, Journal of Network Theory in Finance

Learning outcomes:

By the end of the training course, participants will have gained new knowledge and a more comprehensive understanding of:

- The emerging trends in RegTech and SupTech
- Opportunities and risks of machine-executed regulation
- Case studies of regulatory Big Data uses and applications
- How to make the most of Machine Learning, DLT and Cloud in risk-based reporting
- Frameworks and strategies for effective regulation and supervision of crypto assets
- Hands-on exercises on applications of RegTech and SupTech for AML and cyber risk management
- Case studies of regulatory sandboxes, incubators and accelerators

Tuesday 21 May

Disruptive Innovation: The State of the Art

Implications and opportunities of the evolving regulatory and supervisory landscape

Patricia Jackson, Adviser on Risk Governance, Ernst and Young and former Head of the Financial Industry and Regulation Division, Bank of England

- The state of the start of national and international regulatory and supervisory regimes
- Key political and economic forces shaping the work of regulators and supervisors
- Unavoidable risks, critical challenges and emerging opportunities
- *Discussion:* How to supervise technological innovation?

RegTech and SupTech: technological foundations in 2019

Kimmo Soramäki, Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, Journal of Network Theory in Finance

- Evolution of financial, regulatory and supervisory technology
- The impact of RegTech and SupTech on the financial services industry
- Overview of key technologies in the areas of DLT, Big Data analytics, Machine Learning and Cloud Computing
- Examples of applications in regulatory reporting and compliance risk management

Machine readability in regulation and supervision: where are we? and where are we going?

Panel with **Nahiomy Alvarez**, Financial Markets Group, Federal Reserve Bank of Chicago and **Patricia Jackson**, Adviser on Risk Governance, Ernst and Young and former Head of the Financial Industry and Regulation Division, Bank of England

- The state of the art of machine-readable regulation
- Opportunities and challenges for risk-based supervision, data quality assessment, and closing of the gap between regulatory intention and interpretation
- The emerging role of cognitive compliance
- *Discussion:* Does machine-executed regulation represent a realistic and desirable goal?

About the course chair



Kimmo Soramäki is the founder and CEO of Financial Network Analytics (FNA) and the founding editor-in-chief of The Journal of Network Theory in Finance. He started his career as an economist at the Bank of Finland where he developed in 1997 the first simulation model for interbank payment systems. In 2004 while at the research department of the Federal Reserve Bank of New York, Mr Soramäki was among the first to apply methods from network theory to improve our understanding of financial systems. During the financial crisis of 2007-2008 he advised several central banks, including the Bank of England and European Central Bank, in modelling interconnections and systemic risk. This work led him to found FNA in 2013 provide solutions to monitor the complex financial networks that play a continually larger role in the world around us. Mr Soramäki holds a Doctor of Science in Operations Research and a Master of Science in Economics (Finance), both from Aalto University in Helsinki.

Wednesday 22 May

Adding Value: Combining Good Global Practice with Local Learnings

Using Big Data for nowcasting macro-economic indicators: the ECB-Google case study

Per Nymand-Andersen, Adviser, European Central Bank

- Overview of emerging trends in regulatory Big Data
- Opportunities and challenges of Big Data applications for financial stability and systemic risk analysis
- Examples of good practice in combining Big Data from the internet, administrative and commercial sources
- *Case study:* European Central Bank's use of Google search data in autoregressive now-casting models

Making the most of Machine Learning, DLT and Cloud in risk-based reporting

John Yeo, Senior Associate, Financial Conduct Authority (invited)

- Key features of effective risk-based supervision frameworks and strategies
- The impact of APIs (Application Programming Interface) and software platforms on regulatory value chain
- The role of Machine Learning, DLT and Cloud in market surveillance and risk prediction
- Tips for effective management of sensitive issues in the areas of security standards and confidentiality

SupTech for effective supervision of systematically important financial institutions

Jermy Prenio, Senior Advisor, Financial Stability Institute, Bank for International Settlements

- Overview of the D-SIB (domestically systemically important) and G-SIB (global systemically important) frameworks
- Examples of RegTech and SupTech applications for D-SIB and G-SIB identification and continuous oversight
- Implications for cooperation between the regulator and the regulated
- Tips to overcome issues of cross-jurisdiction communication and coordination

Applying Network Analytics in FMI oversight

Neville Arjani, Principal Researcher, Payments Canada

- The impact of disruptive technological innovation on the evolution of FMIs
- Applications of advanced technology in the areas of Network Analytics and Agent Based Models for FMI oversight
- Tips for collecting and effectively combining qualitative and quantitative statistics
- *Case study:* Making the most of stress testing scenarios and simulations

RegTech for FinTech: how to regulate and supervise privately issued crypto assets?

Panel with Jermy Prenio, Senior Advisor, Financial Stability Institute, Bank for International Settlements and John Yeo, Senior Associate, Financial Conduct Authority (invited)

- Overview of key risks (and opportunities) of privately issued-crypto assets
- Tips for effectively managing financial stability implications of 'Bitcoins' on both local and systemic levels
- Examples of cross-jurisdictional regulatory and supervisory cooperation and coordination
- *Discussion:* Central bank issued digital currencies as an alternative to Bitcoin



Windsor Training Series 2019:

Week One: NEW! Tech Week, 21st–24th May



FinTech: Innovation in Payments and Settlements

Course Chair: Richard Heckinger, former Vice President and Senior Policy Adviser, Federal Reserve Bank of Chicago



RegTech and SupTech: Disruptive Technology in Reporting, Regulation and Supervision

Course Chair: Kimmo Soramäki, Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, The Journal of Network Theory in Finance



RiskTech: New Opportunities in Treasury, Risk and Compliance Technology

Course Chair: Eric Wolfe, former Deputy Managing Director, Funds Management and Banking Department, Bank of Canada



Cyber Risk and Resilience: Strategies, Policies and Frameworks for Central Banks

Course Chair: Chris Gale, former Senior Vice President, Federal Reserve Bank of Boston



Big Data: Applications in Economic and Statistical Analysis

Course Chair: Per Nymand-Andersen, Adviser, European Central Bank

Week Two: Mandates and Functions in Focus, 28th–31st May



Strategic Planning and Management: Delivering Change and Meeting Objectives

Course Chair: Janet Cosier, former Adviser on Strategic Planning and Risk Management, Bank of Canada



Central Bank Board: Good Governance, Resilience and Enhancing Performance

Course Chair: John Jussup, former General Counsel and Corporate Secretary, Bank of Canada



Communications, Media Relations and Engagement

Course Chair: Marek Petruš, Communications Director at Institute for Economic Education (INEV), and former Director of the General Secretariat, Czech National Bank



Macro-prudential Policy: Implementing the Financial Stability Mandate

Course Chair: Maria Nieto, Advisor in the Directorate of Financial Stability, Regulation and Resolution, Bank of Spain



Good Practice in Banknote and Currency Management

Course Chair: Antti Heinonen, Chairman, Banknote Ethics Initiative

Thursday 23 May

Lab Day: RegTech and SupTech in Action

Workshop: RegTech and SupTech for AML and anti-fraud

Kimmo Soramäki, Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, Journal of Network Theory in Finance

- Key financial crime risks of the digital era
- Examples of Blockchain and Machine Learning applications in KYC and KYCC
- The role of international and public-private cooperation and coordination
- *Hands-on exercise*: Automated vs. manual Fraud and AML investigation

Workshop: visualising systemic risk

Gareth Peters, Chair Professor for Statistics in Risk and Insurance Department of Actuarial Mathematics and Statistics, Heriot-Watt University, Edinburgh

- Methods and practices for combining available technologies and digital platforms for visualising different types of systemic risk
- Tips to effectively analyse complex financial data and filter signal from noise
- Management of key operational and ethical risks and challenges
- *Hands-on exercise*: Mapping of cross-holdings between financial institutions and identification of early warning indicators

Workshop: detection, investigation and prevention of DDOS attacks

Kimmo Soramäki, Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, Journal of Network Theory in Finance and **Gareth Peters**, Chair Professor for Statistics in Risk and Insurance Department of Actuarial Mathematics and Statistics, Heriot-Watt University, Edinburgh

- Key features of Distributed Denial of Services (DDoS) attacks
- Implications for the work of central bankers, regulators and supervisors
- Applications of advanced technology in identification on DDoS attacks
- *Hands-on exercise*: Detection of anomalies in cyber networks

What delegates say about us

“ This was an excellent programme. Relevant and instructive. Also facilitated networking with new colleagues ”

Hamilton Stephen, Deputy Director, Research Department, Eastern Caribbean Central Bank

Friday 24 May

Towards Sustainability: Governance and Growth

Sandboxes, incubators and accelerators: coordinating innovation with regulatory compliance

Kordelia Kafetz, Head of FinTech Hub, Bank of England

- Strategies helping innovation comply with legal and regulatory requirements
- Issues of funding and resourcing
- Potential for cross-jurisdictional cooperation
- *Case study*: Bank of England's FinTech Accelerator – success stories and steps to be avoided

RegTech and SupTech governance: operational arrangements and institutional organisation

Jon Hasling Kyed, Deputy Director FinTech, Danish Financial Supervisory Authority (invited)

- Overview of areas where central banks and regulators need technical agility
- Examples of strategies, frameworks and indicators to assess suitability and needs of technological toolkit
- Tips for selection and coordination of in-house solutions with the outsourced ones
- *Case study*: Setting-up a FinTech/RegTech department

Delegate action points and course conclusion

Led by the chair **Kimmo Soramäki**, Founder and CEO, Financial Network Analytics and founding Editor-in-Chief, *Journal of Network Theory in Finance*

- Summary of the training course
- Discussion of the observed trends and case studies
- Application of learning points in the delegates' home organisations
- Preparation of action points

Past attendees include:

Banco De La Republica, Colombia • Bangko Sentral ng Pilipinas • Bank For International Settlements • Bank Indonesia • Bank Negara Malaysia • Bank of Algeria • Bank of Canada • Bank of Finland • Bank of Ghana • Bank of Haiti • Bank of Italy • Bank of Jamaica • Bank of Korea • Bank of Mexico • Bank of Mozambique • Bank of Portugal • Bank of Thailand • Bank of Uganda • Bank of Zambia • Bermuda Monetary Authority • Cayman Islands Monetary Authority • Central Bank of Aruba • Central Bank of Bahrain • Central Bank of Barbados • Central Bank of Belize • Central Bank of Brazil • Centrale Bank van Curaçao en Sint Maarten • Central Bank of Estonia • Central Bank of Ireland • Central Bank of Kenya • Central Bank of Lesotho • Central Bank of Liberia • Central Bank of Luxembourg • Central Bank of Malaysia • Central Bank of Nigeria • Central Bank of Oman • Central Bank of Republic Turkey • Central Bank of Sri Lanka • Central Bank of Swaziland • Central Bank of the Philippines • Central Bank of the Republic of Turkey • Central Bank of the UAE • Central Bank of Trinidad & Tobago • Deutsche Bundesbank • Eastern Caribbean Central Bank • European Banking Authority • European Central Bank • European Investment Bank • Federal Reserve Bank of Philadelphia • Federal Reserve Bank of Richmond • Federal Reserve Bank of St Louis • Hong Kong Monetary Authority • International Monetary Fund • Magyar Nemzeti Bank • Maldives Monetary Authority • Monetary Authority of Singapore • National Bank of Belgium • National Bank of Cambodia • National Bank of Poland • Norges Bank • Norwegian Ministry of Finance • Palestine Monetary Authority • Reserve Bank of India • Saudi Arabian Monetary Authority • South African Reserve Bank • State Bank of Pakistan • Swiss National Bank

Booking details

4-Day (3 nights) residential course

Course fee includes: accommodation at the Royal Berkshire, meals, refreshments, course documentation and a complimentary copy of the most recent issue of the Central Banking journal. Substitute delegates can be accepted should the registered delegate be unable to attend; please let us know prior to the event.

How to book

There is a booking form overleaf. Please use one of the following methods to book your place:

Online: <http://events.centralbanking.com/windsor>

Call: George Johnson on +44 (0)207 316 9136

Email: training@centralbanking.com

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The venue

Central Banking's 2019 Windsor Training Series will take place in the heart of Berkshire, the royal county with a history spanning over 1,000 years. Amidst its countless historical monuments, ancient forests and stunning horticultural displays, the Royal Berkshire Hotel is one of the historical seats of the Churchill family and, since 1971, the home to a traditional British country hotel. The venue (located less than 30 minute from Heathrow airport) is fully equipped for modern events and occupies a relaxed location offering guests the opportunity to step back from their day-to-day work, to think strategically and to learn from their peers in central banks around the world. It is also near to the sights of the Windsor Castle and the Great Park, the independent school of Eton College, and Runnymede – where the Magna Carta was signed.

