

# Detect Financial Crime With Artificial Intelligence



Cybercrime plagues financial institutions (FIs) around the globe—and this new generation of threats requires a new generation of security solutions. While criminals increasingly use advanced technology such as Artificial Intelligence (AI) to mastermind and execute their attacks, most banks continue to rely on rules-based transaction monitoring systems that thwart their ability to fight financial crime.

Most of these systems use business rules or supervised machine learning algorithms that require preexisting knowledge of fraud patterns as part of processing. Hence, they are unable to identify new or emerging fraud patterns and struggle to analyze large volumes of a variety of data and provide meaningful output. Compounding the problem is a high number of “false positives” that direct analyst teams away from real fraud cases and create “alert fatigue.”

Vynamic Security Fraud Detection, powered by a collaboration with ThetaRay, harnesses Unsupervised Machine Learning to detect potentially fraudulent activity in the earliest stages and identify previously unknown fraud patterns. Insider threats, money laundering, cyber-attacks and a broad range of anomalous business activities are mitigated from the outset. Our advanced analytics solutions operate with unprecedented speed, accuracy and scale, enabling clients to detect previously unknown threats quickly and efficiently, obtain measurable value in days and achieve full deployment in a matter of weeks.

## **DETECT MULTI-CHANNEL FRAUD AT EARLY STAGES**

Detect potentially fraudulent activity in the earliest stages across multiple channels and identify previously unknown fraud patterns emanating from cross-channel, product, and customer activity. Intelligent anomaly detection empowers fraud analysts to identify new types of fraud amongst the ‘noise,’ before they become significant and costly.

## **IDENTIFY PREVIOUSLY UNDETECTABLE MONEY LAUNDERING SCHEMES QUICKLY**

AI technology empowers banks to rapidly discover new and unfamiliar schemes, ensuring that money launderers cannot simply learn and bypass static rules and thresholds. Our rules-free solution uses unsupervised machine learning algorithms to analyze all banking activity and KYC data for anomalies that suggest that money laundering is taking place, eliminating bias introduced through legacy rules focusing solely on historical known risks. Clustering algorithms and classification of anomalous activities ensures analysts can most efficiently review results based on suspect patterns of behavior as opposed to one payment at a time.

## **PROACTIVELY DETECT EVOLVING ATM FRAUD**

Thanks to sophisticated proprietary mathematical algorithms, Vynamic Security Fraud Detection provides a unique ability to converge multi-domain data, including ATM machine data, financial transactions and operational logs in real-time and target ATM threats that have evolved beyond legacy rule-based systems. Banks and ATM service providers can automatically identify the earliest signs of anomalous activity, irregular ATM operations or malfunctions, and take action to prevent jackpotting, skimming, and ATM abuse, and rapidly mitigate any negative customer impact.

## Dynamic Security Fraud Detection

### UNPARALLELED TECHNOLOGY TO UNCOVER UNKNOWNNS

To detect sophisticated risks, a new approach is required: the most meaningful anomalies hide in rich, hyper-dimensional data, and in the intricate links inside multi-source data. By using ThetaRay's patented algorithms, a 'normal' profile for the data is modeled, pointing out with laser-precision the anomalies and the exact parameters that triggered them. Its fully automated detection is seamless and swift; no matter how much data needs to be analyzed, anomalies are detected within seconds, and with extremely low false positive levels. This high computational efficiency allows FIs to know about risks immediately, respond, and expedite event investigation in order to rapidly mitigate the risk and minimize impact.

### Clear, Confident Action

Leveraging ThetaRay's Analytics Platform, Diebold Nixdorf helps risk and compliance officers centrally manage internal and external risks, process and policies, incident management, forensic analysis, reporting and compliance management.

### Key Benefits

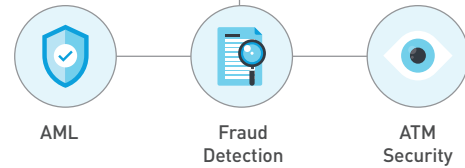
- Ability to Find Unknown Unknowns — with an unsupervised, non-heuristic methodology
- Rule-free Detection — eliminating human bias from financial crime detection
- Reduced Alert Fatigue — with industry lowest false positive levels
- Reduced Operational Costs — with improved compliance and optimized resources
- Rapid Deployment — several weeks instead of months, with no impact to operational systems or network activity

Powered by  
**THETARAY**  
**Advanced Analytics Platform**  
Hyper-Dimensional, Multi-Domain, Big Data Analytics



**Core Technology**  
Proprietary unsupervised machine learning algorithms

### Solutions



### Platform Components

