

Fintech Future: Banking on Big Data

Webinar



19 January 2021
14:00 - 15:30 GMT

Register now

The banner features a dark blue background with a calendar icon showing '19', a clock icon, and a 'Register now' button. In the background, there is a blurred image of a stock market ticker and a person's hand pointing at a tablet.



“a 'data driven' approach is emerging across the financial sector affecting institutions business strategies, risk and operations with respective changes in the mind-set and culture still in progress”



Andreas Papaetis
Policy Expert, European
Banking Authority



Niamh Lawlor
Director of Analytics,
United Health Group



Michael Hom
Head of Financial
Solutions, InterSystems



Peter Oakes
Founder, Fintech Ireland &
Board Director, Regulated
Finserv

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Agenda

◦ 2:00pm - 2:10pm

Welcome & Introductions

◦ 2:10pm - 2:25pm

Implications For Irish Fintechs
Peter Oakes, Fintech Ireland



◦ 2:25pm - 2:40pm

Towards A Data Driven Approach
Andreas Papaetis, European Banking Authority



◦ 2:40pm - 2:50pm

Big Data in Practice
Niamh Lawlor, United Health Group



◦ 2:50pm - 3:00pm

How AI-Enabled Applications Can
Transform Operational Efficiencies
Michael Hom, InterSystems



◦ 3:00pm – 3.30pm

Panel Discussion



Implications For Irish Fintechs

2:10pm - 2:25pm

Implications For Irish Fintechs
Peter Oakes, Fintech Ireland



Background – Peter Oakes



BOARD DIRECTOR | ADVISORY BOARDS | EX-CENTRAL BANKER & REGULATOR | CHIEF RISK / COMPLIANCE | FINTECH | REGTECH | PAYMENTS | EMONEY | THE FINTECH50 | LAW | FUND RAISING

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Tracking 400 'fintech' network companies
– names, executives, business type



6,000+ Twitter followers @FintechIreland
◦ 14,000+ total twitter followers across all
fintech handles



220 Fintech Ireland Surveys Received
◦ <https://fintechireland.com/fintech-survey.html>



150,000+ web visitors a year



1,900+ network subscribers to Fintech
Ireland
◦ <https://fintechireland.com/get-involved.html>



90+ events (presentations at local &
international events)



1,880+ LinkedIn Company Page
Followers/ 1,465+ LinkedIn Group
Members
◦ <https://www.linkedin.com/groups/8321352/>
◦ <https://www.linkedin.com/company/fintech-ireland>



9,000+ audience at events



Irish Financial Services – by the numbers



10,000+ firms providing *finserv* in Ireland and overseas regulated by the Central Bank



3rd largest exporter of *finserv* from the European Union



250 of the world's largest *finserv*, including

- 50% of the world's top 50 banks
- 75%+ of the top global 20 banks



€4.98 trillion total funds AUA (14,000+ funds administered; 7.8k administered v 6.3k non-domiciled)



45,000 people employed directly in international *finserv*

- **7,000 work in fintech.** Payments & Regtech = two largest fintech sectors.

105,000+ technology sector employees



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Fintech Ireland Survey / Census

- We are conducting an ongoing Fintech Survey / Census

- for all fintech firms on the **Island of Ireland**
- 220 responses
- 24 questions straightforward questions
- 60% response rate on Freeform Feedback
- average time it takes to complete = 13 minutes



- <https://fintechireland.com/fintech-survey.html>



Credit / Lending

accelerated payments. | CREDITEXPO | CreditLogic | FIRST CIRCLE | Flender | :fund:it | FUND SME | FUTURE FINANCE | GRID FINANCE | invoicefair | Linkedfinance | LOANITT | luna connect | MortgageBrain | ORCA | PCS | PeeledFinance | PROPERTY BRIDGES | Sparh | Simpler | SUPPLY FINANCE | trezeo | ymba

Platforms

Assured | aspengrove solutions | CleverCards | CR2 | leveris | LoanGuru | PaceMetrics | UNITEK.AI | Sentenial | Sidero | Swoop | Treasure Data

Funds & Trading

Cardinal Analytics | fundcalcs.com | CHASINGRETURNS | Fund Recs | COALFACE | HARBINGER TECHNOLOGIES | Eagle Alpha | Peracton | EZOPS | yeDup | FRS | SIGNALS

Crypto & Blockchain

Bitcove.ie | BitEx.ie | Blockaviation | CONSENSYS | The SME Chain | nafasi | TRADEIX

FinOps

antuar | Payslip | ROCKALL | Quaternion | e-cfs | docuSoft | Global Shares | Finalysis

InsurTech

ClaimVantage | Describe Data | My Cyber Risks | FINEOS | PIPRATE | CodeEast | hublio | RELAY software | Carisma | MAJESCO | compare.ie

Accounting

ACCOUNTS | CASHANALYTICS | Surf | CASHBOOK | TaxHug | bankhawk analytics | calcfox | TheSaurusSoftware | big | PaycheckPlus | ezora | billfaster | SortMyBooks | Yendo

Payments

actusmobile | airpos | ALPHA | ASSURE HEDGE | AVISO | BARRACUDA* | Bige | Bitnet | Bluefin | cambrist | CashDesk.ie | Chevah Money | circuit | CIRCLE | currencyfair | ding | continuum | CROSSFLOW | CUSOP | Easy Payments Plus | COMM | ESCHE GROUP | FESTY | finclude | Fexco | fire | GLOBAL RISK TECHNOLOGIES | ioc | Importwise | Loylap | MONEYS JAR | MIFINITY | MONEX | MOZOBIL | NUAPAY | One4all | payhere | PaymentPlus | payzone | PIP IT | planet | prepaid FINANCIAL SERVICES | prommt | SafeCharge | savvy | SWIRL | lol. | touchtech | TransferMate | VESTA | viepal | Volteneo | Way Pay | worldnet



RegTech

AQMETRICS | Automated Intelligence | CalRisk | CORLYTICS | CORRIBPOINT | CYBER PRISM | Cyber Risk Aware | Daon | DATACTICS | EUROCOMPLY | fenergo | FinReg | FINTECO | FUNDS AXIS | MCO | phonovation | Planet Verify | PRIVITI | red flare | regbot | regulert | risksystem | sedicii | silverfinch | sysnet | spearline | taxamo | Think Evolve Solve | VIClarity | VIZOR | xcelerit | Xiir

Saving / Investing

MyWallSt | PennyOwl | MYFUTURENOW | TUCR | MyMoneyPlatform

Big Data / Analytics

ALLEGIAN | RYLIEN | COURTSDESK | CX INDEX | DataChemist | kx | geowox

Others

bisees | bqokers | brite:bill | change donations | COINDRUM | CONCEPT DAIRY | depositify | engageHUB | EPPIONE | immedis | Lightyear | loyalBe | MoneyMate | Money Point | Ostia | OpenBack | offr | pTools | trustap | UBANQUITY | xtremepush | Zaron

Emoney & Payment Services Firms Authorised in Ireland [V4 as at 23/12/2020]

Payment Services Directive

20 x APIs
3 x AISPs

17 x EMIs

Emoney Services Directive

2009



2013



2010



2015



2018



2019



2020



2011



2017



2015



Authorised in EEA & UK firms passporting (FoE & FoS) into Ireland until 31/12/2020:

Payment Institutions = c. 570

Electronic Money = c. 270

2017



2019



2020



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EU's Digital Finance Strategy (1/2) - Consultation

I. Ensuring a technology-neutral and innovation friendly EU financial services regulatory framework

II. Removing fragmentation in the single market for digital financial services

III. Promote a *well-regulated data-driven* financial sector

IV. Broader Issues

Consultation on a new digital finance strategy for Europe / FinTech action plan

Fields marked with * are mandatory.

Introduction

This consultation will soon also be available in 23 European Union official languages.

If you wish to respond in one of these languages, please wait until then to provide your replies.

1. Background for this consultation

Digitalisation is transforming the European financial system and the provision of financial services to Europe's businesses and citizens. In the past years, the EU and the Commission embraced digitalisation and innovation in the financial sector through a combination of horizontal policies mainly implemented under the umbrella of the Digital Single Market Strategy, the Cyber Strategy and the Data economy and sectoral initiatives such as the revised Payment Services Directive, the recent political agreement on the crowdfunding regulation and the [FinTech Action Plan](#). The initiatives set out in the FinTech Action Plan aimed in particular at supporting the scaling up of innovative services and businesses across the EU, for example through enhanced supervisory convergence to promote the uptake of new technologies by the financial industry (e.g. cloud computing) but also to enhance the security and resilience of the financial sector. All actions in the Plan have been completed.

The financial ecosystem is continuously evolving, with technologies moving from experimentation to pilot testing and deployment stage (e.g. blockchain; artificial intelligence; Internet of Things) and new market players entering the financial sector either directly or through partnering with the incumbent financial institutions. In this fast-moving environment, the Commission should ensure that European consumers and the financial industry can reap the potential of the digital transformation while mitigating the new risks digital finance may bring. The expert group on Regulatory Obstacles to Financial Innovation, established under the 2018 FinTech Action Plan, highlight these challenges in its report published in December 2019.

The Commission's immediate political focus is on the task of fighting the coronavirus health emergency, including its economic and social consequences. On the economic side, the European financial sector has to cope with this unprecedented crisis, providing liquidity to businesses, workers and consumers impacted by a sudden drop of activity and revenues. Banks must be able to reschedule credits rapidly, through rapid and effective processes carried out fully remotely. Other financial services providers will have to play their role in the same way in the coming weeks.

Digital finance can contribute in a number of ways to tackle the COVID-19 outbreak and its consequences for citizens, businesses, and the economy at large. Indeed, digitalisation of the financial sector can be expected to accelerate as a consequence of the pandemic. The coronavirus emergency has underscored the importance of innovations in digital financial products services, including for those who are not digital native, as during the lockdown everybody is obliged

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Weblink: https://ec.europa.eu/info/consultations/finance-2020-digital-finance-strategy_en



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EU's Digital Finance Strategy (2/2) – The Final Strategy



THE BENEFITS OF DIGITAL FINANCE



Better financial products for consumers and new ways of channelling funding to EU businesses, in particular SMEs.



Supports Europe's economic recovery strategy and opens up new channels to mobilise funding to support the Green Deal and the New Industrial Strategy for Europe.



Cross-border digital finance will enhance financial market integration in the Banking Union and the Capital Markets Union.



Strengthen Europe's ability to retain and reinforce our open strategic autonomy in financial services.

Enabling EU-wide interoperable digital identities in finance



At the beginning of the coronavirus pandemic, the use of financial applications in Europe increased by 72% in a week.

- Strict rules to identify customers and prevent money laundering.
- Pave the way for harmonised customer identification rules in EU Member States.
- Single digital identification across Europe to allow for fast and easy customer identification. Businesses would have a single solution. Customers would only need to identify themselves once.

Open finance: Promoting business-to-business data sharing in the EU financial sector and beyond

- Ensure that consumers have better access and control over their personal data.
- Allow access to more customer and business data which would enable financial services providers to offer more personalised services, address customer needs in a tailor-made manner.
- Enable people and businesses to compare products and find more cost-effective options.

Clear and comprehensive EU rules for crypto-assets



Crypto has potential to reduce payments and securities costs up to 50%.

- A European passport for crypto-assets with strong safeguards to ensure consumer protection and financial stability.
- Unleash the full potential of crypto-assets in order to lead to innovative payment solutions for consumers and new financing opportunities for businesses.
- Reap the benefits of crypto-assets while regulating their risks, such as thefts from digital wallets, fraud, use for money laundering.

Mitigating risks of digital transformation by strict and common rules on digital operational resilience



During the pandemic, cyberattacks on financial institutions have risen by 38%.

- All financial entities will be subject to operational resilience requirements to ensure a safe financial system across sectors and avoid a domino reaction.
- Critical ICT third-party providers (e.g. cloud computing services) will be subject to oversight to ensure they do not pose undue operational risks for finance.

Ensuring "same activity, same risks, same rules"

- From traditional market actors (banks, insurance and investment companies) to Fintechs and Bigtechs that provide payments, savings, insurance, everyone is subject to supervision.
- Supervisors will be better equipped to avoid risks in the financial system and therefore to better protect financial stability.

Source:

https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1684



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Big Data and Advanced Analytics Central Bank of Ireland

- As a knowledge-based organisation, how we gather and analyse the **data we receive from firms has become a critical part of the work we do**. Part of this is making sure that the data we receive is accurate and reliable
- Once we have this data, our ability to analyse **it is becoming an increasingly important part of our engagement**, providing us with better quality insights into the activities of the firms we supervise
- It is a **priority to continue to develop our data analytics capabilities** and related technology infrastructure
- In the entities we supervise, one of the key technologies driving innovation in insurance is **telematics and wearable technology**
- Again we see **data analytics** is playing a role
- **Central Bank of Ireland, Deputy Governor Ed Sibley 29 November 2019**



National Strategy on Artificial Intelligence

- Commitment to develop a National AI Strategy for Ireland.
 - expected to provide a high-level direction to the development, adoption and implementation of AI in Ireland
 - recognised that countries around the world are developing national AI strategies in order to harness opportunities presented by rapid advances in AI applications and manage the impacts, e.g. issues around:
 - ethics, inclusion and diversity in AI,
 - enterprise adoption of AI,
 - impact of automation on jobs, and
 - future skills requirements
 - consultation sort to understand views of the public on the opportunities, enablers and challenges for AI in Ireland
- Consultation closed 7 November 2019. No update on deployment of strategy post consultation on website



What do Central Banks and Regulators care about?

1. Financial Stability (Prudential / Conduct Risk)
2. Market Integrity (Prudential / Conduct Risk)
3. Consumer Protection (Conduct Risk)
4. Financial Crime (Prudential / Conduct Risk)



Central Bank has identified that it will act on the emerging risks, opportunities and challenges presented by **financial innovation** and the **rapidly evolving technological landscape** within which it, the firms and individuals that it supervises and regulates operate



Four priorities for the digital transformation of the EU financial sector (September 2020)

- **Priority 1** - tackle fragmentation in the Digital Single Market for financial services
- **Priority 2** - ensure that the EU regulatory framework facilitates digital innovation in the interest of consumers and market efficiency
- **Priority 3** - create a European financial data space to promote data-driven innovation, building on the European data strategy, including enhanced access to data and data sharing within the financial sector
- **Priority 4** - address new challenges and risks associated with the digital transformation



A.I. White Paper (EC November 2020)

- By 2024, the EU Commission aims to:
 - working together with the ESAs, ensure clarity as regards supervisory expectations about [how the legislative framework on financial services should apply to artificial intelligence applications](#)
 - put in place the necessary conditions to enable the use of innovative technologies, including [RegTech and SupTech tools](#), for supervisory reporting by regulated entities and supervision by authorities
 - promote the [sharing of data between supervisory authorities](#)
- EU Commission will also, as set out in the White Paper on artificial intelligence, will promote the use of AI by proposing significant investments at EU level and put forward a new AI regulatory framework reflecting *'our European values'*



A.I. White Paper (EC November 2020) (2/2)

Ecosystem of Excellence

The AI White Paper proposed six actions to build an ecosystem of excellence on AI in Europe. Skills and excellence in research emerged as important topics.

All actions ranked by share of respondents that considered them (very) important



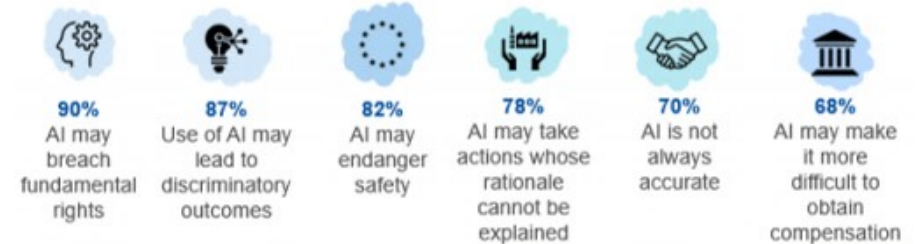

352
Business and industry

96% of business and industry found partnerships with the private sector (very) important.

Trust

Respondents' main concerns related to both fundamental rights and safety, followed by issues linked to the functioning of AI.

All concerns ranked by share of respondents that considered them (very) important



Get in Touch

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Towards A Data Driven Approach

2:25pm - 2:40pm

Towards A Data Driven Approach

Andreas Papaetis, Policy Expert, European
Banking Authority





EBA

EUROPEAN
BANKING
AUTHORITY

Towards a 'data-driven' approach

19 January 2021 | Fintech Future webinar: Banking on Big Data

Andreas Papaetis

Senior Policy Expert - Banking Markets, Innovation and Products Unit



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EBA at a glance and its work on financial innovation

THE EUROPEAN BANKING AUTHORITY AT A GLANCE 1/2



Profile

- The European Banking Authority (EBA) is a **specialised agency of the European Union** set up to achieve a more integrated approach to banking supervision across the EU.
- The EBA was **established on 1 January 2011** as part of the European System of Financial Supervision (ESFS). The ESFS is comprised of the three European supervisory authorities (ESAs): the EBA, the ESMA, the EIOPA, as well as the ESRB, the Joint Committee of the ESAs, the ECB and the Member States' competent supervisory authorities.

Role

- to contribute to the creation of a single market for the EU banking sector. The EBA is in charge of developing the **EU single rulebook** on banking
- to promote pan-EU convergence of banking supervisory practices
- to assess risks and vulnerabilities in the EU banking sector which includes the initiation and coordination of the EU-wide stress test exercise
- to promote a transparent, simple and fair internal market for consumers in financial products and services

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EBA role when it comes to *financial innovation*



- ➔ to monitor and assess **market developments in innovative financial services**
- ➔ to take account of technological innovation and innovative business models when carrying out its tasks
- ➔ to achieve **a coordinated approach to the regulatory and supervisory treatment of new or innovative financial activities**
- ➔ to establish sectoral and cross-sectoral training programmes on technological innovation **to build a common EU supervisory culture and consistent supervisory practices**, as well as in ensuring uniform procedures and consistent approaches.
- ➔ to promote a coordinated EU response by taking appropriate measures to coordinate actions undertaken by relevant competent authorities with a view **to facilitating the entry into the market of actors or products relying on technological innovation**, in particular through the exchange of information and best practices.

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EBA work to date on financial innovation



2020

- Response to EC consultation on Digital Finance Strategy
- Report on **Big Data and Advance Analytics**

2019

- EBA Guidelines on ICT and security risk management
- ESAs Joint Advice on (i) legislative improvements relating to ICT risk and (ii) on the need for a cyber resilience testing framework
- Report on **regulatory perimeter, regulatory status and authorisation** approaches in relation to FinTech activities
- Report on the **impact of FinTech on payment institutions' (PIs) and electronic money institutions' (EMIs) business models**
- ESAs Report on **regulatory sandboxes and innovation hubs**
- Report on **crypto assets**
- **Guidelines on outsourcing arrangements (includes outsourcing to cloud)**

2018

- Consultation on Guidelines on **ICT and security risk management**
- Report on the **impact of FinTech** on incumbent credit institutions' **business models**
- Report on the **prudential risks and opportunities arising for institutions from FinTech**
- Opinion on the implementation of the RTS on **strong customer authentication** and common and secure communication
- ESAs report on **Big Data**
- ESAs Warning on **Virtual Currencies**
- ESAs Opinion on the use of innovative solutions in the **customer due diligence processes**

2017

- Report on **Innovative uses of data**
- Recommendations on **outsourcing to cloud service providers**

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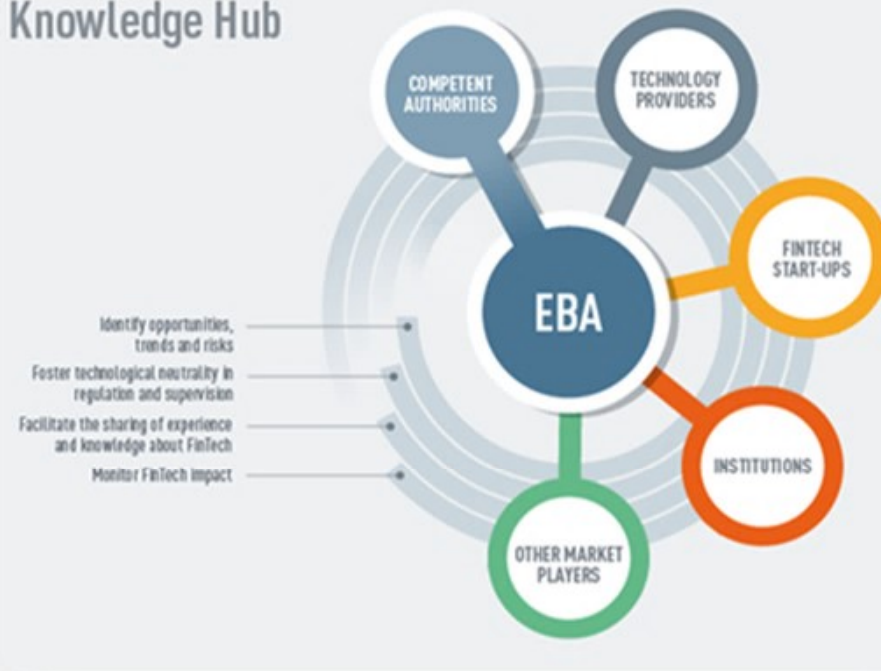
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EBA FinTech Roadmap and FinTech Knowledge Hub



EBA FinTech Knowledge Hub



Impact on business models, prudential risks and opportunities

Authorisation and regulatory perimeter issues

Regulatory sandboxes and innovation hubs

Consumer and Conduct Issues

Cyber security

AML/CFT

You are invited to **register** to the EBA FinTech Knowledge Hub:

Link: <https://www.eba.europa.eu/financial-innovation-and-fintech/fintech-knowledge-hub/stakeholder-register/registration-form>

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Key messages of the EBA thematic report on Big Data & Advanced Analytics

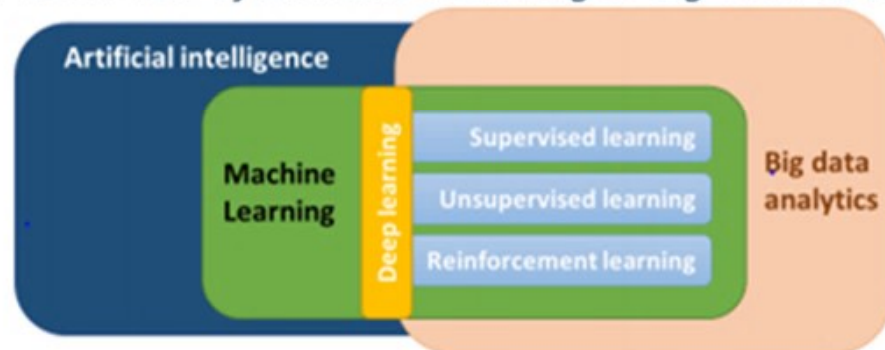
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EBA thematic report on Big Data and Advanced Analytics



Following the cross-sectoral report by the ESAs Joint Committee on the use of big data by financial institutions, and in the context of the EBA FinTech Roadmap, the EBA decided to pursue a **'deep dive' review** on the use of Big Data and Advanced Analytics (BD&AA) in the banking sector. The aim of this report, published on **January 2020** is to **share knowledge among stakeholders** on the current use of BD&AA by providing useful background on this area and presenting the key pillars and elements of trust that could accompany their use.

Pivotal role of Machine Learning in Big Data analytics



EBA observed a growing interest in the use of Big Data Analytics. In particular, **more than 25% of EU banks reported to be using Big Data Analytics** in customer engagement, risk scoring and risk modelling, fraud detection and AML/CFT processes.

Key pillars for adoption of BD&AA



Four key pillars were identified for the development, implementation and adoption of BD&AA. These pillars interact with each other and form the fundamentals for the *Advanced Analytics process*.

To be able to manage data, one needs to know where the data are located, from where they are collected, the type and content of the data and who has access to them.

DATA MANAGEMENT

TECHNICAL INFRASTRUCTURE

Technological infrastructure refers to the technology foundation in place and entails processing, data platform and infrastructure that can provide the necessary support to process and run the BD&AA.

Key Pillars

Have in place a methodology to facilitate the development/implementation/use of AA solutions. The development of a ML project follows a lifecycle with specific aspects, which are different from the approach adopted for a standard business software.

ANALYTICS METHODOLOGY

ORGANISATION & GOVERNANCE

The establishment of appropriate internal governance structures and measures is key, along with the development of sufficient skills and knowledge.

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Elements of trust



- Ethics** → The development, deployment and use of any BD&AA solution could adhere to fundamental ethical principles, embedded from the start into any project, in a sort of **“ethical by design”** approach
- Explainability and interpretability** → A model is explainable when its internal behaviour can be directly understood by human (interpretability) and explanations (justifications) can be provided to understand the main factors that led to its output. Explainability is just one element of **transparency**.
- Fairness and avoidance of bias** → Fairness requires that the model ensures the protection of groups against (direct or indirect) discrimination. Use of techniques to **prevent or detect bias**.
- Traceability and auditability** → Use of traceable solutions to assist in tracking all the steps, criteria and choices in the entire process, **enabling the repetition of the decision** made by the model and facilitating the auditability of the system.
- Security** → **Maintain a technical watch** on the latest security attacks and related defence techniques.
- Data protection and quality** → Data should be adequately protected with a trustworthy BD&AA system which **complies with current data protection regulation**. The concept of data quality needs to be considered throughout the BD&AA lifecycle as the consideration of its fundamental elements could **help to gain trust in the data processed**.
- Consumer protection** → A trustworthy BD&AA system should **respect consumer rights and protect their interests**. Explainability is one of the keys to address this obligation.

Key conclusions



Early-stage of AI adoption

The development of BD&AA solutions is at an **early stage with further adoption expected in the future.**

Expertise and competence

The need of **necessary competence** will become increasingly important when the use of AI/ML techniques becomes more widespread in the financial services industry, raising an important challenge for institutions, supervisors and regulators.

Risk-based approach on Explainability

Explainability requirements could follow a **risk-based approach** and become more stringent as the impact/significance of the model increases .

Success factors

- Appropriate documentation and sufficient justification of material decisions
- Communication of limitations and data sets
- Use of traceable solution (including model versioning)
- Include a human in-the-loop (where necessary)
- Model monitoring and periodic update
- Consider third party risks and risks from open source solutions
- Address data security and model security at organisational and management level
- Ensure model outputs do not violate institutions' ethical standards

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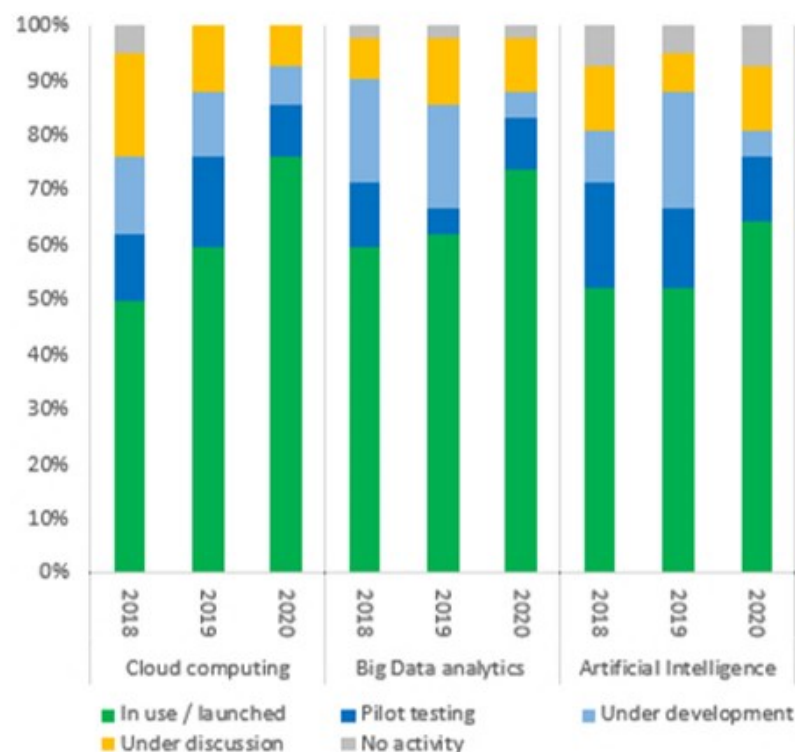
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Latest trends and developments (one year after the BD&AA report)

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Latest trends and developments

EBA's ongoing monitoring observations



- All EU banks are exploring the use of cloud computing. **A notable increase of 26% from 2018 in the use of cloud computing.**
- EU banks continued investing in AI and big data analytics. **Notably, within 2 years, 12% of the EU banks have moved from pilot testing and development to the implementation of AI tools.**
- Overall, **64% of EU banks have currently implemented AI** in their processes and services.

Source: EBA Risk Assessment Report 2020

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Latest trends and observations

EU regulatory developments on AI (1/2)

A series of AI-related publications (e.g. white papers, reports, recommendations, principles) have been released by EU/national bodies



June 2020
Governance of Artificial Intelligence in Finance

Discussion document

AUTHORS
 Laurent Dupont, Olivier Fliche, Su Yang
 Fintech-Innovation Hub, ACPR



BIG DATA ANALYTICS IN MOTOR AND HEALTH INSURANCE: A THEMATIC REVIEW



General principles for the use of Artificial Intelligence in the financial sector

De Nederlandsche Bank
 EUROPESE TOEGANG



ARTIFICIAL INTELLIGENCE

OPPORTUNITIES, RISKS AND RECOMMENDATIONS FOR THE FINANCIAL SECTOR



Latest trends and observations

EU regulatory developments on AI (2/2)



European Commission's AI strategy



- December 2019 – [Piloting of Assessment list on Trustworthy AI](#)
- June 2019 – [Policy and Investment recommendations of AI HLEG](#)
- April 2019 – [Ethics Guidelines for Trustworthy AI](#)
- November 2020 – [Final report on the public consultation on the AI White Paper](#)
- September 2020 – [Digital Finance strategy](#)
- February-June 2020 - [White Paper on AI](#)
- Q1 2021 – Legislative proposal on AI
- Q1 2021 – Updated Coordinated Plan on AI
- Q1/Q2 2021 – Call for advice to the ESAs for potential guidance to the finance sector



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Big Data In Practice

2:40pm - 2:50pm

Big Data in Practice: A Practical Approach
Niamh Lawlor, Director of Analytics, United Health Group



Practical Approach to Big Data



Practical Approach to Big Data



What problem are you trying to solve?

Framing a Problem – identifying it and understanding how others might have solved it in the past

Practical Approach to Big Data



Data Sources

Structured v's Unstructured Data

Internal v's External data

Different types of systems/tooling to process the data

Practical Approach to Big Data



Data Governance

Data Quality

Data Lineage

Data Security

Data Protection – Trust to your users

Data Catalogue

Practical Approach to Big Data



Analysing the data

Descriptive – What happened

Diagnostic – Why it happened

Predictive – Forecasts what might happen

Prescriptive – Recommend an action based on the forecast

Practical Approach to Big Data



Business Adoption

Domain knowledge combined with data knowledge is key

Support your data consumers

Tell a simple story

How AI-Enabled Applications Can Transform Operational Efficiencies

2:50pm - 3:00pm

How AI-Enabled Applications Can Transform Operational Efficiencies

Michael Hom, Head of Financial Solutions,
Intersystems



How AI-enabled applications can transform operational efficiencies



Michael Hom
Head of Financial Solutions

Are you enabled and prepared?

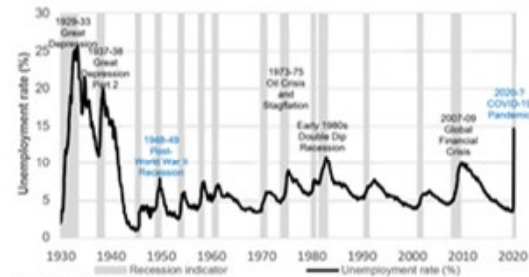
Data Growth and Complexity –
 Volume, Velocity,
 Variety, Veracity, Value,
 Variability, Volatility,
 etc.

US Equity Share and National Volume (October 2007 – March 2020)

US Equity Shares and National Total



Business Disruptions -
 happen more often than
 you think



Source: BLS; NBER; RSM US

Rise of the Machines -
 modern data
 technologies and
 intelligent virtual
 services / applications
 are needed



Here are a few AI-enabled applications

Trading

Functions: algorithmic Trading, live model pricing/valuation, auto hedging, live capital / liquidity mgmt, pretrade margin / credit valuation adjustment

Efficiencies: trading capabilities, execution speed, trade volume capacity, and cost

Risk

Functions: pretrade risk predict, fraud detection / mitigation / prevention, anti money laundering detection, compliance checks, risk limit checks

Efficiencies: speed, scale, and accuracy

Customer Insights

Functions: hyper personalization, product recommendation, retention analysis, customer service chatbots, investment advisory, self service, proactive account management with fraud detection and instant approval

Efficiencies: service and cost



A proper data strategy and platform is a competitive advantage and a prerequisite for analytics and AI

Agility and Flexibility – location agnostic, multi-cloud, and extensible. Adapting to new requirements faster, providing concurrent, dedicated and discrete but consistent access via micro data services.

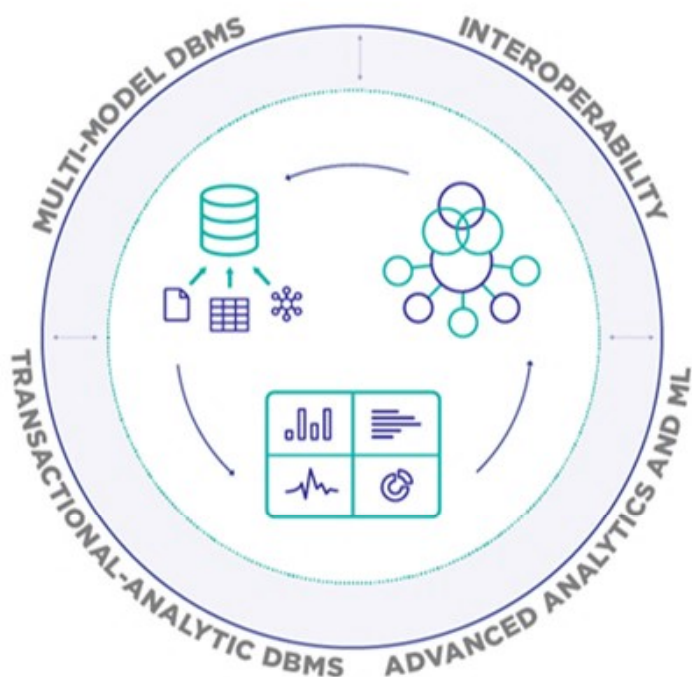
Speed and Scale – ability to grow with data volumes, (auto) scaling to handle the overall growth and volatility spikes along with the ever-increasing need for speed.

Control and Manageability – Easy to deploy, easy to configure, easy to use. Integrated approach to manage, understand and trust your data over time.



InterSystems IRIS

DATA PLATFORM



A Unified Platform for
High Performance
Applications

Supports Cloud, On
Premises,
and Hybrid
Deployment Options

Panel Discussion and Audience Q&As



Your Questions Answered by the Experts



Andreas Papaetis
Policy Expert, European
Banking Authority



Niamh Lawlor
Director of Analytics,
United Health Group



Michael Hom
Head of Financial
Solutions, InterSystems



Peter Oakes
Founder, Fintech Ireland &
Board Director, Regulated
Finserv