UTILIZING ARTIFICIAL INTELLIGENCE FOR BANKING COMPLIANCE AND RISK MANAGEMENT

Brad Rustin, Chair, FinReg and FinTech Practices

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TODAY'S AGENDA

- Introduction to AI in AML
- Capabilities and Use Cases
- Adoption Trends and Benefits
- Challenges and Compliance Considerations

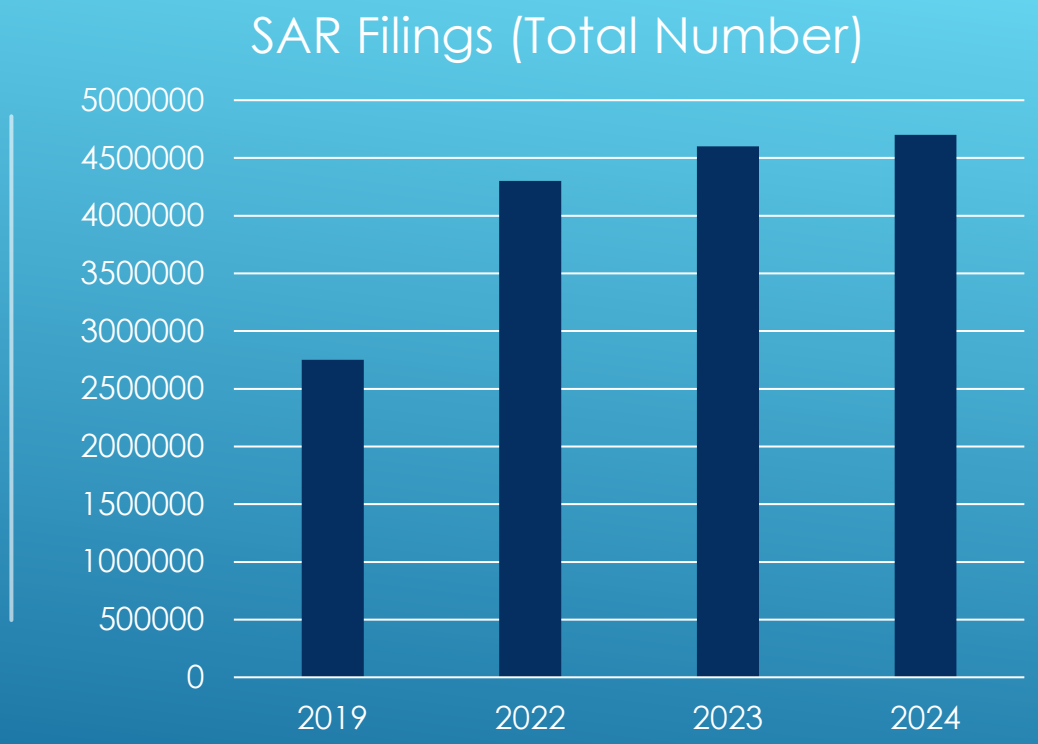
AI ADOPTION WITHIN THE FINANCIAL SERVICES SECTOR

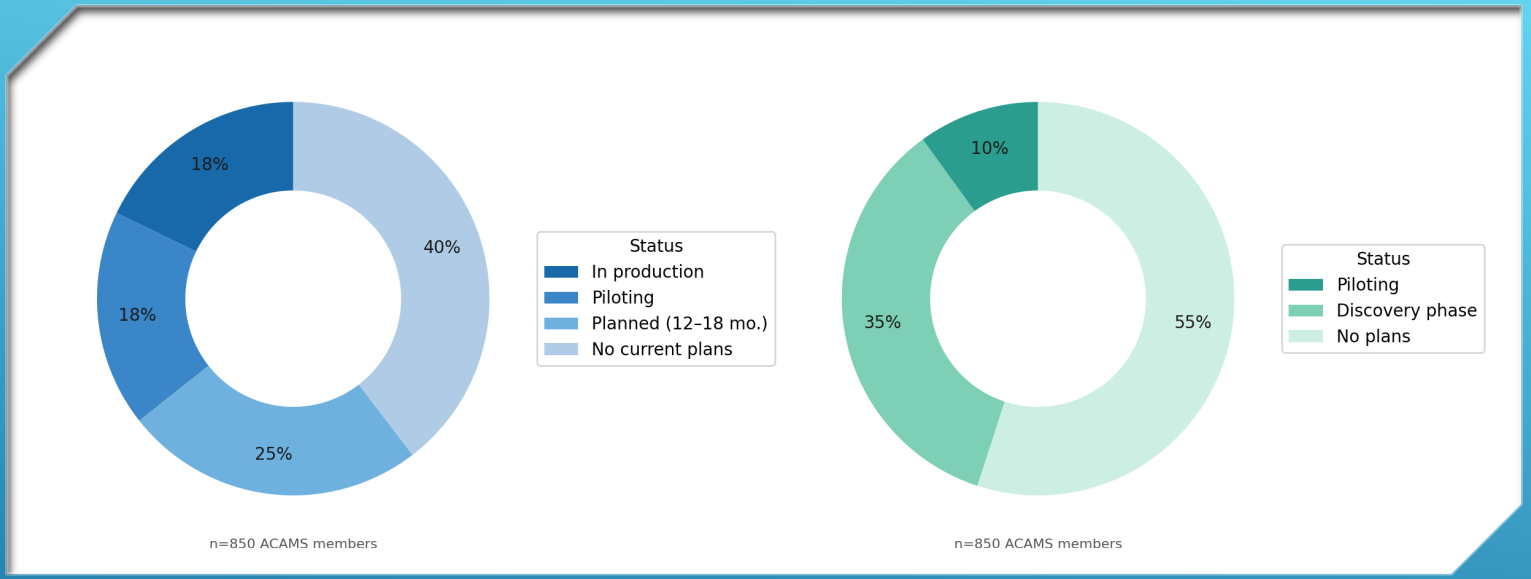
THE INCREASING FOCUS ON BSA/AML

- **Global Financial Impact**
  - Money laundering affects 2-5% of global GDP ($800 billion to $2 trillion), costing trillions annually worldwide.
- **Compliance Penalties**
  - In 2023, $6.6 billion in AML fines were imposed on financial institutions globally.
- **Role of AI in AML**
  - AI enables analysis of large datasets, detects suspicious patterns, and automates compliance.

*United Nations, Office on Drugs and Crime, *Money Laundering*, 2025; Fenegro, *AML Enforcement Actions Surge in 2023.*

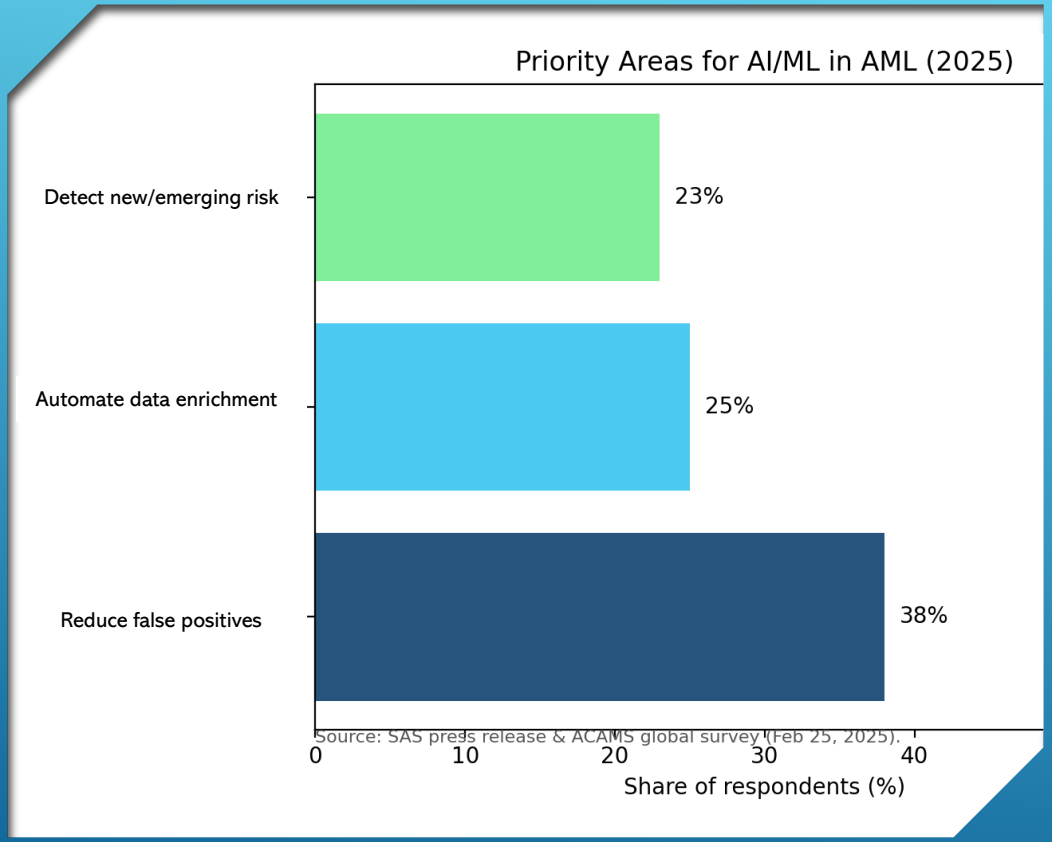
TOTAL SARS FILED





FAST ADOPTION

HOW WILL IT BE USED?



EXPLORING AI TECHNOLOGIES IN BSA SYSTEMS FOR BANKS

CORE CAPABILITIES OF ARTIFICIAL INTELLIGENCE IN BSA/AML

- **Customer Due Diligence**
  - AI automates identity verification processes, enhancing the accuracy and efficiency of customer due diligence.
- **Transaction Monitoring**
  - AI enables real-time anomaly detection to monitor transactions effectively and identify suspicious activities promptly.
- **Suspicious Activity Reporting**
  - AI accelerates the generation of suspicious activity reports, streamlining compliance workflows and improving accuracy.

TELL ME ABOUT BRAD RUSTIN, AN ATTORNEY AT NELSON MULLINS

Customer Due Diligence (CDD) Memo

Subject: Dowse Bradwell ("Brad") Rustin IV
Role: Partner & Chair, Financial Regulatory Practice, Nelson Mullins Riley & Scarborough LLP
Location: Greenville, SC & Washington, DC (per public firm listings)

Brad Rustin is a senior attorney at Nelson Mullins with a focus on financial services regulation, bank–fintech partnerships, BSA/AML, OFAC, and payments law. He also serves as adjunct faculty at the University of South Carolina School of Law. Industry profiles list him as CAMS and CRCM certified (unverified).

Category	Findings
Identity	Confirmed via Nelson Mullins bio, USC Law faculty profile, and multiple conference/speaker bios.
Credentials	Reported CAMS & CRCM; verification with ACAMS/ABA required.
Publications	Extensive authorship on fintech, BSA/AML, and payments; cited in NatLawReview, Bank Director, law
Adverse Media	No adverse media identified. Mentions are thought-leadership, speaking, or teaching.
Legal/Discipline	No public record of bar discipline. Formal SC Bar check recommended.
Sanctions/Watchlists	No evidence of OFAC/other listings in open source. Run formal screening.

Preliminary Risk View: Rustin is a high-profile financial regulatory attorney, which elevates reputational linkage risk for clients engaging him. Mitigated by AmLaw-100 platform, academic appointment, and broad industry credibility.

CDD Recommendations: 1. Verify bar status and discipline with SC Bar. 2. Run full OFAC and sanctions-list screening on all name variants. 3. Confirm CAMS/CRCM certifications with issuing bodies. 4. Search PACER and state court systems for litigation records. 5. Archive key source materials (firm bio, faculty page, publications).

HOW AI CAN HELP AT ONBOARDING

- **Enhance Customer Data Collection**: AI technologies improve data collection methods, leading to more comprehensive customer backgrounds for compliance.
- **Custom Diligence Work Plans**: AI can tailor due diligence workflows based on individual customer profiles, fostering better compliance outcomes.
- **Risk Scoring**: AI facilitates automated risk scoring for customers, ensuring more accurate and efficient due diligence processes.

MACHINE LEARNING AND TRANSACTION MONITORING

- Modern systems leverage machine learning models to help identify suspicious activity by analyzing behavior patterns to generate alerts when customer behavior deviates from expected patterns.
- AI and machine learning technology learns from your analysts to become an extension of your institution's team, which—in tandem with responsible human oversight—can ease AML/BSA team burnout by streamlining reporting workflows and daily tasks.
- Further, AI models significantly reduce false positives by leveraging historical transaction data, helping investigators efficiently close cases while preserving detailed decision trails for audit and regulatory transparency.

EXAMPLE STATEMENT

First Bank of Example

Statement of Account

Account Holder:	Brad Smith
Account Number:	****-5678
Statement Period:	2025-01-01 to 2025-02-28
Statement Date:	2025-09-22
Address:	100 Example Ave., Suite 200, Anytown, ST 12345

Account Activity Summary

Opening Balance	$100,000.00
Total Deposits	$8,845.50
Total Withdrawals	$63,500.00
Closing Balance	$45,345.50

Transaction Details

Date	Description	Debit ($)	Credit ($)	Balance ($)
Opening Balance				100,000.00
2025-01-02	Deposit - ACME Corp Payroll		3,000.00	103,000.00
2025-01-03	Starbucks Coffee #123	8.75		102,991.25
2025-01-04	Netflix.com Subscription	15.99		102,975.26
2025-01-05	ATM Withdrawal - Main St	200.00		102,775.26
2025-01-06	Transfer from Savings		1,200.00	103,975.26
2025-01-07	**Grayson Landscaping, LLC**	**9,500.00**		**94,475.26**
2025-01-08	Whole Foods Market	142.30		94,332.96
2025-01-09	City Utilities - Electric	89.45		94,243.51
2025-01-10	FreshMart Grocery	123.45		94,120.06
2025-01-11	Client Payment - J. Henderson		2,500.00	96,620.06
2025-01-14	**Grayson Landscaping, LLC**	**9,500.00**		**87,120.06**
2025-01-15	CVS Pharmacy	32.10		87,087.96
2025-01-16	Bluebird Cafe	6.50		87,081.46
2025-01-17	La Trattoria Ristorante	78.20		87,003.26
2025-01-18	Mobile Deposit - Check #4521		800.00	87,803.26
2025-01-21	**Grayson Landscaping, LLC**	**9,500.00**		**78,303.26**
2025-01-22	Uber Trip	24.00		78,279.26
2025-01-23	Amazon Marketplace	59.99		78,219.27
2025-01-24	24Fitness Membership	45.00		78,174.27
2025-01-25	Online Transfer - Savings	500.00		77,674.27

THE ROLE OF SYSTEM INTEGRATION

- The ability to integrate an AML monitoring program across all a bank's disparate data is critical to the success of the AI platform.
- Think about all the data that a bank has on each transaction and how it could be leverage for BSA/AML purposes (time of day, method of initiating, geographic locations, typicality, etc.).
- The benefit of AI is to find the smaller, more unique suspicious transactions. For example, imagine if Brad was a contractor regularly paying sub-contractors each week in amounts between $5,000 and $20,000. Would you have detected the $9,500 to Grayson Landscaping?

HELP ME PREPARE A SAR NARRATIVE….

Subject: Dowse B. ("Brad") Rustin IV
Subject identifiers: DOB: October 10, 1980; SSN: 123-45-6789; 123 Main Street, Birmingham, AL 10001; Acct No.: 1234567
Subject occupation / business: Attorney / Nelson Mullins
Relationship to account: Joint Owners with Spouse
Other party / Recipient: Neil Grayson / Grayson Landscaping, LLC
Other party identifiers:
Other party business type: Landscaping services
Report type: Initial Suspicious Activity Report
Filing institution: First Bank, Washington, DC
Filing date: September 22, 2025
Internal case/reference ID: 12345

Summary of suspicious activity (short):
From January 7, 2025 through February 18, 2025, Subject A engaged in seven electronic ACHs each in the amount of $9,500 to Recipient B (a business described in public records as a landscaping company). The transfers occurred on the same day of the week each week. There is no documentation or apparent business purpose for these payments in the account file; amounts and timing are consistent with attempts to avoid $10,000 CTR reporting thresholds and inconsistent with recurring landscaper payments. Subject A and bank personnel could not provide a legitimate business justification for the payments.

Detailed narrative:

- Account: 1234567
- Transactions:
  - January 7, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
  - January 14, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
  - January 21, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
  - January 28, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
  - February 4, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
  - February 11, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
  - February 18, 2025: $9,500 — ACH to Grayson Landscaping, Second Bank of Washington DC, account number 1234
- Channels used: ACH
- Pattern: Seven (7) transfers, each $9,500, on same day of each week
- Business purpose / documentation: No invoices, contracts, or service agreements in the account file. Customer could not provide supporting invoices or credible explanation when questioned on March 17, 2025
- Known relationships: Recipient B is registered as a landscaping business at 123 Apple Pie Street, Alexandria, VA. No evidence in the account file of a contractual relationship between Subject A and Recipient B.

HELP ME PREPARE A SAR NARRATIVE….

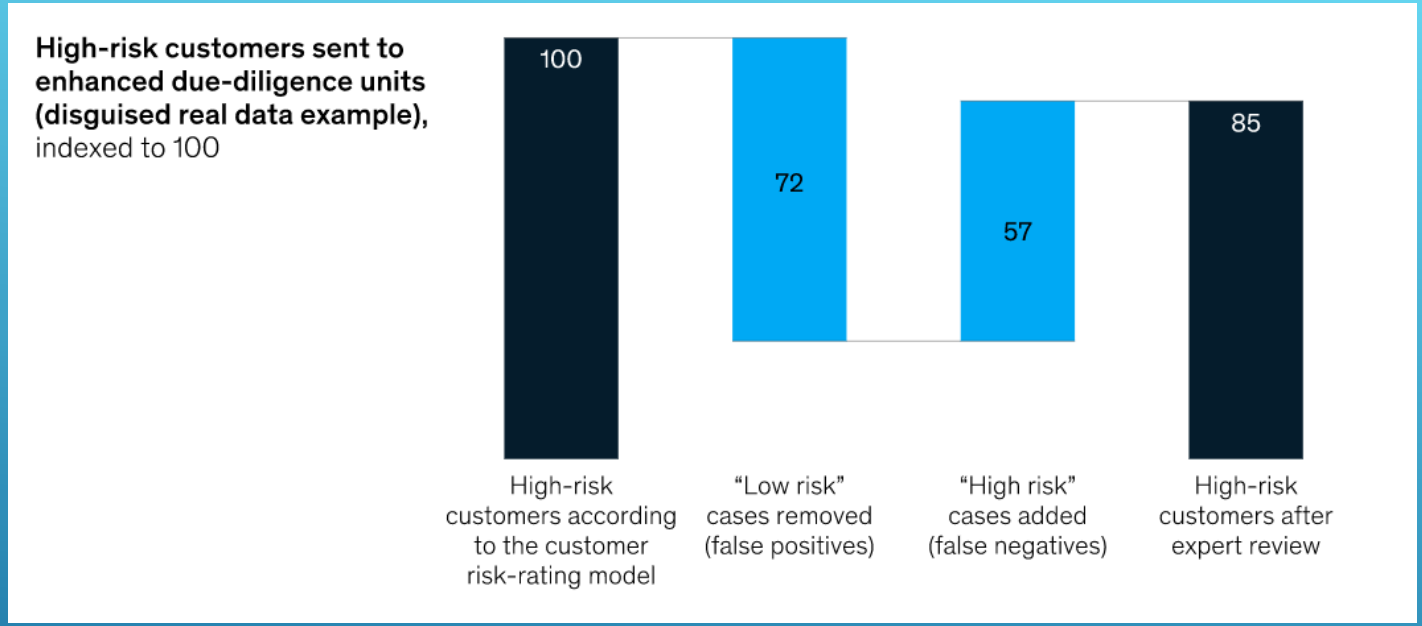
- Other relevant account activity: Prior to this pattern, account activity was limited to typical household payments, with no recurring payments to Recipient B.
- Possible indicators: amounts just under $10,000 (possible structuring to avoid CTR reporting limit), repeated payments to same external beneficiary, weekly cadence, lack of supporting business documentation.
- Actions taken by the bank: Bank contacted account owner on March 17, 2025; customer provided no explanation and said this was "none of bank's business." Later said it was for "personal services." Bank placed account on internal monitoring on March 17, 2025
- Attachments/references:
- Recommended disposition: File SAR and continue enhanced monitoring / escalate to BSA officer. Do not notify subject of SAR filing.

Transaction Summary:

Date Range: 2025-01-07 through 2025-02-18
Number of Transactions: 7
Amount per Transaction: $9,500.00
Total Amount: $66,500.00
Transaction Type(s): ACH
Frequency / Pattern: Weekly; same weekday each week (Tuesdays)

Indicator(s): Possible structuring (under $10,000), repetitive payments to same beneficiary, lack of supporting invoice/documentation

Reporter contact (bank): Cindy Hall, Deputy BSA/AML Officer, First Bank, CHall@FirstBank.com; 888-867-5309



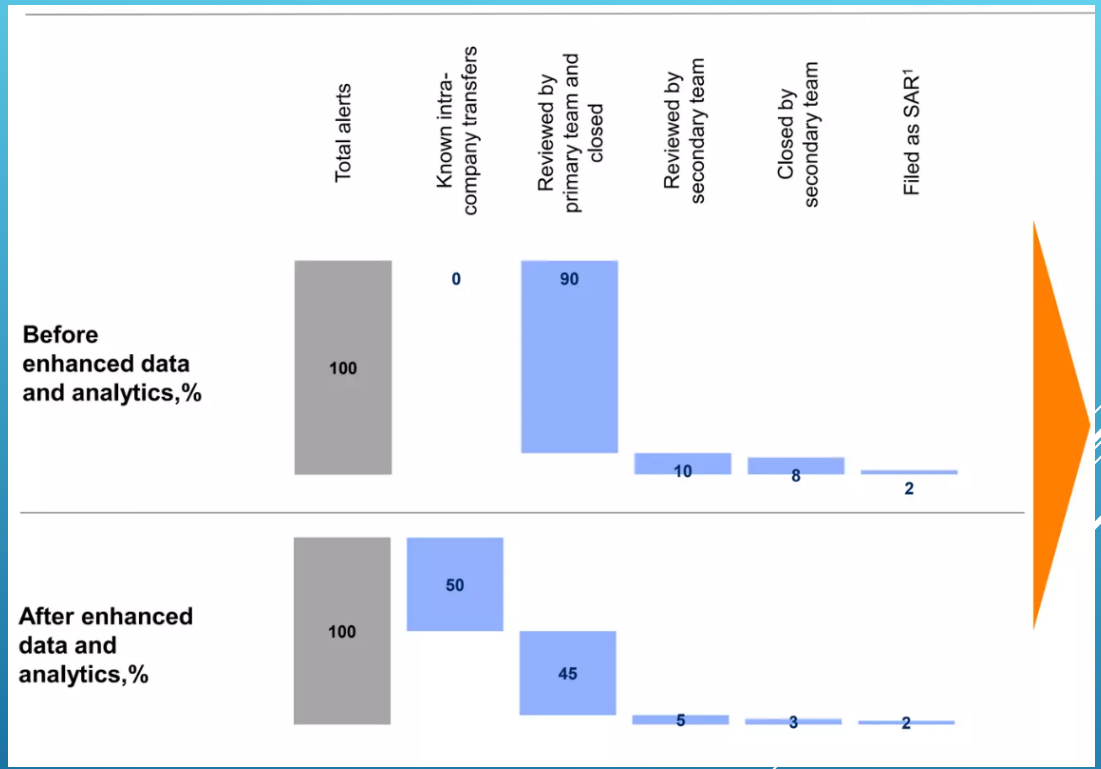
TYPICAL AML SCORING SYSTEMS

*McKinsey & Co., *The investigator-centered approach to financial crime: Doing what matters* (2020).

USE OF ENHANCED ANALYTICS

McKinsey conducted research at a large U.S. bank. The bank established machine learning systems that would "learn" from the BSA/AML team and look for more intricate patterns of conduct.

Most of the false positives were innocuous intra-company transfers. By understanding the corporate structure and "teaching" the software, the burden on BSA/AML staff was halved.



GOOGLE CLOUD/HSBC EXPERIMENT: THE DYNAMIC RISK ASSESSMENT (DRA) PROGRAM

Benefit	Description	Results
Speed	DRA significantly improves the speed of data analysis and result generation	• Reduced batch analysis cycle time from ~30 days to 2 or 3 days • Results generated faster, in under 12 hours
Accuracy	DRA outperforms traditional systems by leveraging transaction flows and other parameters to detect complex typologies	• The bank can detect two to four times more 'true positive' risk, versus a traditional system • Able to identify new typologies of suspicious behavior (for instance, misuses of business loans
Efficiency	DRA generates significantly fewer alerts than traditional systems, reducing the level of 'noise' from false positive Suspicious Activity Reports	• Alert volumes decreased by more than 60%, reducing wasted investigator time. Further improvements have been observed as the model learns from newly detected suspicious activity • Enhanced customer experience by minimizing the need to engage with customers on false positive alerts

OTHER COMPLIANCE USES FOR AI

- **Identification and verification of customers**: In the context of remote onboarding and authentication, AI, including biometrics, machine learning, and liveness detection techniques, can be used to perform micro expression analysis, anti-spoofing checks, fake image detection, and human face attributes analysis.
- **Monitoring of the business relationship and behavioral and transactional analysis**:
  - Unsupervised machine learning algorithms: Group customers into cohesive groupings based on their behavior, which will then create controls that can be set more adequately based on a risk-based approach (ex: transaction threshold settings), allowing a tailored and efficient monitoring of the business relationship.
  - Supervised machine learning algorithms: Allow for a quicker and real-time analysis of data according to the relevant AML/CFT requirements in place.
- **Alert scoring**: Helps focus on a pattern of activity and issue notifications or a need for enhanced due diligence.
- **Identification and implementation of regulatory updates**: Machine Learning techniques with natural language processing (NLP), cognitive computing capability, and robotic process automation (RPA) can scan and interpret big volumes of unstructured regulatory data sources on an ongoing basis to automatically identify, analyze and then shortlist applicable requirements for the institution; or implement (to a certain extent) the new or revised regulatory requirements (via codification and generation of implementation workflows) so regulated entities can comply with the relevant regulatory products.
- **Automated data reporting (ADR)**: The use of standardized reporting templates and automated digital applications (data pooling tools) to make the regulated entity's underlying granular data available in bulk to supervisors.

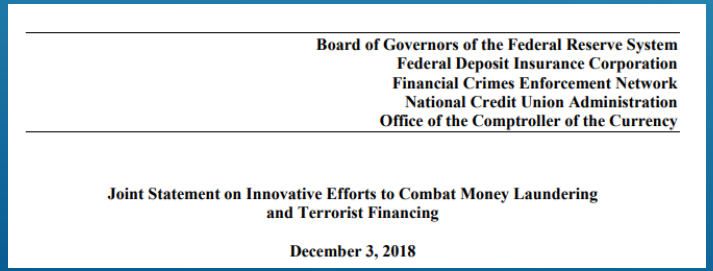
OFAC SCREENING

- Some of the greatest value in AI has been through OFAC screening:
  - Ability to easily screen multiple sanctions lists and databases, including on an automated/ongoing basis.
  - Ability to use “fuzzy matching” to identify text that is similar, but not exact.
  - Ability to weed out “false positives” by augmenting data hits with third party information.
  - Better assessment of “hit” or “match” quality, which allows bank personnel to prioritize investigations and resolutions.

COMPLIANCE CHALLENGES: THE RISKS OF NEW AI TECHNOLOGIES

THE CURRENT STATE

- Almost all current AI-based AML systems use a human as the "final check" in the review process.
- There is still little adoption of so-called "Black Box" programs that generate results with little human interaction or oversight. Regulators still expect that you can "explain" what is occurring within the monitoring system.
- Acceptance of the technology has been slow, especially with regulators and auditors. There was a concern that the technology might produce lesser results than a hands-on scrutiny by human analysts–leading to missed signs of abuse or fraud.
- "Pilot programs undertaken by banks, in conjunction with existing BSA/AML processes, are an important means of testing and validating the effectiveness of innovative approaches. While the Agencies may provide feedback, pilot programs in and of themselves should not subject banks to supervisory criticism even if the pilot programs ultimately prove unsuccessful. Likewise, pilot programs that expose gaps in a BSA/AML compliance program will not necessarily result in supervisory action with respect to that program."



Board of Governors of the Federal Reserve System
Federal Deposit Insurance Corporation
Financial Crimes Enforcement Network
National Credit Union Administration
Office of the Comptroller of the Currency

Joint Statement on Innovative Efforts to Combat Money Laundering and Terrorist Financing

December 3, 2018

RISKS OF ARTIFICIAL INTELLIGENCE

- **Bad Data**. If the underlying data on which the system is trained is missing, incomplete, or has errors, the "output" may not be valid.
- **Data Exposure**. Given the sensitive nature of the data fed to the system, banks must be extremely careful with the risks of data exposure.
- **Inherent Complexity**. Banks must generally avoid "black box" programs where they cannot explain the data analysis or results to regulators. Similarly, banks must be careful if the system can "learn" or "adapt" itself overtime as this presents the risk of hallucinations or decreasing relevancy of past validations.
- **Burden on Human Resources**. Generally, the oversight of large AI-based programs require significant human capital, specially trained in the management of these types of programs. Humans should intervene at different steps of a model's conception, testing, and use, to ensure the AI/ML model is working as intended.
- **Governance and Model Risk**. The complexity of AI/ML models creates challenges for typical model risk management functions. For example, the increased complexity of model inputs and the ways in which models evolve may make traditional MRM processes less effective. Similarly, there is very little "reproducibility" in AI/ML systems–traditionally a bedrock principle of MRM.

PRACTICAL GUIDANCE

- Be careful replacing critical BSA/AML/OFAC functionality until the new systems have been vetted, tuned, and proven effective.
- If you plan to use third-party sourced AI for BSA/AML/OFAC controls, you must ensure it is fully vetted through your institution's Third-Party Risk Management (TPRM) framework. Generally, this will be considered a high-risk or critical third-party relationship.
- Ensure your institution has developed an AI-specific framework that includes:
  - Model risk and model validation;
  - Explainability and visibility into the system;
  - IT security challenges with access to customer-level data;
  - IT security challenges with monitoring criteria, red flags, and tolerances; and
  - Internal human resources with sufficient knowledge to oversee, tune, and test an AI-enabled system.

QUESTIONS OR FOLLOW UP?

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