

Redefining trade transaction monitoring with automation and analytics

SAS and EY deployed a combination of text mining, image recognition and machine learning models that helped a global financial institution:

- Process 9 million transactions.
- Process 25 million documents.
- Automate 200 risk typologies.
- Achieve over 90% model accuracy.
- Improve operational efficiency by 25%.

Challenges

Complex nature of trade

The diversity of tradeable goods and services, the involvement of multiple entities, and the international nature of interconnected supply chains make trade activities complex and complicated. The dynamic nature of international trade allows organized criminal groups, professional money launderers and terrorist financing networks to carry out many types of financial crime, including the profound risk of trade-based money laundering.

High volume and speed of transactions

Trade finance is a high-volume business involving multiple parties from numerous regions across the globe. Also, the emergence of new technologies and the digitalization of trade have led to increased speed of trade operations, which can make timely identification of suspicious trade and financial transactions among the thousands of legitimate transactions even more challenging.

High cost of compliance

A typical trade transaction goes through numerous compliance checks during its life cycle, with each review adding costs along the way.

Manual processes

As much as 30% to 40% of trade operations capacity is consumed by manual risk and compliance. Many aspects of the trade transaction life cycle are still inherently paper-based, leading to a high volume of documentation. Many financial institutions (FIs) still rely on manual efforts to review and process these documents. This compels FIs to devote additional spending, time and resources, including the resources necessary to hire highly qualified experts, which is more difficult for smaller FIs with limited compliance budgets.



The issue

FIs play a crucial role in facilitating international trade by providing their clients with a wide array of offerings. The regulatory authorities require FIs to report suspicious activities, including any occurring in trade transactions, because criminals are increasingly taking advantage of the trade business' complexity and heavy reliance on documentation.

Therefore, it is more important than ever for financial institutions to have the right technologies in place to detect suspicious activity effectively and efficiently. Moreover, the growing global trade landscape compels them to be nimble enough to effectively scale and adapt to evolving financial crime tactics.

To address these key challenges, financial institutions should leverage recent technology developments such as artificial intelligence (AI) and machine learning (ML) to automate their manual compliance processes, improve existing detection measures and gain the agility they need to conduct comprehensive, cost-effective monitoring of international trade activities.

Our approach

SAS and EY have partnered to create TRACK (Trade Risk Analytics Compliance Kit), which harnesses the power of advanced analytics and automation capabilities to transform the way that trade finance teams identify and control risk. Its risk analytics scoring engine can analyze large volumes of trade transactions using natural language processing (NLP), text analytics and third-party data to enable more effective and efficient monitoring of trade transactions.

TRACK powers the automated review of millions of transactions via ML models while addressing complex risks in international trade, resulting in a unified view of the risk. This includes detecting patterns of illicit trade finance activity as bad actors employ increasingly sophisticated techniques to launder money, illegally transport goods and avoid sanctions.

By applying advanced analytics to automate these compliance reviews, TRACK provides a broad range of use cases that drives the analytics solution, covering regional and country-specific compliance requirements.

Capabilities

Advanced detection

TRACK allows for in-depth analysis and risk scoring of every transaction to enable financial institutions to effectively align their resources to the highest risk items. You can rapidly escalate transactions through different workflows depending on the severity and type of risk, with advanced anomaly detection distinguishing

between normal and abnormal behavior. This allows trade finance analysts to prioritize the most urgent transactions. The solution identifies red flags and creates a risk score that can help determine the next steps in the transaction process:

- No risks identified - straight through processing.
- Low risk flags - automatic clearance.
- Red flags present - operator review required or automatic escalation.

Once the level of risk is identified, escalated transactions are enriched with analytic findings and supporting evidence for targeted investigation and faster decisioning.

Analysis of structured and unstructured data

The digitization of paper documents using OCR allows financial institutions to apply adaptive analytics, NLP and advanced text analytics to understand customer activity over time, the network of related parties and unstructured data. Document-heavy transactions that require manual analysis to review can now be automated at high speeds to optimize human intelligence and decisioning. Advanced analytics enables entity resolution that takes multiple, disparate data points - from external and internal sources - and resolves them into a single, unique entity.

Comprehensive risk coverage

A hybrid approach to monitoring trade transactions provides a more comprehensive coverage of risk. This approach combines proven rules to detect known industry red flags with advanced analytics capabilities - including machine learning, deep learning and AI - to identify unknown risks. Administrative users can create, govern and update program-defined monitoring rules with a custom scenario builder.

Exposure of hidden relationships

Network and entity generation processes help trade finance analysts to rapidly uncover hidden relationships of unlikely related parties. The advanced visualization capabilities provide holistic views of entity relationships and transaction networks, incorporating key risk and compliance indicators. Entity analytics highlights potential areas of interest, showing entity closeness, betweenness and influence.

Improved operational efficiency

Financial institutions can use AI to automate their labor-intensive, manual processes. This helps them to cut the document review time from hours to seconds and eliminate any errors due to human fatigue and redeploy resources to high-value events.

THE SAS AND EY DIFFERENCE

We help financial institutions minimize false positives, maximize efficiency and lower overall compliance costs.

SAS® and EY TRACK allows you to:

Reduce costs associated with trade compliance while enhancing the compliance coverage and improving the customer experience.

Utilize industry-leading advanced analytics to identify anomalous behaviors hidden in complex trade transactional patterns and relationships.

Leverage robust text analytics capabilities to automate review of digitized documents for indicators of key trade finance risks.

Apply entity analytics and advanced network visualization capabilities to uncover hidden relationships and gain holistic views of customer relationships and transaction networks.

Speed human decisioning through automation by combining analytic results and financial institutions' policies to escalate the highest risk items for investigation and reduce delays for processing low-risk items.



CASE STUDY

A global financial institution with significant trade finance market presence uses AI for next-gen trade risk analysis

A Tier 1 multinational provider of diversified financial services wanted to improve its customer experience for trade finance business through reduced due diligence times and improved accuracy. Its process to review trade packages was manually intensive, requiring several hours to scan for sanctions and AML/fraud risks. Investigators were unable to keep pace with the growing volume of trade transactions and experienced a high error rate due to human fatigue. There was pressure from senior management to test AI for process automation.

SAS and EY deployed a combination of text mining, image recognition and machine learning models that provided quantifiable benefits to the customer.

OUTCOMES



9 MILLION
TRANSACTIONS
PROCESSED



25 MILLION
DOCUMENTS
PROCESSED



200
RISK TYPOLOGIES
AUTOMATED



> 90%
MODEL
ACCURACY



+25% INCREASE
IN OPERATIONAL
EFFICIENCY



Power of the PARTNER

Over 300 of the world's financial institutions use SAS to prevent money laundering. And EY has led financial crime transformation and remediation programs at seven of the 10 largest financial services organizations. This combined expertise brings exceptional value to our joint customers and represents what we call the Power of the Partner.

Find out more about our partnership:

sas.com/ey

ey.com/sas



For more information on this solution, email Jason.Grasso@sas.com.

Or find out more about our Trade Risk Analytics Compliance Kit (TRACK) at sas.com/ey-track.

