

Big Data and Artificial Intelligence for Portfolio Risk Assessment

How AI and BigData Enables Novel Approaches to
Portfolio Risk Assessment and Asset Management

March 16th, 2021



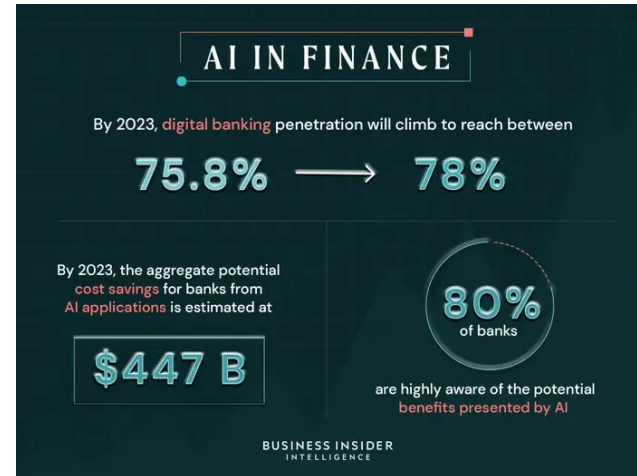
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AI in Digital Finance: Market Impact

Drivers

- Exponential Increase in Available DataPoints (including Alternative Data) + Technology Acceleration (AI, BigData, Processing)
- Open Banking and related regulations (e.g., PSD2)
- Accelerated Digital Transformation of Banking and the Finance Sector
- Benefits: Automation, Accuracy, Reduced Operation Costs...



Regulatory Drivers & Impact

Markets in Financial Instruments Directive (MiFID)

- Transparency in Research, Profiling, Recommendations etc.
- Impacts AI systems for Data Aggregation, Enrichment, Presentation of Insights, Extraction of Insights (Machine Learning)

Payment Services Directive II (PSDII)

- Enabler for Data-Driven Innovation in Payments and the Digital Finance Ecosystem
- “Front End” Innovation over Back-End Banks

General Data Protection Regulation

- Preventive Risk-Based Approach to Citizens’ Rights Violation
- Citizens’ Right to Data & Explainability of AI



Notable AI Applications in FinTech and Digital Finance

Statistical Credit Scoring

- Machine Learning for Credit Risk Assessment
- Particularly important for SMEs that are currently excluded from access to finance

Fraud Detection

- Identification of Anomalous Behaviour and Suspicious Transactions
- “Hidden Patterns” in Credit Card Use, Capital Market Surveillance etc.

Anti-Money Laundering (AML)

- Fast “Flagging” of Suspicious Transactions based on the Analytics over Alternative Data, Blockchain Networks, Dark Web etc.
- Automation & Intelligence in Identifying Suspicious Behaviour

Notable AI Applications in FinTech and Digital Finance

Financial Assistants – Finance Management

- Personal Finance Management (PFM) - Business Finance Management (BFM)
- Predictive Planning

Product Design – Customer Centric Analytics

- Sentiment Analysis – Customer Centric Recommendations – Intelligent On-Boarding and KYC

Usage Based Insurance

- AI over IoT & sensor collected data to calculate risk premiums
- E.g., Home Insurance, Health Insurance, Car Insurance

Notable AI Applications in FinTech and Digital Finance

Roboadvisors

- AI-enabled software for portfolio construction and investments

Personalized Asset Management & Investments

- Risk Profile Construction for Automated and Effective Recommendations
- Assets and Investments

“Democratization of Asset Management”

- Lowering the Barriers for Citizens to Access High Quality Asset Management Services

Today's Agenda

March 16th (9.30-12.00) CET

Session 1: Portfolio Risk Assessment and Value-at-Risk Calculation

09:30 - 09:40	Workshop Introduction
09:40 - 10:00	"Data-Driven Customer Risk Assessment for Personalized Asset Recommendations", Pablo Carballo Nieto, Prive Technologies, GmbH, Austria
10:00 - 10:20	"An Automated, Personalized, Investment Recommendations System for Retail Customer", Nikoalos Droukas, National Bank of Greece
10:20 - 10:25	Short Break
10:25 - 10:45	"What Investments are Right for You?: Supporting Financial Advisors with Customer Risk Aware Investment Recommendations", Dr. Richard Mccreadie, University of Glasgow, UK
10:45 - 11:00	"Value at Risk (VaR) Assessment Challenges in High Frequency Trading", Dustin Ciccardini, JRC Capital Management, GmbH, Germany
11:00 - 11:15	"Machine Learning Techniques for Value at Risk (VaR) Calculation", George Fatouros, INNOV-ACTS Ltd, Cyprus and George Markidis, University of Pireaus, Greece
11:15 - 11:25	Break

Session 2: Demonstrations, Open Discussion and Stakeholders Feedback

11:25 - 11:45	System Demonstrations
11:45- 11:55	Open Questions and Answers Session - (Questions from the Audience)
11:55 - 12:00	Meeting Close & Conclusions

Call for Action:

- Please provide your feedback – Fill-in our Survey
- Subscribe to INFINITECH Newsletter
- Join the INFINITECH Marketplace (to be launched March 2021)

