Practical Guide on AI/ML Compliance for Financial Services

PART 1

DATAVISOR

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Introduction

AI's potential to increase the efficiency of business processes is widely accepted nowadays. Specifically, financial services providers have explored AI in a variety of fields that include:

▶ Fighting fraud across industries and use cases by leveraging large amounts of data and machine learning algorithms.

▶ Providing enhanced customer service through the use of interfaces such as chatbots.

▶ Making more accurate credit decisions taking into account traditional and alternative data points signaling creditworthiness.

▶ Augmenting risk and control practices in connection with credit monitoring, payment collections, loan recovery, and loss forecasting.

▶ Analyzing text through the use of natural language processing to analyze regulations, news publications, consumer feedback, and other large volumes of written information.

▶ Strengthening their cybersecurity protocols through the use of behavior-based detection to collect network metadata, identifying and stopping malicious attacks and compromised accounts that could be used to leak information, and enhanced forensic analysis of malicious files.

▶ Increasing the reach and effectiveness of marketing activities by enabling more tailored product recommendations.

▶ Providing highly-tailored investment advice to customers in securities markets and implementing algorithmic trading by making sense of historical trading data.

Financial institutions are some of the most highly regulated businesses, especially after the 2009 financial crisis. Practically all the internal and external processes of FIs are subject to specific legal standards. However, it is not always easy to navigate these rules and interpret them in connection with the use of new technologies such as artificial intelligence.

We will discuss the current regulatory landscape, some interesting recent developments in that field, and how some financial regulators currently use AI.

Relevant Rules Applicable to Financial Institutions

The US and many other countries have yet to issue specific and comprehensive laws and regulations for the use of AI by financial institutions. However, in the US there are several acts, supervisory guidances, statements, manuals, procedures, and other norms that businesses should into account when designing their compliance frameworks around the use of artificial intelligence.

The most notable examples include the Fair Credit Reporting Act, the Interagency Statement on the Use of Alternative Data in Credit Underwriting, and the Federal Financial Institutions Examination Council Information Technology Examination Handbook.

For a guide that can serve as a starting point for financial institutions, check out the AI Compliance Checklist we provide as an exhibit to this document.[1]

Additionally, financial institutions should be aware that earlier this year, a group of government agencies issued a request for information and comment (RFI) addressed to financial institutions in connection with their use of artificial intelligence.[2]

Sources:

[1] https://www.regulations.gov/document/OCC-2020-0049-0001

[2] The group is comprised of the Board of Governors of the Federal Reserve System, the Bureau of Consumer Financial Protection, the Federal Deposit Insurance Corporation, the National Credit Union Administration, and the Office of the Comptroller of the Currency.

In the agencies' own words:

The purpose of this request for information is to understand respondents' views on the use of AI by financial institutions in their provision of services to customers and for other business or operational purposes; appropriate governance, risk management, and controls over AI; and any challenges in developing, adopting, and managing AI.

The RFI also solicits respondents' views on the use of AI in financial services to assist in determining whether any clarifications from the agencies would be helpful for financial institutions' use of AI in a safe and sound manner and in compliance with applicable laws and regulations, including those related to consumer protection.[3]

This can be indicative of federal regulators' awareness of and interest on how artificial intelligence can be used by financial institutions. There might be interesting developments in the compliance space in the future.

Sources:

[3] https://www.govinfo.gov/content/pkg/FR-2021-03-31/pdf/2021-06607.pdf

How Regulators are Using Artificial Intelligence

A separate but highly related issue regarding artificial intelligence and compliance is the use of AI by worldwide government agencies in the fulfillment of their duties.

For example, the UK's Financial Conduct Authority reportedly used artificial intelligence, specifically natural language processing technology, to create an intelligent regulatory handbook for financial institutions. This means that users will be able to make intelligent searches across different normative bodies by theme, activity, or type of financial institution through a single interface. Everyone that has had to interpret and make sense of rules coming from dozens of legal documents will surely appreciate this development.[4]

Different American government agencies, including the Securities and Exchange Commission (SEC), are also working with AI in different areas. In a speech given in 2017, the Acting Chief Economist and Acting Director of the SEC's Division of Economic and Risk Analysis explained how the agency has been implementing natural language processing algorithms and other forms of artificial intelligence to supervise securities markets.[5]

Sources:

[4] https://www.financialreporter.co.uk/finance-news/fca-to-launch-fully-searchable-intelligent-handbook.html?utm_source=Email+Campaign&utm_medium=email&utm_campaign=11064-377926-Breaking+news+27th+September+%28360%29

[5] https://www.sec.gov/news/speech/bauguess-big-data-ai

Anti-money laundering (AML) supervision is one of the areas where regulators stand to gain the most from incorporating machine learning. A notable example comes from the Australian Transaction Reports and Analysis Centre that developed machine learning software tools that can detect money laundering networks faster and more accurately than ever before by searching through millions of financial transactions in order to discover evidence of financial crimes. In just one year, Australia reportedly saved millions of dollars with this project, including $8.3 million in welfare fraud, $130 million in liabilities from Serious Financial Crime Taskforce activities, and $152 million in income tax assessments.[6]

These developments lead us to believe that artificial intelligence is in the realm of compliance to stay. Some questions are yet to be answered, but we also believe that financial institutions should adopt a proactive approach to prepare for an AI-enabled future in compliance.

Sources:

[6] https://www.arc.gov.au/news-publications/publications/making-difference-outcomes-arc-supported-research-2016-17/new-software-detect-money-laundering

How Financial Institutions can Prepare for an AI-Driven Future

In this section, we will discuss some actions that companies can take to embrace the power of artificial intelligence and build the capabilities that will make them successful in the coming years as they create compliance frameworks for innovative technologies in the AI field.

1 Using machine learning to enhance your fraud detection and prevention capabilities is the most relevant step you can take today. This can have a drastic impact on your bottom line through cost reduction and revenue growthl by reducing your false positive rates.

Learn how DataVisor can enable you to do this by scheduling a free 1-on-1 demo with our experts.

2 AML compliance through artificial intelligence should be an arrow in your quiver to succeed in the 21st century. Protect your business against financial crime and prevent reputational damage and millions of USD in fines all while building the organizational AI savvy that will make you more successful in the future.

Read more about how DataVisor can make the difference here.

3 Invest in your data. Machine learning algorithms are only as good as the data they are fed. A well-prepared strategy in this area will likely pay for itself in the long run.

4 Document processes and create internal manuals and guidelines. As your team begins to implement, enable organizational learning and preparedness by documenting successes and failures to ensure continuity and successive wins.

Additionally, well-crafted internal policies can be game changers in the context of interactions with regulators.

5 Be ethical and responsible with your data and AI algorithms. Even if some questions about the use of AI in financial services have not been answered by lawmakers yet, you should rely on ethical best practices for responsible artificial intelligence that will help your business avoid setbacks and retain a good image in the eyes of your users.

Learn more about this by reading this.

In part two of this manual, we will discuss two very interesting concepts related to compliance and artificial intelligence and machine learning: interpretability and explainability. Stay tuned!

Important note: This document does not intend to provide legal advice of any kind and it should not be construed as legal advice of any kind. Always consult a licensed attorney if you have questions regarding financial regulations and laws.

Sources:

https://www.complianceweek.com/technology/regulators-want-answers-from-financial-services-on-ai/ml-tools/30279.article

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https://www.finextra.com/blogposting/15713/ai-and-ml-in-financial-services-compliance-management-use-cases-for-the-regulators

https://www.iif.com/portals/0/Files/private/32370132_van_liebergen_-_machine_learning_in_compliance_risk_management.pdf

Exhibit – AI Compliance Checklist

1. **Laws and Regulations**

   ▸ Section 39 of the Federal Deposit Insurance Act as implemented through the agencies' safety and soundness regulations

   ▸ Sections 501 and 505(b) of Gramm-Leach-Bliley Act as implemented through the regulations and standards, including Interagency Guidelines Establishing Information Security Standards

   ▸ Fair Credit Reporting Act (FCRA)/Reg. V

   ▸ Equal Credit Opportunity Act (ECOA)/Reg. B

   ▸ Fair Housing Act (FHA)

   ▸ Section 5 of the Federal Trade Commission Act (prohibiting UDAP) and sections 1031 and 1036 of the Dodd-Frank Act (prohibiting unfair, deceptive, or abusive acts or practices (UDAAP))

2. **Supervisory Guidance and Statements**

   ▸ Interagency Statement on the Use of Alternative Data in Credit Underwriting

   ▸ Supervisory Guidance on Model Risk Management

   ▸ Third-Party/Outsourcing Risk Management

   ▸ New, Modified, or Expanded Bank Products and Services

   ▸ CFPB Innovation Spotlight on Providing Adverse Action Notices When Using AI/ML Models

3. **Supervisory Guidance and Statements**

▶ Federal Financial Institutions Examination Council Information Technology

   Examination Handbook

▶ Consumer Compliance Manuals and Booklets

▶ Interagency Fair Lending Examination Procedures

▶ CFPB Examination Procedures, ECOA Baseline Review Module 5: Fair

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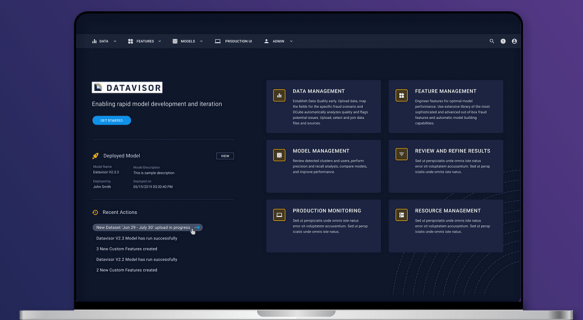
This list is not exhaustive. For more information, visit:
https://www.govinfo.gov/content/pkg/FR-2021-03-31/pdf/2021-06607.pdf

About DataVisor

DataVisor is the world's leading AI-powered Fraud and Risk Platform for enterprises. Using proprietary unsupervised machine learning algorithms, DataVisor restores trust in digital commerce by enabling organizations to proactively detect and act on fast-evolving fraud patterns, and prevent future attacks before they happen. Combining advanced analytics and an intelligence network of more than 4B global user accounts, DataVisor protects against financial and reputational damage across a variety of industries, including financial services, marketplaces, ecommerce, and social platforms.

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