Events FIRAMIS

RegTech BDA Frankfurt

Location: FinTech Quartier Frankfurt

Agenda:

- Opening Dr. Jochen Papenbrock – The FIN-TECH project Branka Hadji Misheva, ZHAW Zurich University

- Perspective of a European regulator / supervisor on modern Big Data and AI approaches Gilles Bouvier, ECB

- Credit risk in banking Dr. Jan-Alexander Posth, ZHAW Zurich University

- Coding Session: • Use case II - Clustered scoring models • Use case III - Spatial regression scoring models Branka Hadji Misheva, ZHAW Zurich University Thomas Leach, University of Pavia, Italy

- Network / Clustering models + Explainable AI Dr. Jochen Papenbrock, FIRAMIS Dr. Dimitri Marinelli, FIRAMIS

- Panel Gilles Bouvier, ECB Julian Arevalo, EIOPA Dr. Michael Jünemann, Bird & Bird Carsten Zecher, KPMG Thorsten Seeger, P2P industry expert

Parties participating, their roles and their responsibilities: Allianz, Peer-to-Peer Finance Association, Frankfurt Finance Association, ECB, FinTechs, Banking Software companies, Deutsche Bundesbank, KPMG, Deutsche Börse, Mastercard, Landesbank Hessen Thüringen, Deutsche Leasing, partner and local Universities, Bafin, p2p lending platforms, Volksbank Mittelhessen, Deutsche Bank, Quoniam Asset Management, City of Frankfurt, Mastercard Advisors, Microsoft AI Academy

Digital@Investment, Department of Banking, Finance, Insurance, AI & Big Data, Data Science, Int. Finance, Fintech Team,Business development,Insurance science, Faculty of Business and Management, Supervisory Oversight and NCA Relations, Research and Development,Faculty of Economics and Business, Digital, Statistics and Econometrics, Department of Statistics and Econometrics, Digital Innovation Unit,Computer science,Management,Product and Sales Management,Business Strategy and Development, Credit Risk Management,Equities Research,Market Analysis and Portfolios,Risk, Computer Science,Sales and Product Management,Economics and Regional Development,Risk Advisory,Treasury,Advisory and Lending Platform, Executive Operations, Compliance,Business Consulting, Research Institute for Computational Methods,Hauptamt u. Stadtmarketing,School of Engineering, Department of Software Engineering and Artificial Intelligence (ISIA),

Computer Science, JGU, Senior Lecturer,Managing Partner, BDD, Director, Data Scientist, Student, Professor Supervisor, Managing partner,Post-doc researcher, Principal Supervisor,Researcher,Teaching and research assistant, Pre-Sales,,Associate Professor,Vice-Dean of BBS, Advisor , Consulting,Consultant, Head of Capital Markets Academy , CEO,Director,Data Science Student, Developer / Founder, Data Scientist-Schulungen & Innovation Manager, Machine learning intern, Senior Advisor,Datascientist , Projectmanager International Development and HR Director,   Head,Business Analyst, Principal Banker,Associate Partner, Capital Market Analyst / Data Scientist,Baltic Risk Manager, Ph.D. Researcher,Manager for corporate customers,Lecturer ,Junior Staff, Leadership Voyager,Product Manager, Managing Director, Manager, Junior Consultant, Senior Officer, Consultant, Associate Professor of Finance, BDO,Abteilungsleitung Presse, Researcher, PhD Student

How will they stay involved? Since many participants came from the FIRAMIS network and from the Techquartier Fintech Hub Ecosystem there is an ongoing dialogue and debate with them, many of the participants we connected on LinkedIn and Twitter to keep them posted, we granted access to the platform, we explained to them the ongoing plan and schedule of FIN-TECH and invited them to participate in future events, we emailed some of them afterwards to keep them involved and asked for feedback, we connected them to the fintech hub, we visited some of the participants later (ECB, EBA, EIOPA, banks, fintechs)

What is their feedback on the use cases presented?

Our impression was that the event was a success. We had many participants from a diversified background and good feedback. Discussion were lively. The project and the content were nicely introduced and highlighted by supervisors, practitioners and academics. Overall contents of the workshop was very high rated. People liked use case I best. The use cases' explainability, accuracy and utility was above average.

Here are some direct feedbacks from the participants:

'liked the first ECB presentation and the final discussion panel. '

'Use case II - Clustered scoring models was very interactive with the ability to access the case data online during presentation. This adds much value.'

'Very pleasant speakers and topics indeed! '

'This workshop was very insightful and gave me the opportunity not just to learn about current issues regarding Credit Risk, FinTech and P2P lending but also to get to know various scholars and practitioners. This is a great platform to gain a lot of valuable insights. I am thankful for having the opportunity to attend. '

'great organisation'

'ECB FinTech regulation was especially interesting'

Are the selected use cases in the end the ones that meet the expectations and requirements at most?
It seemed so. We received also some feedback on improvement on the use cases regarding more data to increase accuracy:

'In the context of SMEs, qualitative aspects and business cycle are significant for prediction of default. E.g. experience of management, management quality, sector competitiveness, capacity to adapt to disruptions in the sector, dependence on limited number of customers/suppliers, groups of connected borrowers, etc. The database supplied lacks this type of information. The use cases probably would have stronger predictive accuracy with these variables. '

We also received feedback on the eXplainable AI part that was presented form our side for the first time before it later became an AI use case:

'The perceived \black box\ nature of the neural networks methodology also decreases its perceived utility specially when improvements in accuracy are not significant vs more traditional \white boxes\ methodologies. The explainable AI might solve the \black box\ constrain but only if it can be translated into layperson language to explain to front-office, borrowers and non-experts why a certain borrower is considered more or less risky.'

SupTech Denmark BDA
Danish Financial Supervisory Authority
26th to 27th of August 2019

Agenda:

- Big Data Analytics Introduction of the technology; Opportunities and risks in the financial sector Jochen Papenbrock

- Analysing Complex Relationships Scatterplot diagnostics "Scagnostics"; Introduction to network models, complexity in networks Jochen Papenbrock + Peter Schwendner

- Financial Application of Network Analysis Correlation Influence Networks applied to European Sovereign Bond Markets Network Analysis in (Systemic) Risk Management and Fraud Detection Peter Schwendner + Jochen Papenbrock

- Machine Learning and Credit Risk Modelling SVM credit scoring, Boosting & random forests Jeremy Hu

- Deep Learning and LSTM with example of crypto market forecast Jeremy Hu

- The concept of Explainable AI (XAI) Jochen Papenbrock

Parties participating, their roles and their responsibilities:

Bank Division 1, Capital Market Analysis
Kontor for Fintech, Betalingstjenester og Governance,Consumer protection, Pension funds division, Fintech, Payment Services and Governance Division
Division for Fintech, Kapitalmarkedsanalyse, Economic Secretariat, Investor Protection Division

Special Advisor
Deputy Financial Inspector
Advisor
Chief Special Adviser
Financial Inspector
Head of section
Special Advisor
Specialkonsulent
Projektleder
Chief Special Advisor
Deputy Financial Inspector
Special Adviser

Student
Economist
Deputy Financial Inspector
Chief special advisor
Head of Section
Deputy director
Deputy financial inspector

How will they stay involved?
They received all slides presented plus additional material they asked for. They also planned to prepare data and use cases that we could analyse in a team and potentially discuss in the next session. We also agreed to spit the audience for the next workshop into more economics/law and tech/data science.
We gave a longer introduction to the project and explained how they can get involved, e.g. by the platform and attending other workshops. They planned to send people to other workshops as well what they did for example with Bundesbank.

What is their feedback on the use cases presented? Are the selected use cases in the end the ones that meet the expectations and requirements at most?

The good introduction on Big Data Analytics was appreciated. Audience liked the network analysis and clustering use cases, they saw that the method can be generalised and that the visual representation of complex information is highly useful.
XAI was high on their agenda and the subject has priority for them. They are now informed about the potential of XAI in banks and planned to include it in to their supervisory check lists with our help. They recognised that many other supervisors have XAI on their agenda.

SupTech Denmark AI
Danish Financial Supervisory Authority
February 6th - 7th 2020

Agenda:
Day 1

Data Science & Digital Society

Data management, digital economy, decision analytics

Prof. Wolfgang Karl Härdle, Humboldt University, Berlin
Prof. Cathy Yi-Hsuan Chen, University of Glasgow

AI/ML across banks in practice

Dr. Bernhard Hein, Ernst & Young Germany
Dr. Ansgar Koene, Ernst & Young Global

Potential topics of interest:

- How we perceive the maturity AI/ML field of play across our banking clients in practice, today (EY point of view)
  - Where do banks already use AI/ML techniques, and where would they like to do so
  - What slows the development down (perceived and actual technical and reputational impediments)
- AI/ML models vs. traditional modelling – differences and commonalities in the model lifecycle
- Suggested cornerpoints of an adapted ML/AI model risk control framework (where would EY take a closer look when auditing such models)
- Selected hot topics
  - Limitations of model transparency methods
  - Bias / Fairness between statistics and reputational risk

Financial Risk Meter (FRM)
Methodology, examples in American, European, Asian stock market and cryptocurrency market

Prof. Wolfgang Karl Härdle, Humboldt University, Berlin
Prof. Cathy Yi-Hsuan Chen, University of Glasgow
Dr. Jochen Papenbrock, Firamis, Germany

eXplainable AI (XAI) in Regulated Financial Markets

*2 use cases: XAI in credit assessment and
CRM (contagion risk monitor)*

Dr. Jochen Papenbrock, Firamis, Germany

Day 2

Use Cases

Dr. Jochen Papenbrock, Firamis, Germany
Prof. Wolfgang Karl Härdle, Humboldt University, Berlin
Prof. Cathy Yi-Hsuan Chen, University of Glasgow

Sentiment analysis for company news & announcements and its potential use case for market surveillance authorities

Holger Boschke

How to use Artificial Intelligence in order to enhance News Analytics

- Natural Language Processing and Ontologies
- Visualizing news data in order to deal with information overload

How to create fact based actionable insights with the help of sentiment indicators

- Creating sentiment indicators using current and historic news data
- Using sentiment indicators and algorithms based on them to enhance portfolio performance

How to use news analytics and sentiment indicators for market surveillance purposes
Discussing potential use cases (incorporating order book data) for market supervisory authorities

Coding Session

Dr. Jochen Papenbrock, Firamis, Germany
Prof. Wolfgang Karl Härdle, Humboldt University, Berlin
Prof. Cathy Yi-Hsuan Chen, University of Glasgow

Parties participating, their roles and their responsibilities:

Large Banks Division
Division for fintech
Fintech, Payments and Governance
BANK 3
Legal Division and International Team
Office of Investor Protection

Chief Advisor
Chief Special Advisor
Studnet
Special Advisor
Deputy Financial Inspector
Financial Officer
Legal Officer

How will they stay involved?
- Standard plus extended slides
- Coding and workshop session
- Use cases
- Platform
- Etc.

What is their feedback on the use cases presented? Are the selected use cases in the end the ones that meet the expectations and requirements at most?

Workshop above average
Best use case was XAI

Their own feedback (excerpt)
- AI/ML across banks: This presentation from EY was spot on what we, as more or less lay people, can comprehend. They focused in on the big topics and gave a few examples. Just enough detail to let us learn but not so much that we were left behind.
- xAI: This part is perhaps one of the more 'down to earth' parts, and was quite instructive.
- Day 2: I have heard from the few participants, that it was helpful in their further work.
- Our main goal was to make people interested in the subject, and all in all, I believe we succeeded.
- Jochen and The guys fr EY were great.
- The EY section, as well as the XAI section, was exactly what I hoped for.
- The FRM part was not relevant for me, or I think, the audiance in general. It would have been better suited for the national bank, and not us being the micro prudential supervisor.
- Presentations by EY and on XAI werevery good and directly relatable to the work of conduct supervisors.
- Hein & Koene from EY clearly made the best presentation of the day. It was interesting, relevant, understandable, had a hands on-approach with usable tips and knowledge for our daily work The presentation on XAI from Papenbrock was also relevant and interesting.
- presentation from Ernst & Young was excellent. It was exactly what I (as a member of our IRB team) was looking for.

- The consultans for EY and Dr. Jochen Papenbrock did a great job of presenting their topics.

SupTech Bundesbank BDA

26 – 27 June 2019,
Session 3 Network analysis Wolfgang Karl Härdle & Jochen Papenbrock

- Contribution of Dr. Jochen Papenbrock: A longer presentation on Financial Network Analysis similar with links to the presentation 'Workshop der Bundesbank zur Digitalisierung mit externen Referenten, 9. August 2018'
- Supporting the preparation, execution and postprocessing of the workshop including several visits to Bundesbank

For further details and feedback regarding this workshop please refer to the UBER documentation and contribution to the intermediate evaluation report. My impression was that participants found our presentation on network analysis for complex financial data very useful and saw its potential also in generalisation and visualisation as well as in practical use.

SupTech Bundesbank AI

10 – 11 February 2020

Day 1:

Session 2
Network analysis | Wolfgang Karl Härdle & Jochen Papenbrock

Day 2:
Session 7
eXplainable AI (XAI) in Regulated Financial Services | Jochen Papenbrock

Suptech workshop BDA of the ZHAW in Budapest
15th – 16th of May 2019
- Presentation:
  "Network Models and Practical Session II
  Introduction to network models and presentation
  of use cases with hands-on coding examples I"
  Dr. Jochen Papenbrock

- Representation of the FIN-TECH project to the supervisory authorities

For further details and feedback regarding this workshop please refer to the ZHAW documentation and contribution to the intermediate evaluation report. My impression was that participants found our presentation on network analysis for complex financial data very useful and saw its potential also in generalisation and visualisation as well as in practical use.

Bucharest Midterm-Workshop
15 November 2019
- Presentation:
  "eXplainable AI (XAI) in regulated financial services – Jochen Papenbrock, Firamis
  Panel session 1 – Credit and market risk in peer to peer lending"

For further details and feedback regarding this workshop please refer to the ASE documentation and contribution to the intermediate evaluation report. My impression was that participants found the topic XAI very important and several workshop participants approached us afterwards to discuss and confirm this impression.

Special Workshop Brussels organised by FIRAMIS
SPECIAL WORKSHOP FOR BANKERS & INSURERS on BDA AND AI
November 26th, 2019
With the friendly support of the Representation of the State of Hessen to the EU
In collaboration with EBF

Agenda:

Opening
Jochen Papenbrock & Prof. Paolo Giudici – The FINTECH project
Felix Holefleisch, Head of Unit- Hessian Ministry of Economics, Energy, Transport and Housing, Representation of the State of Hessen to the EU

Perspective of a European regulator / supervisor on modern Big Data and AI approaches
Gilles Bouvier, ECB

EBA's report on Big Data and Advanced Analytics
Andreas Papaetis, EBA

Big Data Analytics and Artificial Intelligence – risks and opportunities
Sébastien de Brouwer, EBF

The concept of Explainable AI
Jochen Papenbrock, FIRAMIS
Dimitri Marinelli, FIRAMIS

Panel
Moderator: Sebastian Fritz-Morgenthal, Bain & Company

Gilles Bouvier, ECB
Andreas Papaetis, EBA
Barak Chizi, KBC
Davide Corda, Intesa Sanpaolo
Peter Neu, DZ Bank

More information and feedback on this workshop can be found in this LinkedIn article created by workshop participants from DZ Bank and Bain&Company in the attachment 'DZ Bank_12.12.19.pdf' to the intermediate evaluation report as well as in the press release 'Brussels_special.pdf' also part of the intermediate evaluation report.

Parties participating, their roles and their responsibilities:

- European Central Bank
- AREA42 - Credendo
- CredaRate Solutions GmbH
- ESBG
- Professional Risk Managers International Association / FIS GLOBAL
- European Central Bank
- Austrian Savings Banks Association
- European Banking Federation
- National Bank of Belgium
- NVIDIA GmbH Germany
- European Commission
- European Banking Federation
- Deutsche Börse AG
- Deutsche Bank AG
- Landesbank Hessen-Thüringen
- DZ BANK
- Allianz SE
- ESBG
- NORD/LB
- Oliver Wyman GmbH
- Austrian Savings Banks Association
- Cicero Group
- European Association of Co-operative Banks
- ICLA In-house Competition Lawyers' Association
- AML
- BBVA
- European Banking Authority
- Intesa Sanpaolo
- Tetralog systems AG
- Banca MPS

- Bain & Company
- Ernst & Young GmbH
- ESBG-WSBI
- Intesa Sanpaolo
- KBC

Departments:
- Banking Supervision
- Innovation
- Internal Rating Models
- Digital, Retail and Markets Regulation
- Risk Management
- DG-MSIII
- European Affairs
- Policy
- Banking supervision
- Sales
- WWFO
- DG Connect
- Policy
- Department of Economics and Management
- Capital Markets Academy
- Regulatory Affairs
- Risk controlling
- Strategy & Corporate Development
- Group Regulatory and Public Affairs
- Regulatory Affairs
- Department
- Risk Control
- Commission
- Financial Services
- Brussels Office
- EU Public Affairs
- Retail Banking, Payments and Financial Markets
- Competition
- Risk and compliance
- European Public Affairs
- CEO Office
- Banking Markets, Innovation and Products Unit
- Group Data Office
- Partner
- Organizzation Area
- Economics
- Global Risk
- Machine Learning
- Management

- Intys FSA
- FSO Advisory - Quantitative and Analytics Services
- Regulatory Affairs
- European Regulatory and Public Affairs
- BDA and AI
- fintech partnerships
- KBC
- Bacon
- Algo Trading

Positions:

- Analyst
- Manager
- CEO
- Digital & Retail policy adviser
- Managing Director
- Supervisor
- Head
- Chief Policy Officer
- Financial & Risk Analyst
- Account Manager
- Sr. Solution Architect FSI-EMEA
- Policy Officer
- Policy Adviser
- Assistant Professor
- Team Head
- Regulatory Policy & Advocacy - Digital
- Head of portfolio methods
- Division Head, Managing Director
- Head of European Affairs Office
- Legal Advisor
- Senior Financial Services Correspondent
- Head of RiskLab
- Policy officer
- Partner
- EU Adviser
- Associate (focused on Fintech)

- Senior Adviser, Retail Banking and Consumer Policy
- ICLA Italia Chairman
- Software architect
- Head of EU Digital Public Affairs
- CEO
- Policy expert
- Head of Data Transformation
- Research Consultant
- Head of Process Innovation
- Professor
- Head of Global Risk
- Data scientist and quantitative analyst
- CLO
- Manager
- Partner
- Adviser
- Policy Adviser
- General manger big data, data analytics and AI
- partner
- GM AI and Big Data
- Producer
- Asst Vice President

How will they stay involved?

The event was intended, among other reasons, to connect each other and to strengthen the project network and ecosystem Workshop participants had the opportunity to connect to each other in interactive sessions like the panel discussion.

Also, we invited people to follow the project in the future and to acquire them as evaluators of the project use cases, granting access to the platform.

Back in Frankfurt we connected several of the participants by local physical meetings on by email/phone. They receive updates regarding the future activities of the project and how to engage.

What is their feedback on the use cases presented? Are the selected use cases in the end the ones that meet the expectations and requirements at most?

The event was a success. Many participants from a very heterogeneous background were involved. Several banks could be acquired to deliver a feedback on the XAI use case and the network analysis use cases. Some banks invited us to deliver follow-up presentations on these topics. To some of them it was to learn about the potential to open black box models and to explain them.

The event preparation had begun several months before the event and was directed to activate a large group of relevant people to follow the activity. We could not only reach banks and fintech but also groups representing the financial service industry on European level. We use the FIRAMIS and UNIPV network for as well as social media like LinkedIn as well as our meetings with ECB, EBA, EIOPA and other authorities

Here some direct feedback by the participants:

'great event'

'Excellent workshop - very instightful even for a non-technical person. Found extremely intersting the part presented by FIRAMIS on how to overocme trade off between accuracy and description in models.'

'Discussions were very good, mix between Roles was good.'

'Good overview of current project status and activities for new (fintech)participants'