



Building a better working world

# EY forensic data analytics for integrated banker surveillance

Hosted by EY Virtual Analytics Infrastructure (EY Virtual)

## Regulators continue to examine sales practices in financial institutions

Sales practices, as a form of conduct, have recently gained renewed attention as a result of issues in the banking sector. The Office of the Comptroller of the Currency (OCC) launched its effort to examine sales practices at large and mid-size banks in fall 2016. The Federal Reserve (Fed), the Consumer Financial Protection Bureau (CFPB) and Financial Industry Regulatory Authority (FINRA) have also taken enforcement action in multiple areas related to sales practices. The European Banking Authority published its final guidelines on remuneration policies and practices related to the provision and sale of retail banking products and services in late 2016.

## Traditional approaches provide silos of partial intelligence with too many false positives

Traditional approaches have produced high volumes of alerts with high false positive rates. One of the biggest data analysis struggles is with unstructured data, such as customer complaints. Banks have been lacking the ability to link customer complaints with employee behavior and sales transactions. As a result, compliance efforts are not sufficiently aligned to risky patterns, behavior, performance and controls. Many technology offerings are expensive to implement and have high ongoing costs due to resource requirements. Large financial institutions are saddled with legacy systems following years of merger and acquisition activities that are risky and costly to replace.

## EY's next generation banker surveillance analytics offering

EY's banker surveillance analytics offering is hosted on the EY Virtual platform. It is designed to help eliminate information silos, expand the scope of conduct risk management and enable unified enterprise risk management functions. The key to our approach is to apply analytics to a full array of tightly woven employee, customer and sales transaction data to identify high-risk behavioral patterns and trends.

### A condensed sample banker surveillance analytics program design

	Employee	Customer	Transaction
Data sources	<ul style="list-style-type: none"> <li>Incentive compensation</li> <li>Exit interviews</li> </ul>	<ul style="list-style-type: none"> <li>Complaints</li> <li>Vulnerable and high risk customers</li> </ul>	<ul style="list-style-type: none"> <li>New accounts that remain dormant</li> <li>Spike in early stage closure</li> </ul>
Risk patterns and trends	<ul style="list-style-type: none"> <li>Comparison of behavioral metrics to known risk patterns</li> <li>The correlation between the timing of sales target accomplishment and known high-risk scenarios</li> </ul>	<ul style="list-style-type: none"> <li>Customers with an abnormal number of accounts</li> <li>Accounts opened for customers outside of the banker's region</li> </ul>	<ul style="list-style-type: none"> <li>Anomalous transactions</li> <li>Activity by deceased client</li> </ul>

**Business rules**  
Criteria and cross-checks for known high-risk scenarios

**Predictive analytics**  
Identifying risk patterns using behavioral analytics and cognitive learning techniques

**Text analytics**  
Mine unstructured data and fuse with structured data to identify anomalies

**Entity linking and networks**  
Entity resolution and discovery (collusion, family ties, etc.)

Account activity risk

Transaction risk

Origination risk

Relationship risk

Conduct risk

Vulnerable client risk

Banker and event risk scores

Risk policies

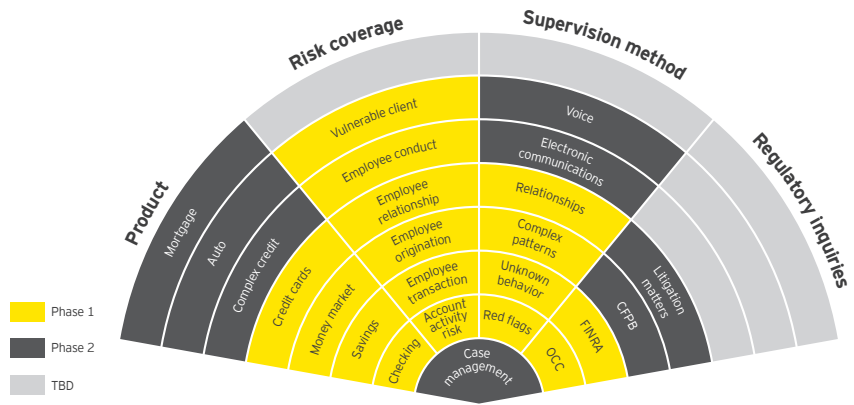
Automated decisions

# Key features of EY's banker surveillance analytics offering

- ▶ **Behavioral risk profiling driven with holistic data:** At the core of our analytics engine is a library of behavior patterns indicating instances of conduct risk. These patterns are developed through in-depth historic data analysis and appended as new incidents occur. The algorithms are fully customizable and self-improving using a closed-loop feedback process.
- ▶ **Comprehensive alerts that lead to answers:** We enrich risk alerts with contextual information from structured and unstructured data sources. The comprehensive insight into behavioral patterns and activities enables compliance executives to focus the investigation on high risk areas.
- ▶ **Interactive, real-time case management capabilities:** Through the web-based user interface, front-office executives maintain a full view of sales activities with the ability to promptly clear or escalate alerts. The real-time interaction helps organizations enhance front-office self-regulation while protecting legitimate, profitable sales activities more cost effectively.
- ▶ **Auditable:** Our data-rich design provides an evidence-based audit trail that can sustain the regulatory scrutiny.
- ▶ **Built on the EY Virtual platform:** EY Virtual, as the host platform, offers the ability to consolidate a wide range of data sources with multiple deployment and data hosting options. It has the capacity to integrate with legacy systems and new technologies alike. With EY Virtual, a bank can extend the data analytics implementation into other risk areas without the cost and time to develop a new compliance system, while gaining the benefit of an integrated enterprise risk management function.

- ▶ Fast detection with precision and inclusion
- ▶ Increased ease of regulatory compliance
- ▶ Reduced cost of compliance
- ▶ More effective front-office control
- ▶ Efficient and targeted investigation

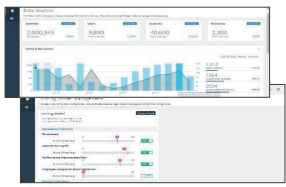
Sample banker surveillance data analytics program implementation road map in Virtual EY



## EY in action

A global bank needed to strengthen its banker surveillance program (BSP), which lacked the ability to incorporate the data sources required to provide sufficient insight into conduct risk.

It was also highly manual and produced too many false positives. The case management tool couldn't track case disposition activities to meet regulatory demands.



EY developed custom employee behavioral analytics to aggregate data from multiple sources (e.g., complaints, whistle-blower, employee exit interviews) to identify risky activities and relationships. Our team used the iterative process within EY Virtual to fine-tune the risk-scoring algorithms, reducing false positives over time. We incorporated visual dashboards and auditable, investigative workflows into case management tools and produced real-time reporting summarizing risk behavioral patterns and trends across relevant data sources. The analytics implementation seamlessly integrated with the bank's existing fraud management tools. The bank now has a sustainable BSP by taking a risk-based approach to enhance early alerting of anomalous banker activities and behavioral patterns.

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 EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

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