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BSA/AML Risk Assessment and Data Analytics

ACAMS Chicago Chapter

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Welcome

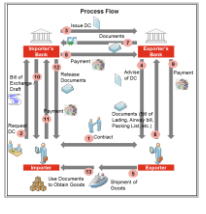
Current State Risk Assessment Challenges

Current State	*"Analytics Enablers"*	*Future State*
• **Point in time** review that is updated only periodically (eg annually)	Automation and real-time reporting →	• **Live risk analysis** and reporting tools to enable a continuous assessment of risk and identification of emerging risk areas
• **Qualitative and subjective input** based on outdated assumptions	Key risk indicators (KRIs) based on actual data →	• **Strong quantitative evidence** to support and confirm the qualitative analysis included in the assessment
• **Limited by organizational silos** with challenges assessing themes spanning across the company	More robust data infrastructure based on modern tools and technologies →	• **Centralized analysis and reporting** to be able to quickly understand thematic risks across the organization

Key Characteristics of an Effective Risk Assessment

Risk-Based	*Evolving*	*Predictive*	*Integrated*
• *Data Analytics provides a baseline for comparative analysis between parts of the firm – helping to assess relativeness of risk*	• *Data Analytics can more granularly measure and describe movement in risk over time and accelerate management of emerging risks*	• *Data Analytics can identify relationships between risks to better validate results and uncover new risk trends*	• *Data Analytics can help communicate risk profiles across the enterprise or help bank personnel drill into certain areas*

Analytics is a key enabler to improving each of these key risk assessment characteristics



Assessing Risk and Data Analytics

1. Define Structure and Taxonomy

The organization can be categorically dissected and analyzed so that risk assessments can be conducted in a standardized manner.

2. Identify Key Risk Factors

Quantitative analytics of risk factors through KRIs allow for automation and continuous monitoring. A good KRI should be measurable, comparable, and provide insight specific to the risk factor.

Bad KRIs

1. *# of Wire Originators*
2. *Total # of Wires*
3. *Total # of Foreign Wires*
4. *Total # Customers*

Good KRIs

1. *Percentage of wires to high risk customers*
2. *Value of wires to tax havens*
3. *Cash by customer and segment type*
4. *Drafts by Customer and segment type*

3. Evaluate Inherent Risk

Risk measurements can be benchmarked, visualized, and analyzed using data analytics tools to supplement the risk based assessment of the organization's inherent risks.

4. Assess Current Controls

Key Performance Indicators can be used to quantify the success of the organization's risk mitigating controls and identify pain points.

5. Evaluate Residual Risks

The quantifiable measurements of the risk assessment process can be viewed holistically to determine the residual risks despite the controls in place.

6. Report Key Risk Trends

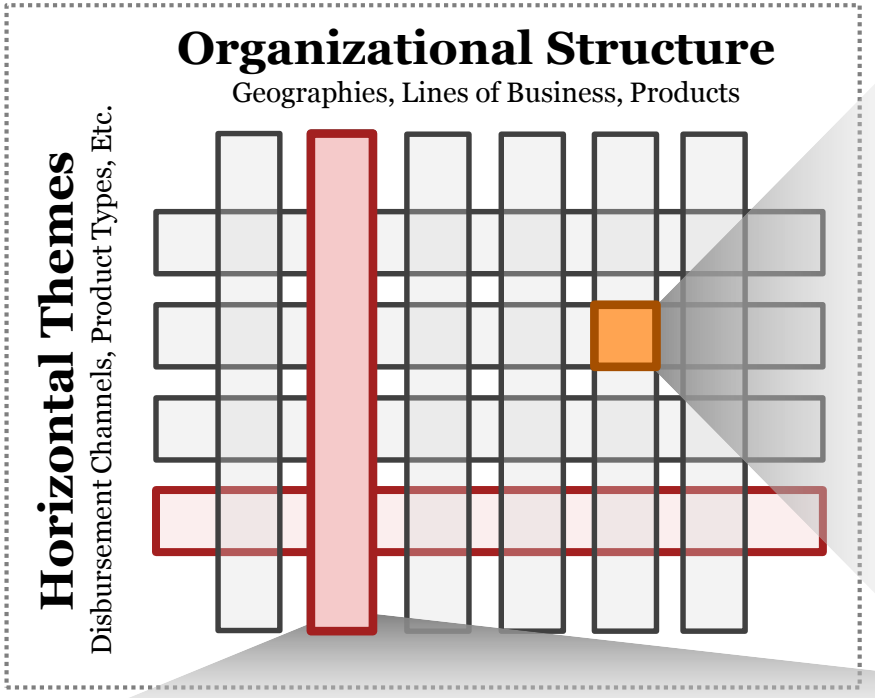
The results of the risk assessment can be analyzed and stored over time for trend analysis and a longer term projection of compliance programs.

Analytics Focus Areas

- Exploratory Analysis
- Defining Key Risk Indicators (KRIs)
- Real-time Reporting and Dashboarding
- Trending and Thematic Analysis

Getting the KRIs Right

Risk Assessment Taxonomy



Intersectional KRIs

Inherent Risk

- Wire volume and value to tax havens
- …

Controls KRIs

- Alert productivity of "High Risk Wire" detection scenario
- …

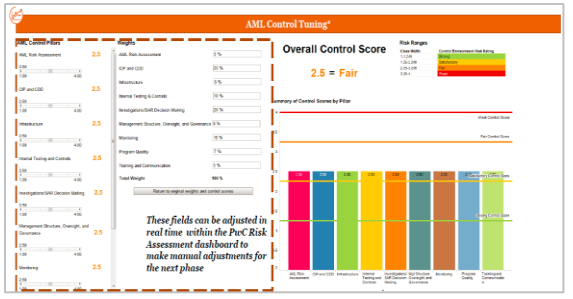
By generating and evaluating KRIs within the intersections of the organizational structure and horizontal risk themes, risk can be stratified for varying cross-sections of the organization

Building on KRIs – Common Work Products

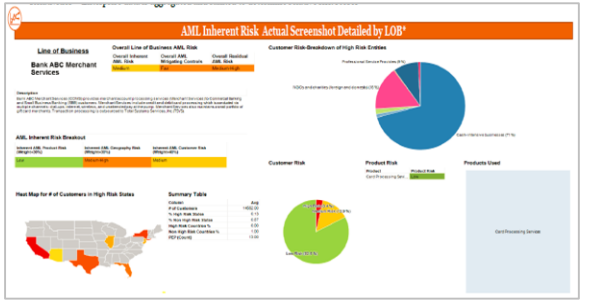
"Live" Risk Scorecards

Simulated "What If" Risk Analysis

Risk Score Model Tuning



Risk Analysis Accelerators



Where to Start: Leveraging Existing Analytics and Data

Analytics are being developed across the bank. The Risk Assessment should leverage existing analytics and data to support risk analysis to the extent possible

Key Risks & Metrics

1. Missing Transactions & Other Data
2. Gaps in Product/Risk Coverage
3. Data Quality and Integrity Issues
4. Exception & Exemption Lists
5. Large # of False Positive Alerts
6. Duplication of Data Records
7. Scoring and Risk Rating
8. Other System & User Risks

Customers, Transactions, and Other Reference Data

- Second and Third Line Issues — A
- Technology Risk Data — B
- Field Validation & Reference Issues — C
- Operational Risk Analysis — D
- Frequency Distribution Analysis — E
- Orphan, Duplicate Records Metrics — F
- Marketing Profiles — G
- Transaction Distribution Analysis — H
- Performance Analysis Metrics — I

Learning and Feedback Loop

How to Expand: Areas of Focus

1 Build a Data-Driven Culture

- Mandate that assessments be based on quantitative evidence and hard facts
- Empower and encourage staff to use available tools and technologies

2 Standardize and Centralize KRIs

- Maintain common utility or team for KRI generation and evaluation to confirm data quality, accuracy, and completeness

3 Start with Visualization

- Visualization tools are light-weight entry points into Data Analytics with highest ROI

4 Leverage Existing Infrastructure

- Compliance functions have led the consolidation and aggregation of data across the enterprise
- Don't reinvent the wheel!

5 Focus on High Risk Areas First

- Prioritize efforts to improve analytics around higher risk areas

6 Operationalize Analysis

- Analytics should be developed with an aim to distribute the work products to stakeholders across the enterprise for broader use

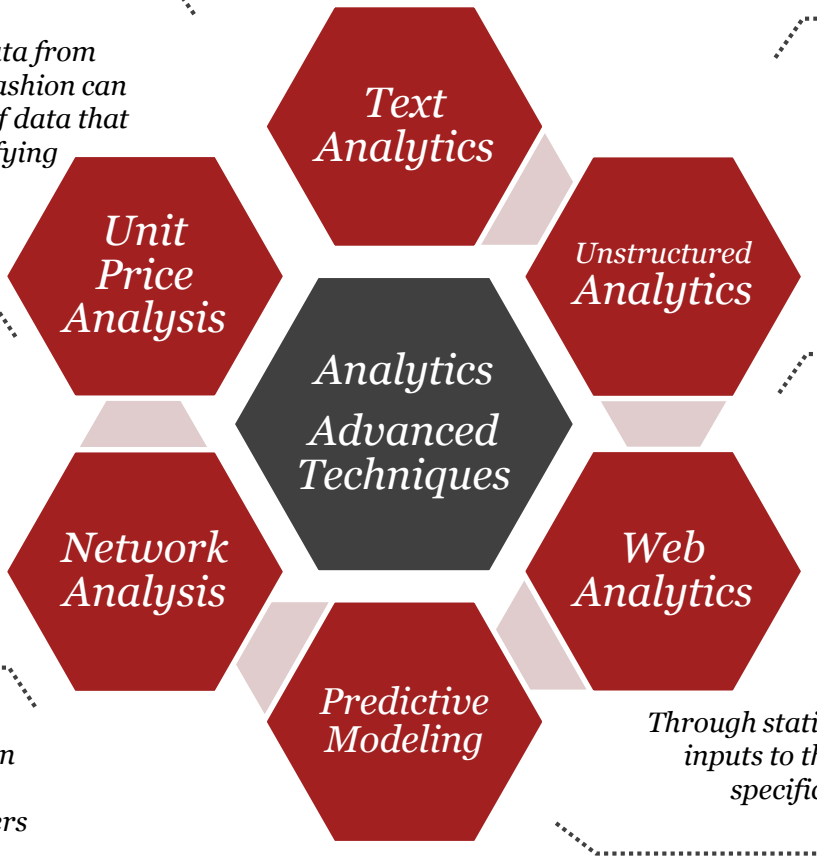
Where Are We Going: Advanced Analytics in AML

Text Analytics

The capability to extract data from text files in an automated fashion can unlock a massive amount of data that can be leveraged for identifying and assessing risks

Unstructured Analytics

Data from contracts, communications, and other paper-based or unstructured data sources can be analyzed to extract key features for use in risk modeling and analysis.



Unit Price Analysis

This statistic-driven approach uses publicly available data and algorithms to detect if unit prices exceed or fall far below global and regional established thresholds which can help identify pricing risks in illiquid assets

Web Analytics

Web analytics can be leveraged to crawl the internet and obtain publicly available data which may not be distributed through structure formats.

Network Analysis

Enterprise analytics software tools can identify hidden relationships in data between trade and transaction partners

Predictive Modelling

Through statistical correlations and advanced models, inputs to the assessment can be analyzed to identify specific risks that are likely to grow and require preventative remediation

Demo

Key Takeaways

1. The importance of effective risk assessment and risk management increases as money laundering risks become more complex, the organization evolves, and perpetrators become more sophisticated

2. Data analytics is a key enabler to driving the improvements required of the risk assessment, including depth of analysis, frequency of delivery, and adaptability to changing internal and external factors

3. Deployment of data analytics is a journey, and the bank should pursue the growth and maturity of data analytics application using a risk-based approach focused on the areas of greatest value

Questions?

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