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Cookies, AI and the Future of AML Systems

by Ken Agle

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SOME THINGS GO IN CIRCLES

If you're old enough, you can remember when the book "If you Give a Mouse a Cookie" by Laura Numeroff was published. It was 1985 and life in the regulatory world was a bit simpler. The book was definitely a favorite of our household as the story follows a very wanting mouse and its desire for just a bit more, repeatedly. From the cookie, the mouse solicits a glass of milk, then a straw (to drink the milk), a napkin and then a mirror (to avoid a milk mustache), nail scissors (because he wants to trim his hair using the mirror), and a broom (to sweep up his hair trimmings). Next, he has the boy give him a blanket to take a nap, read him a story, give him crayons and paper so he can draw a picture, and then hang the picture on the refrigerator. Looking at the refrigerator makes him thirsty, so the mouse asks for a second glass of milk. The circle is complete when he wants a cookie to go with it.

Circular patterns in Banking can also be found, especially within AML (Anti-Money Laundering) Systems. Once you get an AML System, you'll need to have individuals to work that system. They'll need training and support and then you'll need to get the system validated. From there you may find the need for modifications to the system and potentially face exhaustion from handling the abundance of low-quality alerts. That may drive you to lose those good, but exhausted people, so you'll potentially look for a new system. You'll get the new system, and the process will begin all over again.

AdvisX is in the business of being a part of the process. Namely, the AML validation part. Having conducted hundreds of system validations over the past 10+ years, I have seen this pattern repeatedly.

Most systems are flawed because the foundation of those systems are flawed. While corrective efforts to improve those foundations has been increasing, only recently are we beginning to see the use of Artificial Intelligence (more commonly referred to as AI) integrated into those systems.

Like many of you, I've been playing around with AI in various formats. It's an easy tool to find quick solutions to sometimes previously complex areas that often required years of experience only to find them resolved in mere seconds. Those resolutions often led you to be amazed. Yet, one can realize that AI is a bit of a two-edged sword. It is quick to offer solutions but are the solutions accurate?

Spend enough time and you'll realize that both are true. Give AI the right information and inputs and you'll find it can work wonders. When that information is flawed, AI can be just as flawed. It makes a lot of sense that AI would make its way into AML and particularly AML Systems for monitoring. AdvisX has long held that predictive analytics can and must play a central role to AML monitoring. AML Systems have been striving for years to establish one form or another of risk-based weighting relative to alerts thereby pushing those with higher probability towards the top for the attention of the organization. Navigate to any AML System and each of them tout their use of AI. Words like cutting-edge AI innovation or predictive AI, generative AI and machine-learning technology are frequently cited but do they lead to anything of actual value?

Ultimately, the answer to this question will be based on age-old principles. Is your organization's KYC (Know Your Customer) sound and is it fully integrated into the system? Does the system have sufficient data to base its predictive elements regarding transactional patterns? Does your current AI factor these elements and provide risk impact with respect to the patterns? Do transactional typologies properly interact external sources such as negative and positive news to allow for enhanced outcome? Is this information presented in a manner that allows the analyst to vet the presented information, accept the AI position and accept, reject or modify? Let's explore these questions a bit.

INTEGRATING SOUND KYC INTO MONITORING

The concept of "no two customers/members[1] are alike" seems logical, but it's also true that no two financial institutions are alike. When combined, it should be clear that organizations that rely on broad-sweeping system settings within their AML solution are doomed to challenges.

Moreover, when those same systems lack meaningful information regarding a customer they'll suffer from those limitations. AI requires a sound dataset or database to provide meaningful feedback. However, most AML Systems draw from very limited and sometime erroneous datasets. This is certainly true when comparing against lending systems that have a comparatively massive dataset regarding customers. The advent of credit scores started in 1956 with Fair Isaac Corporation (FICO) but only expanded in the late 1980s and early 1990s when universal scoring expanded.

FICO and its competitors rely on complex systems to integrate towards a single risk score. The factors obtained from a massive dataset among tens of millions of transactions into weighted algorithms based on established factors allows for a level of reliance relative to likelihood of debt repayment.

Then consider the factors that most AML systems draw from, and you'll find a significantly lower amount of information. Often these systems draw from a shallow pool of limited elements such as individual, business, past activity, etc.

The merit of expanding the depth of information is unquestioned but may require deeper consideration. Clearly an individual's profession, age, geographic location, marital status, dependents, housing status, FICO score, etc. or a businesses' years of operation, number of employees, revenues prior year, asset size, NAICS code, etc. could greatly enhance a monitoring system's capacity to properly understand the transactional pattern. Whether these elements and those like it should be applied to an AML System has merit for debate but there is no question that they would promote greater value to understanding transactional patterns and allow AI to flourish.

At question is whether such information is available and whether it should be applied to AML System's and the use of AI within those systems. Predictive analytics requires that a dataset have the information to draw upon to make those predictions. Whether this is ethical or legal will require consideration, but some aspects of the data must be integrated to allow AI to flourish.

Does current AI factor each of these elements and provide risk impact with respect to the transactional patterns?

To date, the answer seems yes and no. Yes, as most AML Systems have aspects of a model and hence the need for validation there is certainly some form of intelligence in play with respect to alerts. Otherwise, they're just tracking rote patterns and generating alerts. Most systems seek to provide a hierarchy relative to the alerts generated as priority. This is often the proprietary "Secret Sauce" of the AML System. Fair Isaac and other credit reporting companies do not provide the exact method of their calculated score but rather the generalities.

This is similar to many AML Systems. However, it doesn't take a rocket scientist to figure out what is weighted and how it impacts scoring. The problem is that most of the scoring doesn't draw from a large pool of information because that information isn't integrated (see above discussion).

Consequently, the AML models are, in varying degrees, blind to the full picture. Give the systems more access to the complete picture and you'd have a better model. Until those blinders get removed it will place more burden on the analyst to sift through the mountain of false-positives. While that mountain can and should be reduced through their respective system's ever-improving techniques and mechanisms, the challenge of limited datasets will prevail against true use of AI's abilities.

Do transactional typologies properly interact with external sources such as negative and positive news to allow for enhanced outcome?

This element seems like a no-brainer but we've yet to see it in play in most systems. Given that the pool of information regarding negative news and positive news is vast, integration of AML Systems to directly tie to this pool is a must. While negative news seems like a natural pull that an AML system would identify (and many have this ancillary capacity) direct integration into risk scoring would provide meaningful feedback on alerts. Perhaps more importantly there is positive news such as a company's good standing, length of time in business verified, asset and earnings verification, number of employees, locations, etc.

All of this integration related to transactional patterns could boost monitoring to promote greater understanding of transactional patterns. Much of this information is publicly available but requiring integration through AI to leverage its capacity. This seems a must pursued action in the near future if not already underway with AML Systems to survive the next round of implementation.

Is this information presented in a manner that allows the analyst to vet the presented information, accept the AI position and accept, reject or modify?

The integration of AI capacity into AML Systems is only beginning. Ultimately, like every tool, it has powerful capacity in the hands of skilled and trained users. In the hands of unskilled individuals' disaster can happen. This will be true of AML monitoring. AML Analysts will have to have greater abilities to sift through what is accurate and inaccurate and deploy new skills to ensure that output matches to those skills. This will include ability to accept, reject and/or modify the results from integrated AI into AML Systems. When the systems learn from those modifications, they will become only stronger and, hopefully, more reliant. This will inevitably require more innovation in how systems are validated as validation will greatly expand into the use of AI as part of system governance, understanding including conceptual soundness, outcome analysis and ongoing monitoring.

Institutions can and should practice sound controls including above and below the line testing as they implement AI into their monitoring systems. These will promote greater assurances that implemented enhancements through AI or otherwise are balanced against outcome analysis.

Conclusion

While there is no doubt the promise of AI into AML Systems including generated investigatory analysis with analytics is the future, it will require more input from knowledgeable individuals within those systems as well as foundational database integration. This cycle will perpetuate like the mouse and the cookie. Fortunately, it will be an ever more interesting ride and one that will provide ample opportunities for learning and growth.

For more information about AML System Validation and/or System Optimization and Enhancement contact....

KENNETH AGLE

EVP of Risk Management

Ken Agle brings more than 25 years of banking experience covering almost all facets of bank risk management operations. He has conducted more than 350 compliance reviews and has assisted more than 200 financial institutions throughout the United States. He has developed and implemented systems and training programs on all phases of banking risk management, including, but not limited to BSA/Fair Lending, loan review, HMDA, CRA, BSA, Operational Compliance, TILA, and RESPA. He has written numerous regulatory responses and appeals and has been instrumental in assisting institutions with challenging circumstances while facing regulatory enforcement orders. He has partnered with McGladrey & Pullen, RSMI, Promontory, Sheshunoff and other multi-region firms to provide support services to financial institutions. Mr. Agle specializes in strategic regulatory response and in developing and implementing both proactive and reactive tools and systems to preempt and resolve issues affecting today's financial institution.

Prior to launching his own consulting firm, Mr. Agle had been a bank examiner. As a commissioned examiner, Mr. Agle oversaw numerous examinations, including Safety and Soundness examinations and Compliance Examinations.

He has been the author of various banking forums, including the Compliance Briefing and the online compliance news webcast, "Compliance Street." Mr. Agle has written banking policies covering every compliance regulation and other banking topics, such as lending, asset-liability management, and risk management. His articles, "Confessions of a CRA Examiner," and "Calming Compliance Jitters with DCAF," were published in "The Findley Reports on Financial Institutions." He is a regular presenter for Sheshunoff Consulting; a leader in web-based Bank training covering numerous Banking topics.

Mr. Agle graduated magna cum laude from United States International University, London and San Diego, where he majored in Business Administration and Finance.

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LET'S GET STARTED

We're ready to roll up our sleeves and get to work for you. We take great pride in delivering great value with all of our products and services and look forward to hearing from you.

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