ADVANCED DATA ANALYTICS LIE AT THE HEART OF PROTECTING AGAINST FINANCIAL CRIME

KEY HIGHLIGHTS

- Collective experience in financial services and combined technology solutions help to combat the rising threat of financial crime
- Big data platform, advanced analytics, and operational tools enable financial services firms to unlock innovation and efficiencies in the battle against financial crime
- Financial crime last area of financial services to benefit from a holistic view of data and removal of siloes – a financial crime data lake allows firms to make informed and contextual decisions

Financial Services is a sector that has made great advances in its use of big data and advanced analytics, using this technology to improve the customer experience, mitigate risk, understand the markets better and utilize insight across the organization. One area that such technology is mostly yet to touch however, is financial crime.

Financial crime is a major and growing challenge for financial services organizations. Synthetic Identify Fraud for example, is the fastest-growing type of financial crime in the United States. The act of creating synthetic IDs to secure credit via a combination of real and fake IDs is almost impossible to detect, such is the sophistication and professionalism of cybercriminals. Furthermore, research has suggested that only 50% of money laundering or terrorist financing incidents are detected by system alerts.

Balancing innovation and efficiencies to combat financial crime has therefore become a principal objective for financial services firms. But many organizations struggle to address poor data quality, inconsistent procedures, unreliable quantitative metrics, and siloed systems and platforms. Furthermore, it is vital when protecting against financial crime, to do so in real-time, and for decisions to be made intelligently with the full context of working with all available data.

Background

For financial services firms to map innovation and efficiencies when addressing financial crime, it requires the right combination of expertise, experience, and technology. Financial crime departments lack a single source of truth, with data dispersed across the business, there is inconsistent security and governance and many FS firms do not have the flexibility, agility, and infrastructure to truly succeed against financial crime.

The partnership of Quantexa, Microsoft, and Cloudera allows financial services firms to:

- Gather all siloed data into one 'financial crime data lake', allowing informed and contextual decision making
- Bridge operational divides, applying data analytics across functions to deliver deeper insight around financial crime
- Address the growing threat of financial crime more efficiently and effectively than would ever have been possible just a few years previously

Solution

The first element of the solution is Quantexa, the scale-up that uses Contextual Decision Intelligence and financial data analytics to improve decision-making, increase Anti-Money Laundering (AML) efficiency, and grow new markets. Working with many of the world's biggest financial services organizations, Quantexa has four core functions to help customers fight financial crime.

Entity resolution – dynamic single view of internal and external data. This connects billions of data points across internal and external data sources in real-time or batch, creating a single, enterprise-wide view of people, organizations, places, and more. Users can find related entities that could not be found with traditional matching approaches and the system can scale to tens of billions of records, reducing false positives by up to 90%.

Network generation – link resolved entities into networks that reveal connections. Context is everything in financial crime and this provides a dynamic view of the bigger picture, automatically compiling the most relevant connections, entities, and data and capturing how they relate to each other. This informs decision-making by removing coincidences and uncovering connections and behaviors that are impossible to see when looking at data in isolation.

Advanced analytics framework – using context to build analytics models. This allows users to make real-world decisions based on analysis of contextual information, identifying suspicious behavior, detecting criminal activity, and revealing hidden opportunities using networks. It uses the context of resolved entities and relationships in scenarios, rules, and models, making for faster and more accurate decisions.

Visualization & exploration – make people more effective and efficient. Makes identifying risks and opportunities even easier, with powerful visualizations allowing the user to make sense of huge volumes of data, surfacing the most important connections to better understand the context created.

Quantexa can be used reactively, if the user has a lead, or proactively, by analyzing the data and locating any high-risk activity. With a batch processing tier and a dynamic tier, real-time entity resolution is possible, and it is all underpinned by a dual architecture, overlaid on Microsoft Azure.

Working both on-premise and in the public cloud, offering pervasive intelligence in Artificial Intelligence and Machine Learning, Microsoft Azure is empowering intelligent banking. With its secure and trusted, hyper-scale global infrastructure, it means users can go beyond rule-based systems and address financial crime more effectively than ever.

Its use of modeling and Machine Learning is especially potent for validation and learning. Microsoft collates all relevant data over a specified time frame, and its scalable real-time Machine Learning detection system is specifically engineered to align with overall AML approaches of banks. This validates the model and delivers 89% accuracy for new (previously unknown) transactions.

Alongside the innovation of Quantexa and Microsoft Azure is the advanced data analytics of Cloudera. Working with 82% of the global top 100 banks in both hybrid and multi-cloud environments, Cloudera makes it easy for customers to migrate workloads into Azure in a structured, safe, and secure manner.

Cloudera provides a single control plane across private cloud and public, so customers can manage data apps into whatever environment suits them best. Cloudera SDX offers consistent security and a shared data exchange, allowing the migration of sophisticated workloads onto Azure, even those as sophisticated such as Quantexa.

Results

The three-way partnership can deliver vast benefits to financial services firms in the on-going battle against financial crime. Financial crime is perhaps the last area of real innovation with data remaining within financial services, so building out the holistic view of activity is hugely important. This removes siloes across the organization, which means more flexibility in an organization's capabilities to fight financial crime.

Financial criminals are agile and highly organized, and financial services firms applying the data and analytics layer can generate a powerful return in the fight against them. One Quantexa banking customer working in 56 countries with 32TB of data, delivered dynamic entity resolution in real-time across all customers, accounts, and transactions. A capital markets firm replaced its traditional AML system with Quantexa. Previously it had averaged 2,000 alerts a year, with a false positive rate of 100%, but Quantexa was able to bring that down to several hundred alerts and a referral rate of 35%.

The value in a partnership

With financial crime such a problem for financial services firms, using technology to address this has become ever more important. The partnership between Quantexa, Microsoft, and Cloudera can meet this challenge, allowing users to feel more confident about their ability to combat and withstand financial crime.

Working with a big data platform to break down company siloes, advanced analytics to use modeling and Machine Learning to process data, and operational tools to improve investigation lifecycles, users can really tackle financial crime. Establishing a financial crime data lake, migrating workloads into the Azure cloud, and leveraging the innovative platform of Quantexa is a powerful and effective proposition.

Working in any environment of the customer's choosing, Cloudera, Microsoft, and Quantexa can combine to deliver a compelling offering in the fight against financial crime:

- Break down data siloes within the organization, unlocking the real-time insight needed to combat financial crime

- Derive hidden relationships within data that otherwise would be hard to discover

- Make contextual and informed decisions relating to improving financial crime defenses

- Improve business performance across compliance and security, as well as financial crime

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