CATCHING THE BAD GUYS

How actuaries can use their skills to combat Financial Crime

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29 August 2024

WHAT IS FINANCIAL CRIME?

Financial crime refers to **all crimes committed** by an individual or a group of individuals that involves **taking money or other property through illegal means**, to **obtain financial or professional gain**.

Financial crime can range from fraud committed by an individual, to large-scale operations masterminded by organised criminal networks.

Ultimately this is **criminal activities** that provide an **economic benefit through illegal methods.**

Criminal networks have become more and more complex especially due to global markets, offshore banking, virtual currencies, and the dark net.

TYPES OF FINANCIAL CRIME

MONEY LAUNDERING (ML)

- Process of disguising the illegal sources of criminal proceeds, in order to convert the funds for legal or illegal use.
- Follows a complex process of changing the form of funds or moving funds to a place less likely to attract attention.

TERRORIST FINANCING (TF)

- Process by which terrorist fund their operations in order to perform terrorist acts. Funds are not necessarily derived from illicit proceeds.
- Key channels for raising funds can include NGOs and crowdfunding platforms.

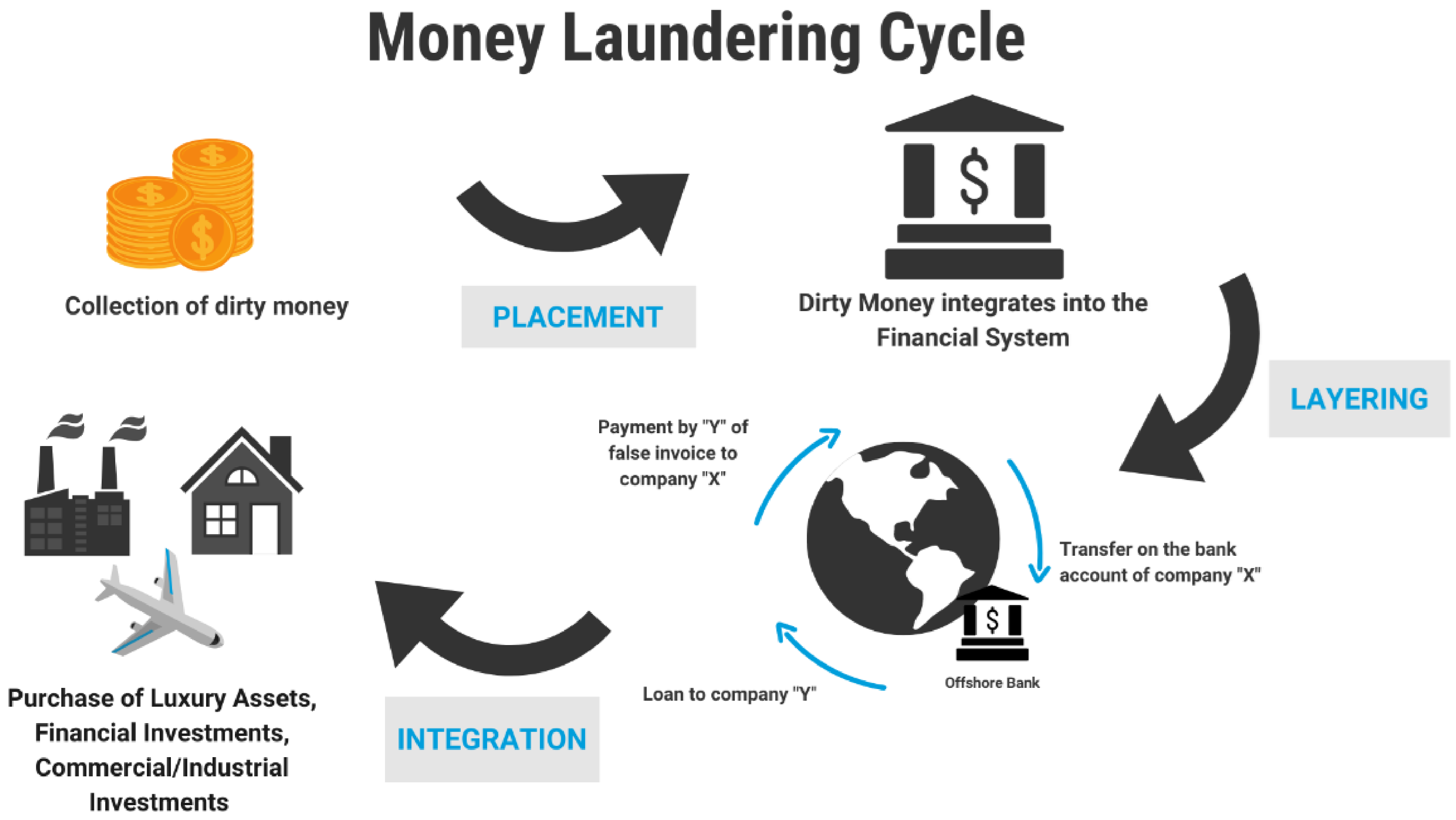
PROFLIFERATION FINANCING (PF)

- Raising, moving, or making available funds to purposes of Weapons of Mass Destruction proliferation (nuclear weapons, biological weapons and related means of delivery).

PREDICATE CRIMES

- Criminal activities (the “original crime”) that generate the financial proceeds that then need to be laundered.
- From a South African perspective, the following are considered as key predicate offences:

WHAT IS MONEY LAUNDERING?



HOW DOES THIS IMPACT ME?

FINANCIAL LOSS & CORRUPTION

Simon Rudland's Gold Leaf Tobacco used Sasfin Bank officials to launder its dirty cigarette money – here's how

19 Aug

South Africa: McKinsey tries to mop up 'shocking' state capture mess

CAPTURE CHRONICLES | Acting judge allegedly spent corrupt money on R16-million Ballito mansion

Bank of Baroda SA fined R4... by ... Reserve Bank regulat...

...abler or victim? KPMG SA and State Capture

A record R64 billion fine for MTI's Johann Steynberg, but when will investors get paid out?

29 Apr 2023

Gold smugglers use South Af... ba..., bribes to launder money ...

Gold mafia helped Gupta brothers in South Africa state ...ture ...

Swazi Secrets: From money laundering to terrorism financing, the failings of African regulators

Drug money bound for Panama, funds for Al-Shabaab in Somalia … The African authorities responsible for monitoring criminal financial...

S... Ponz... ...e M... or...ed t... ...a... R32bn to tho... ...s of US victims

BAB...A DEOKARAN | Tembisa Hospital ...ion losses surge by R2bn as murder i...ation dies

BANKING

...i...ce ...ini... r ...es to place Habib Overseas Bank under ...r...orsh... – ...mpted by greylisting?

State capture: The case against Nedbank

OPINION

The private-sector players who facilitated public-sector fraud

...f CEO Markus Jooste's asset billions attached ...y SA Reserve Bank

Government nails Steinhoff for R6.2 billion

Digital Vibes scandal: first acc...ed appears in court

11 Jun

BHI scam: Fraud-accused 'visited casino 131 times in four years, laundered R800m'

Estina dairy farm scandal: Alleged Gupta associates in court for R37.7m fraud case

LOCAL EXAMPLE

A four-part investigation by Al Jazeera's Investigative Unit (I-UNIT) has revealed a series of gold smuggling gangs in Southern Africa that help criminals launder hundreds of millions of dollars, getting rich themselves while plundering their nations.

South Africa's FSCA sets record fines to combat financial crimes

30th June 2024

06 Aug

Share

Prudential Authority slaps Sasfin with R160m net fine for 'historic noncompliance'

Investec Bank: A financial penalty of **R20 million** and a directive to take remedial action to address deficiencies in the following area:

- failure to implement adequate processes and working methods in relation to the sanctions screening of related parties of customers to ensure that the bank complies with its reporting duties.

Deutsche Bank was hit with a R10 million fine for failing to identify and verify customer details, as well as failing to have controls and systems in place relating to the "detection of property associated with terrorism and related activities".

Financial watchdog gives Momentum stiff R11m penalty

REPUTATIONAL RISK

Banks fork out R277m in fines for non-compliance with Fica, Tito Mboweni says

Major South African bank hit with R20 million fine

South Africa's central bank has fined Nedbank 35 million rands ($2.1 million) after an inspection beginning in early 2019 identified various problems in its compliance with anti-money laundering legislation.

SA RESERVE BANK FINES GRINDROD BANK R10.3M FOR FICA NON-COMPLIANCE

*Posted on **14 December 2023***

Standard Bank fined R30 million for not having strong enough money laundering controls

Reserve Bank fines Deutsche Bank, Discovery Life for lapses in money-laundering control measures

REGULATION | 28 FEB, 2024

Ashburton fined R16m for non-compliance of FICA regulations

Sarb fines 5 SA banks a whopping R30m

The big hurdle South Africa must jump to get off the greylist

WHAT CAN WE DO ABOUT IT?

As financial institutions, we are **important players in the market to stop the bad guys from legitimizing their proceeds** from predicate crimes. The flow of money is good evidence in court against predicate crimes.

Historically, advanced analytic skills do not necessarily sit within the Compliance space, which creates a gap but also an opportunity for actuaries.

As actuaries, we have a unique set of skills that can contribute to combatting Financial Crime by combining our **business knowledge**, **understanding of various data sets and modelling skills.**

RISK MANAGEMENT

S42 of the FIC Act requires all Accountable Institutions to have a Risk Management and Compliance Program (RMCP) in place. This identifies ML, TF and PF risks that the institution faces and how to deal with these risks.

Companies need to adopt a **Risk Based approach** when assessing the risks.

Various Risk Assessments need to be completed to **identify, assess, monitor, mitigate and manage the risk** that products and services may be abused.

Examples:
Casinos, Gambling & Sports Betting
Virtual Assets
Terrorist Financing
Illegal Wildlife Trading

Calculating the **Inherent Risk**, **Control Effectiveness** and ultimately the **Residual Risk**

Modelling the **AML risk rating of clients**. This is then used to determine the level of **due diligence** that is required.

Various techniques and models can be used to determine risk ratings, ranging from basic risk matrix to complex models.

Factors to consider:
Country Risk
Client Type Risk
Delivery Channel Risk
Product & Services Risk
Industry / Sector Risk
Source of Funds Risk

SUSPICIOUS ACTIVITY MONITORING

Accountable Institutions must understand the purpose and intended nature of the business relationships to ensure transactions are consisted with your knowledge of the client. Therefore, we can develop models to identify suspicious activity by monitoring transactions.

CLUSTERING AND OUTLIER DETECTION

- **Client are clustered into groups based on static and transactions factors.**
- **These clusters are used to determine expected behaviour.**
- **Actual behaviour is compared to expected behaviour in order to identify outliers.**

Various modelling techniques and pattern detection methods can be used

Examples are Decision Tree, K-Means Clustering, Classification and Regression Trees (CART)

TRANSACTION MONITORING ALERTS

- **Analysis of data to identify data points that can be used to model red flags identified per crime.**
- **Work with business and compliance to create rules to address typologies. These rules can be simple or complex models.**
- **Build a model to create alerts from rules and consider scoring of alerts based on risk.**
- **Testing, implementation and feedback are required to ensure a balance between managing risk and operational volumes.**

Models can range from simple rules to identify large value transactions in high-risk industries to more complex models to identify layering of transactions or flow through of funds

SUSPICIOUS ACTIVITY MONITORING (cont.)

Accountable institutions (AI) are required to report suspicious activity to the Financial Intelligence Centre (FIC)
Once suspicion has been confirmed, various actions can be taken depending on the institution.

CONFIRMED SUSPICION – BACK TESTING

- **Once alerts have been confirmed suspicious, a detailed analysis should be completed to identify if there are any other clients in the base that behave in a similar way.**
- **New rules and models can be implemented to identify, predict and avoid this in the future.**

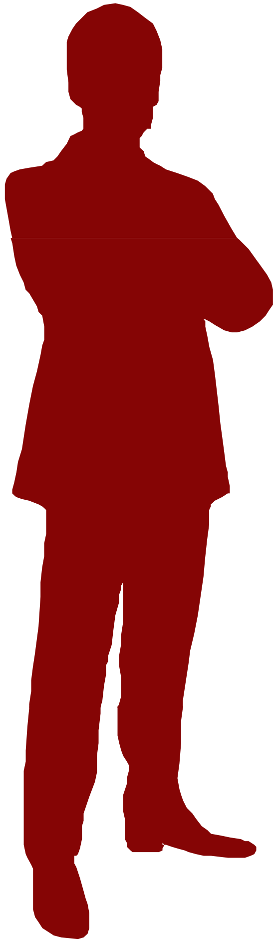
Various modelling techniques and pattern detection methods can be use.

Examples are simple regression models to complex machine learning models

OPERATIONAL NATURE

- Investigation of alerts is usually in the operational area.
- Models need to balance managing risk while optimising alert volumes. Therefore, **reducing false positives** where possible.
- This is especially important due to the regulatory requirement of investigating and reporting within a certain number of days.

SUSPICIOUS ACTIVITY MONITORING (examples)



SALARIED individual
Working in **FINANCIAL industry**
Additional **RENTAL INCOME**

CLUSTERING

→ Expected Salary Range & Transactional behaviour

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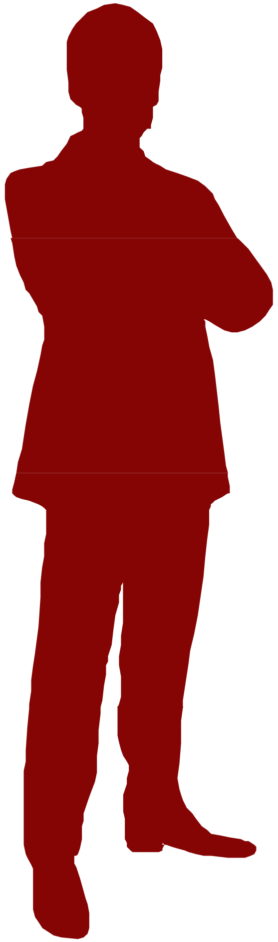

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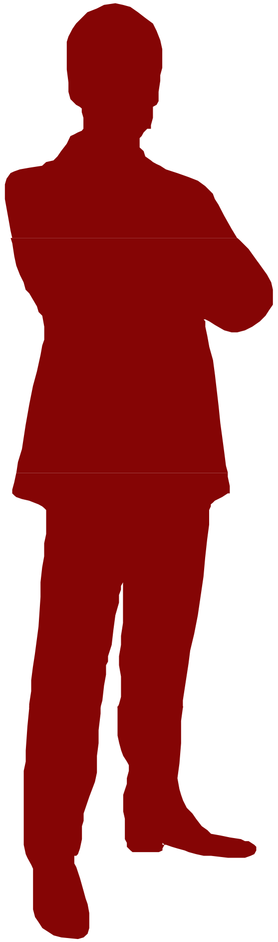

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RULE to create ALERT

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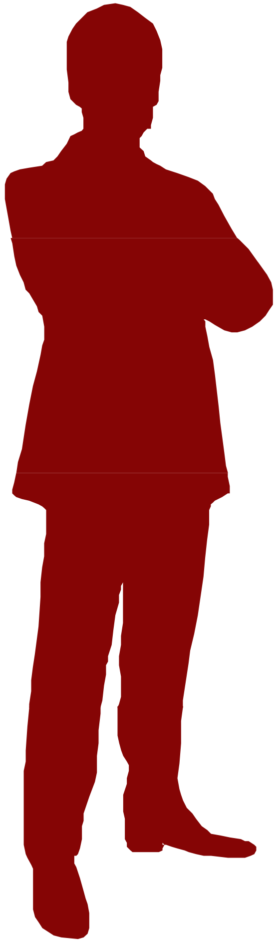

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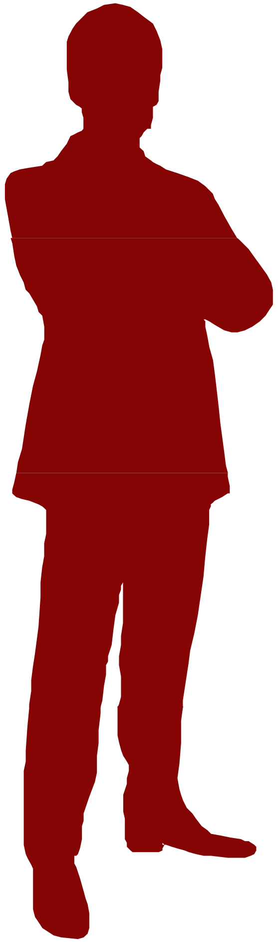

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SUSPICIOUS ACTIVITY MONITORING (examples)

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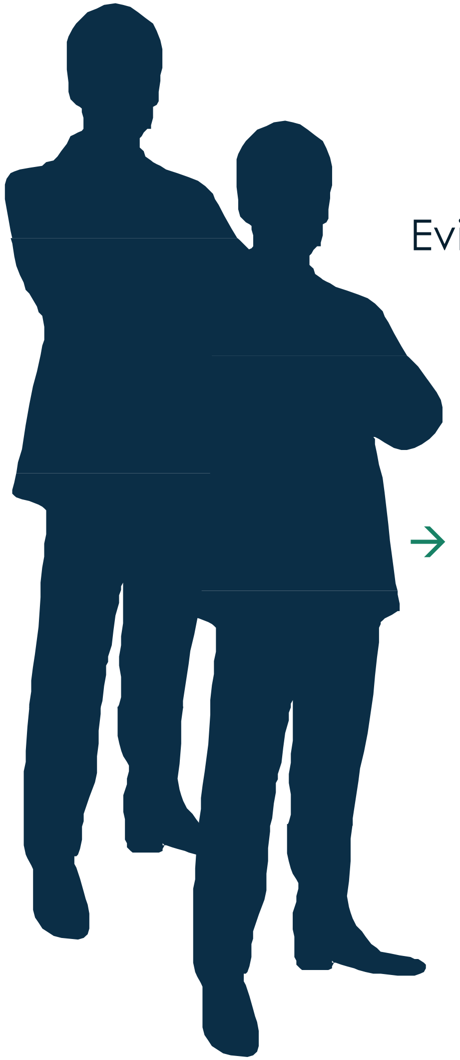

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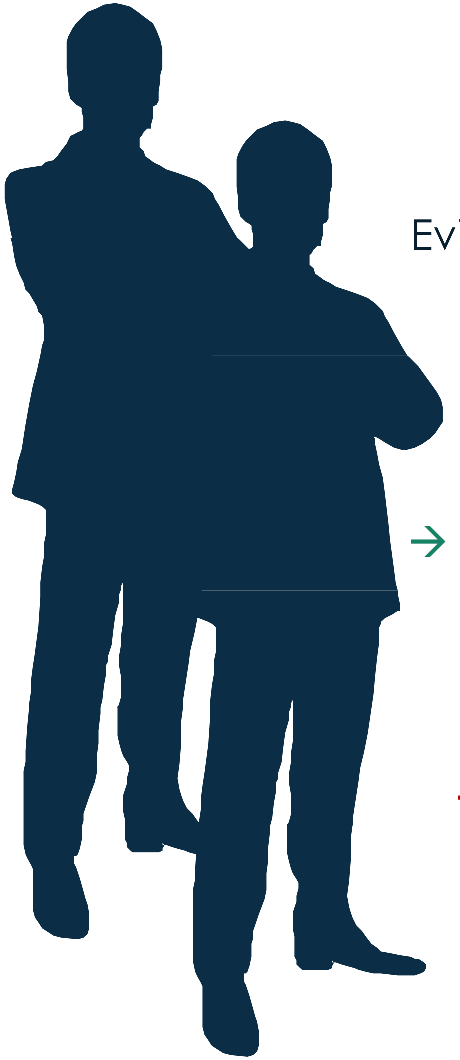

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MODEL to create ALERT

This example shows how combining different data sources, clustering models and transactional models can identify financial crime

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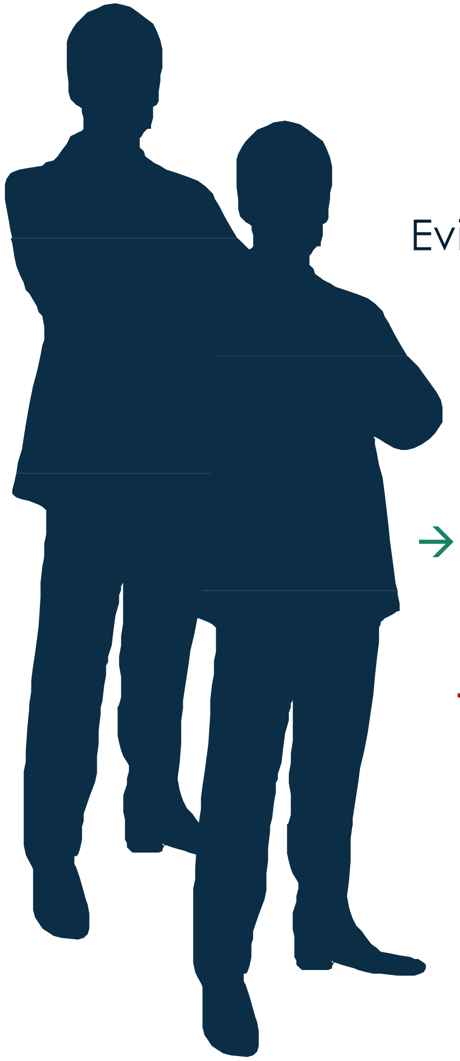

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OTHER PRACTICAL EXAMPLES

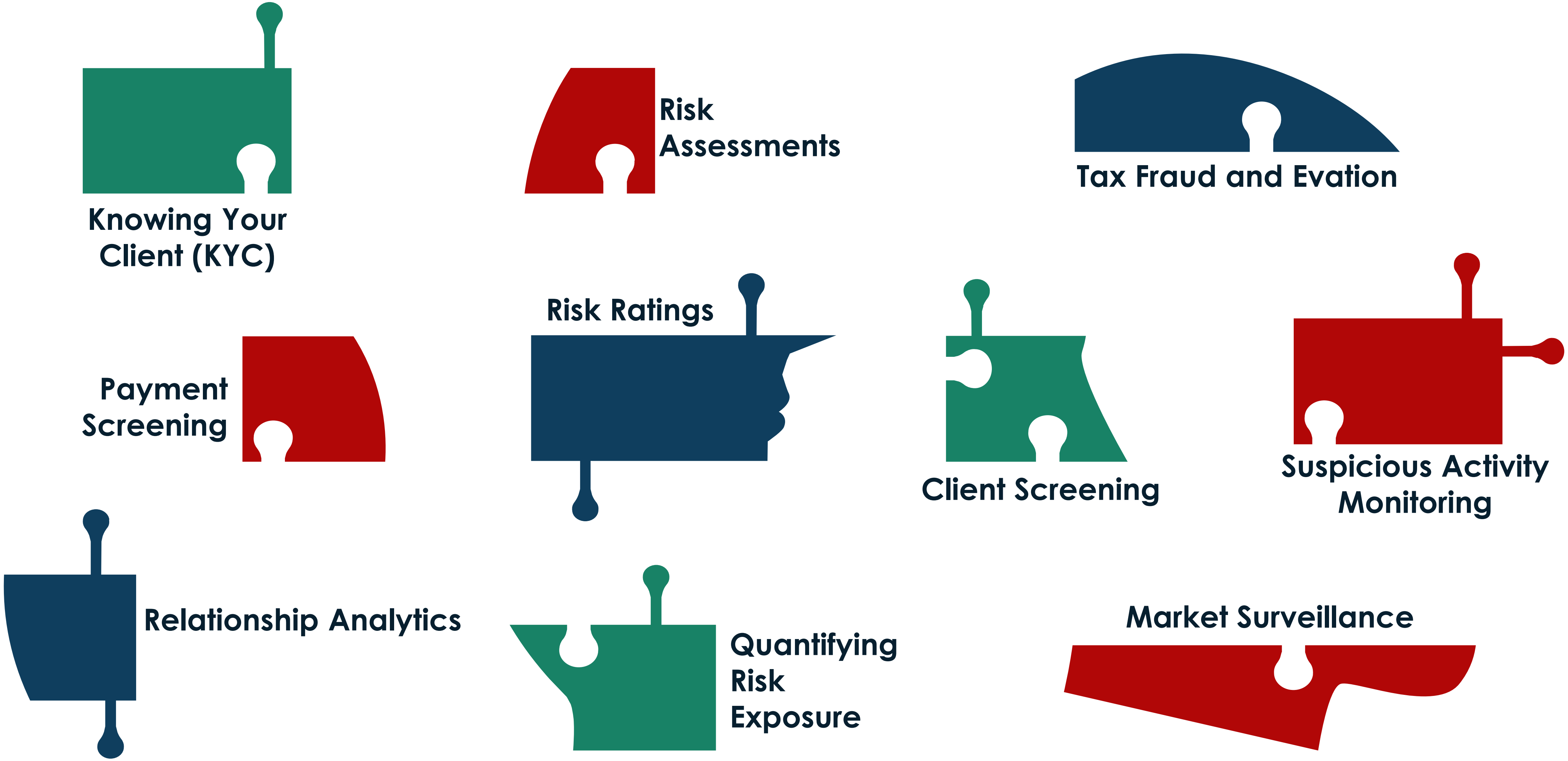
Market Surveillance

Combination of
Trade Surveillance models and
Communication Surveillance models

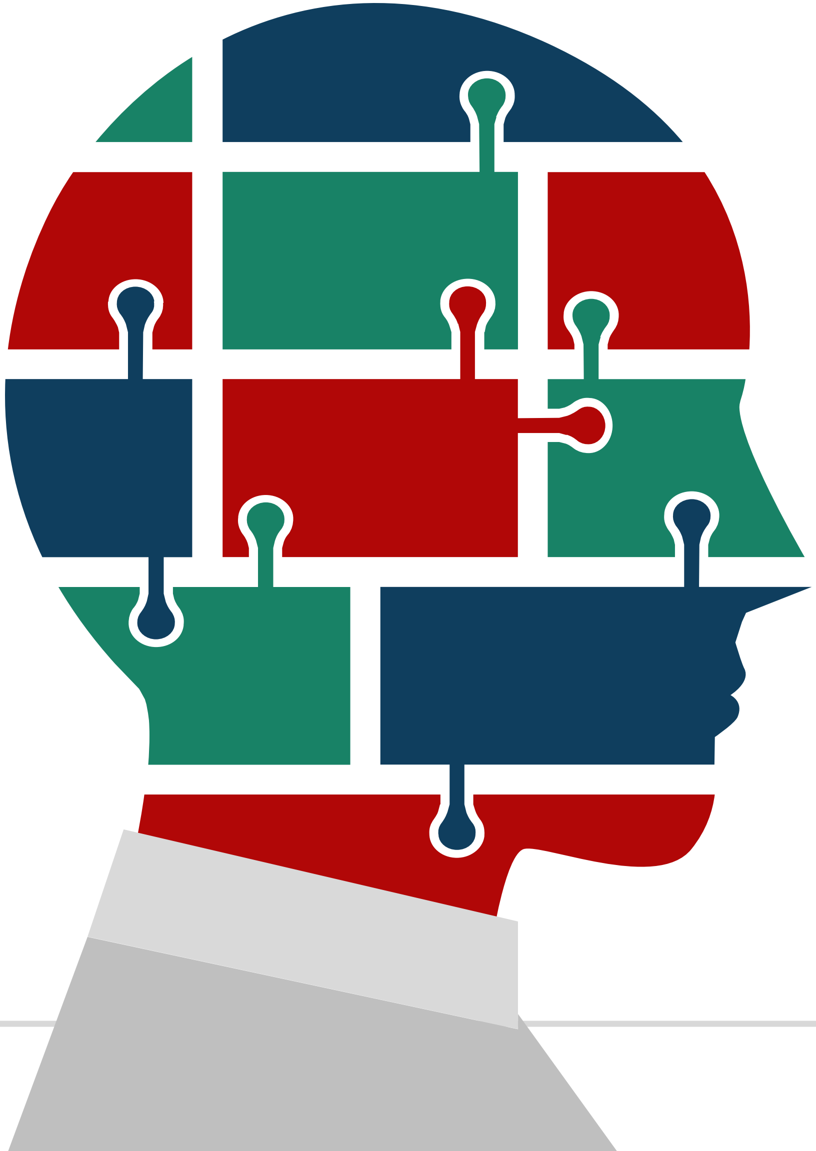
to identify **insider trading or market manipulation**

IMAGE SOURCE: Investopedia

CATCHING THE "BAD GUYS"



CATCHING THE "BAD GUYS"



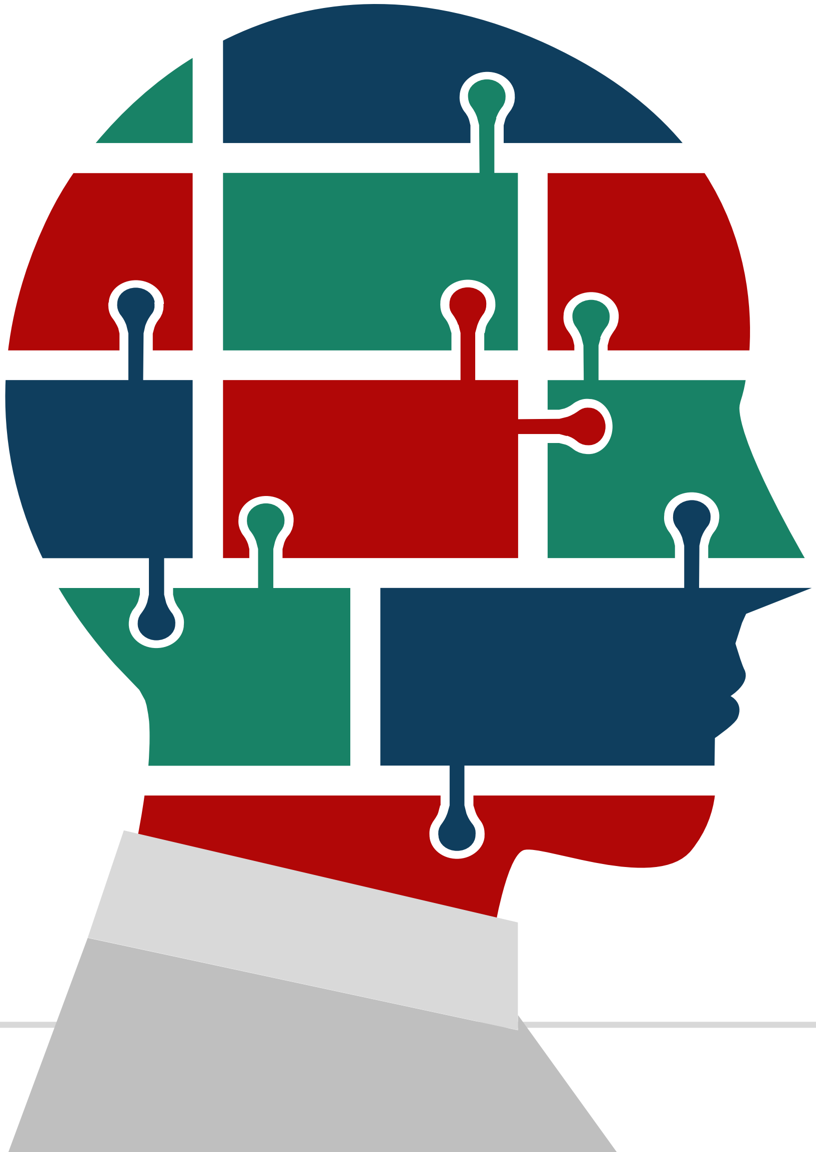
KEY TAKEAWAYS

- Actuaries have a **unique skill set** that can be used to combat Financial Crime.

- Our ability to **understand both business and technical components**; use data to identify patterns and make informed decisions; **our experience in quantifying risks** and to explain this to non-technical stakeholders are key in this space.

- Working in non-traditional areas may require additional studies but our skills are transferrable.

Criminals are smart and only getting smarter, we need to keep up!



QUESTIONS?