



INTELLIGENT FINANCIAL CRIME DETECTION

**GETTING
AHEAD OF
FINANCIAL
CRIME WITH AI**

THE POWER OF AI

BUSINESS SITUATION

CRIME-DETECTION AND COMPLIANCE CAPABILITIES ARE STRAINED

Financial crime is a major threat to financial institutions (FIs) today. Criminal networks are employing financial crime to underpin their activities, from organized crime, to terrorism, and drug and human trafficking. As such, banks have been put on the front-lines of crime prevention. FIs have continued to increase their spending to support Anti-Money-Laundering (AML), Know Your Customer (KYC), and other Financial Crime Compliance activities, to address a host of new challenges.

Criminals are constantly innovating

New criminal techniques across the financial crime spectrum are continually emerging and becoming ever more sophisticated. They are instigated both by economic and geopolitical shifts, together with advances in technology and data. This requires that FIs develop ever more sophisticated techniques to uncover and stop new threats in an expeditious manner.

New regulations increase compliance cost

FIs are spending, on average, \$60 million per year to prevent financial crime by meeting their AML compliance requirements, but some larger firms are spending up to \$500 million annually to comply with KYC and Customer Due Diligence (CDD) rules.¹ Firms that fail to make necessary changes to meet regulatory demands run the risk of major reputational and financial losses. From 2010 to 2015, banks paid over \$300 billion in fines related to non-compliance.²

Growing volume and complexity strain existing systems

The combination of new threats, high transaction volumes, and increased regulation places a premium on an FI's ability to streamline operations and maintain appropriate levels of control.

But right now, traditional FI processes are largely manual and incapable of scaling to meet the new challenges. Advancements in areas such as artificial intelligence (AI) and machine learning (ML) can help transform FIs, making them more efficient, agile, and better able to detect financial crime. But, they'll need to adapt quickly in order to stay ahead in the technology arms race.



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KEY TENSION

INTELLIGENT TECHNOLOGIES REQUIRE NEW CAPABILITIES AND APPROACHES

However, FIs have been slow to adopt AI and ML to combat financial crime for two reasons. First, AI and ML generate vast quantities and varieties of data, both structured and unstructured. FIs often lack the adequate techniques and tools to collect, manage, and trace that data while maintaining appropriate levels of compliance and security, especially with the move to cloud.

Second, institutions, compliance officers, and regulators have been reluctant to shift from rules- to AI-based algorithms due to concerns about conceptual soundness, accuracy, and transparency. In other words, how does one trust a model when the more advanced AI and ML applications operate as a “black box?” If the inner logic is not transparent, it is difficult to justify and validate the outcomes or indeed to explain to regulators how decisions were reached. So, developing these models and deciding how to regulate them is a significant challenge in the near term.



INSIGHT

ADDRESS CRITICAL USE CASES TO PROVE EFFICACY

To move forward with confidence, FIs need to apply AI/ML to critical use cases first, then scale. Reinventing known functions with measurable outcomes, AI will demonstrate value and reliability through consistent quality improvements at a reduced cost, while meeting regulatory expectations. As a track record is established, compliance officers and regulators will be more confident in expanding the use cases and scaling the solutions.

AI/ML offers us the greatest opportunity to identify hidden threats to FIs and, in particular, through advanced pattern and behavior recognition. Built around much broader data sets, FIs will be able to leverage learning platforms that can grow in complexity alongside the desire to migrate away from traditional rule-based solutions.

OPPORTUNITY

TRANSFORMING FROM A RULES-BASED TO ALGORITHM- DRIVEN MODEL

In order to address the increasing demands of the financial crime detection and risk compliance ecosystem, compliance functions should move toward a self-learning, intelligent, and optimized framework, by adopting a suite of innovative tools and technologies.

For example, intelligent automation and Robotics Process Automation (RPA) can automate high-volume tasks and eliminate manual effort. Cloud technology can centralize and store data to fuel advanced analytics, as well as allow FIs to make the most of flexible and powerful infrastructure by supporting complex analytics over increasingly large data sets. Most important, AI/ML will use increased computer power to detect anomalies and patterns in vast quantities of data to produce dramatic increases in quality and efficiency.

SOME OF THE CRITICAL USE CASES WHERE AI SHOULD BE PRIORITIZED INCLUDE:

- **Detect and focus on suspicious behavior with advanced analytics and machine learning** to identify anomalies that indicate non-compliance, and to learn and identify new indicators and patterns of behavior linked to money laundering or other non-compliant and suspicious behaviors.
- **Discover new money laundering typologies through network analysis** to understand the complex relations across networks of transactions and behaviors, including links between risky entities, cash-structuring behaviors, and rings of collusive criminals.
- **Create advanced segmentations through advanced data mining and aggregation techniques** to move from a small number of high-level segments containing thousands/millions of customers to lower level behavior-driven segments. Also, use machine learning to spot and identify patterns in behavior at a micro-segment level, improving how risk and detection rules are applied.

- **Prioritize investigations using machine learning** to analyze customers' transactions and identify the most likely suspicious transactions for investigation. This approach helps to improve an investigation's efficiency and reduce the size of investigation teams.
- **Improve customer and payment screening using text mining** of documents and watch lists, and increase compliance by discovering sanctioned or embargoed entities conducting transactions through the bank's network.
- **Improve operational efficiency through predictive analytics** to analyze historical investigation and case information to allocate the most complex cases to the top-performing team members.
- **Create explainable and responsible AI/ML models** for better financial crime detection. Working closely with regulators, FIs should consider model explainability for regulatory and management needs, plus the ethical implications of AI (e.g., the impact on human roles and on human-machine interaction).

By embedding AI/ML into risk and compliance activities, and deploying advanced analytical techniques, companies can expect to see a measurable improvement in outcomes and performance across the financial services ecosystem.

Key and measurable outcomes expected include:

- Improved quality of alerts and reduced false positives
- Better detection of complex fraud
- Reduction in overall alerts volume
- Increased risk data collection and presentation for investigation
- Increased global compliance and reduced risk
- Automated handling of simple fraud cases
- Improved data quality and acquisition approaches for KYC
- Reduced escalation rates into Compliance from TM Operations

Getting ahead of financial crime is mission-critical for FIs and vital for the good of society as a whole. AI and ML will enable the journey to a data-driven, intelligent model for financial crime detection. And since intelligent technologies don't work within the confines of potentially outdated rules and continually recalibrate, they offer the greatest hope of detecting both existing and new innovative criminal threats.

Explore how Accenture Applied Intelligence can help you unlock the power in your data and reinvent your crime detection activities. Visit www.accenture.com/ai-for-business-transformation

CONTACT

Adam Markson

Managing Director,
Accenture Finance & Risk

✉ adam.markson@accenture.com

Kieran Towey

Managing Director,
Accenture Applied Intelligence

✉ kieran.towey@accenture.com

Carl Welford

Senior Manager,
Financial Services Consulting

✉ carl.welford@accenture.com

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@AccentureAI

1. "Thomson Reuters 2016 Know Your Customer Surveys Reveal Escalating Costs and Complexity," Thomson Reuters, May 9, 2016.
2. "Another 'fine' mess? 300 billion US dollars in bank fines and counting ..." Finextra, June 23, 2015.

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