Compliance, Leading the Way for Automation in CIB

This article is an extract of the CH&Co.'s Fintank yearly publication.

This article is an extract of our CH&Co. Fintank yearly publication on Innovation for Financial Services. The 2018 edition addresses ways for incumbents to collaborate with Fintechs, Insurtechs and Regtechs through technologies driving the industry's digital transformation.

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Compliance, Leading the Way for Automation in CIB

Following the 2008 crisis, the scandals involving Financial Institutions (FIs) and the global fight against terrorism financing resulted in regulators demanding that FIs take ownership and responsibility. To face the new regulatory demands FIs spent and hired massively in their Regulatory and Compliance departments.

Amid tightening regulations, FIs are constrained to adapt quickly and take regulatory responsibility.

Smart Automation can help optimize the current workforce and to rebalance the workload towards higher value-added tasks.

HSBC	J.P.Morgan		Deutsche Bank	citi
2,000 to 7,000	From 23,000 to 43,000	$6bn to $9bn	€1.3bn	$1.7bn
HSBC's compliance staff grew from 2,000 in 2013 to 7,000 in 2015	Between 2011 and 2015, the compliance and regulatory headcount grew from 23,000 to 43,000, and the budget rose from $6bn to $9bn		Deutsche Bank spent €1.3bn in extra regulatory related spending in 2014	In 2015, regulatory and compliance investments consumed half of Citi's $3.4bn efficiency savings

CHALLENGES

Today, as pressure increases, the cost of compliance has become a major concern and an important weight on profitability.

To face the new regulatory paradigm, financial institutions hired extensively in their Compliance departments - this increased headcount is weighing heavily on profitability:

- **Cost:** Compliance departments represent 5% of total operating costs in major financial institutions
- **Talent pool:** 31% of FIs have more than 500 people in their global Compliance function, up from 14% in 2012
- **Time allocation:** Compliance professional spend a third of their time on low added-value tasks

Scarce and expensive resources

Skilled compliance professionals are rare on the market

Salaries are increasing due to the high demand and increasing expertise

Time spent on low value-added tasks

In house staff spend too much time on data collection and low added value task

A compliance officer spends a third of his time on data collection and reconciliation

Very high turnover

Due to the competition among FIs for experienced compliance personnel

Compliance officers are frustrated by the amount of manual repetitive tasks

LIMITATIONS

As compliance teams are growing, their techniques, systems and processes are incrementing. Current practices are showing their limits today, as regulatory expectations are on the rise.

- **Sanctions exposure:** between 2009 and 2016, the largest international banks paid a total of US $321 billion
- **Limitation:** only 50% of identified Anti-Money Laundering and Counter-Terrorism Financing (AML/CTF) misconduct is detected by transaction monitoring
- **False positive:** 90 to 99% of alerts from transaction monitoring systems represent false positives
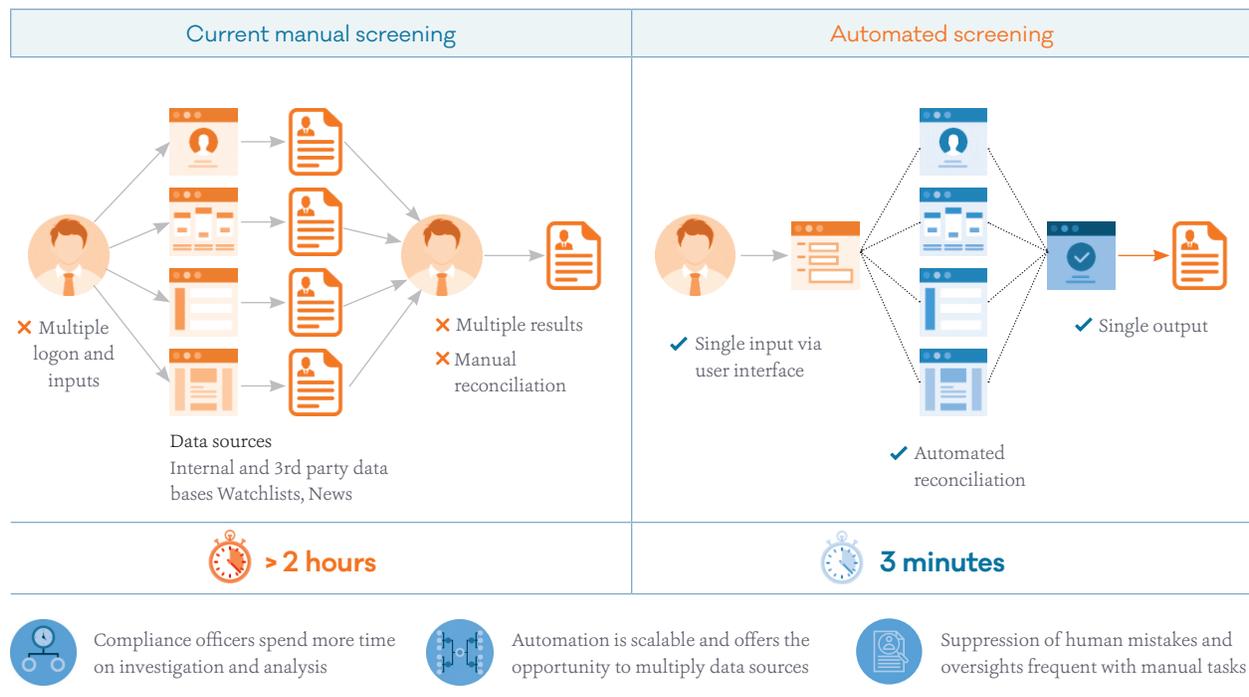
KYC Onboarding | Periodic reviews | Screening	AML / CTF / Sanctions Transaction monitoring and analysis	Investigation & Reporting
Manual processing of repetitive task	Thresholds and rigid scenarios	Lack of supporting insights
✗ Multiple systems and data sources	✗ High volumes of false positives	✗ Investigations start from scratch
✗ Fragmented workflow	✗ Undetected misconducts	✗ Investigators have to search/request additional information
✗ Mistakes and oversights	✗ Unidentified PEPs and suspicious connections	✗ Reports are manually generated
✗ Errors in manual reconciliation		

MOVING FORWARD WITH SMART AUTOMATION

To break this cycle of incremental hiring and spending, banks are innovating and leveraging a combination of Smart Automation technologies, as illustrated below:

Example 1: RPA application to screening

Data collection and screenings are the main low-value added tasks for analysts in Compliance departments. Multiple logins and inputs are time consuming and manual reconciliation engender mistakes. Instead of additional software, robots work as humans.

Current manual screening	Automated screening
✗ Multiple logon and inputs ✗ Multiple results ✗ Manual reconciliation Data sources Internal and 3rd party data bases Watchlists, News	✓ Single input via user interface ✓ Automated reconciliation ✓ Single output
> 2 hours	3 minutes

Compliance officers spend more time on investigation and analysis

Automation is scalable and offers the opportunity to multiply data sources

Suppression of human mistakes and oversights frequent with manual tasks

Example 2: Machine Learning algorithms applied to AML/CTF

The nature of money laundering renders ineffective existing AML technologies that rely on rules, as fraudsters develop new schemes and techniques that cannot be programmed before they are identified. Therefore, current rules-based systems require permanent manual updates as they are continuously out-dated with new regulations. Applied to AML, Machine Learning algorithms increase the quality of transactions monitoring and support investigations.

AML/CTF and sanctions ongoing monitoring is built on a rigid rule-based approach. Machine Learning capabilities offer flexibility and a risk-based approach to focus on matters requiring attention.

Machine Learning algorithms identify risks based on patterns and networks which allow the reduction of false positives and the identification of previously unknown fraudulent activities.

AML / CTF pain points	Machine Learning opportunities	Machine Learning benefits
Subjective and fixed thesholds generate 99% of falsepositives • Compliance officers must investigate all of them • Front Office is often asked to provide justification and context	✔ The machine learns how to detect false positives from previous investigations ✔ The systems can just identify the false positive to the compliance officer with the justification	**A risk based approach can reduce false positives by up to 50%**
Rigid scenarios generate "false negatives" • Models miss borderline activities • Not prepared for new fraudulent methods	✔ Behavior analysis detects previously missed suspicious activities ✔ Offers additional insights in relation with triggered alerts to support investigations	**Additional information and insights reduce investigation time up to 30%**
Alerts triggered are simple notifications of events • Investigators needs to collect data • No differentiation between a very risky activity and an usual event	✔ Deep network mapping capacities generates insights for investigation, identifies PEPs and link to undesirable connections	**Algorithms can be integrated and running in 4 to 5 months**

Example 3: AI application to sanction screening

AI helps identify patterns to reduce manual treatment of obvious false hits escalated to Compliance.

Overall approach

1 Study existing alerts / FAQ will help identify a list of "Good Guys" not yet set-up

2 Develop the logic for identifying "Good Guys"

3 Transfer logic to AI algorithm

4 AI will use the logic to identify "Good Guys", integrate them within the "Good Guys' " List on an ongoing basis and anticipate the decision

Examples of existing alerts

• ELN consistently appears in MTXXXs, which is a synonym for the Liberation Army in Nigeria, but typically refers to an Equity-Linked Product related to Fixed Income product. This is not eligible to be tagged as a "Good Guys"

Resolution

• Increasing the list of "Good Guys" would reduce the number of false alerts
• Evolutive computing would enable an ongoing detection and integration of "Good Guys" within the "Good Guys' " list
• Neural network would enable the AI to constantly develop new logics to identify "Good Guys", removing the need for one-off costs on data analysis to identify new "Good Guys"

Potential of cost savings: 75% of OFH (avg. cost: 0.5$ to 1$ per alert)

Quality improvement: Refocus team on alerts requiring investigation

Acknowledgements & Contacts

CH&Co. Digital Expertise

We are deeply involved in growing the global FinTech community and use our knowledge to enhance our public Fintank.net database. We cofounded FinTech hubs, such as FinFusion in Montreal or Finance Innovation in Paris, and regularly co-organize FinTech meetups in New York, Singapore, France, London and Geneva. The events unite leaders from the Financial Services industry, startups and other innovators featuring panel discussions, demos and insights from our FinTech experts that are among the world's top influencers.

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