The Emergence of Behavioral Analytics in Financial Markets Compliance

2017 NICE Actimize FMC Survey

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Introduction

Conduct-related threats such as collusion, unauthorized trading, benchmark manipulation and rogue trading put firms at risk. They're difficult to prevent because they don't follow a predictable pattern that can be modeled. Nevertheless, firms must uncover conduct-related threats in order to meet their regulatory obligation to prevent market abuse, minimize conduct risk and create a culture of compliance. From a business standpoint, these threats—along with weak trade controls and failing to detect suspicious activity—can trigger eight-figure financial losses, substantial legal fees and irreversible reputational damage to the firm.

Understandably, firms need to address both sides of the compliance coin—known forms of market abuse such as layering and spoofing as well as hidden conduct-related threats. To achieve this, many firms are adopting a risk-based approach to surveillance by analyzing patterns over time, enabling them to catch known and unknown threats as they develop.

The emergence of "Big Data" and advanced analytics, such as behavioral analytics, is bringing risk-based surveillance within reach. Behavioral analytics enables firms to identify risky entities—including traders, investment advisors and accounts—by analyzing a wide range of data and measuring deviations from normal behavior.

Behavioral Analytics Survey Methodology

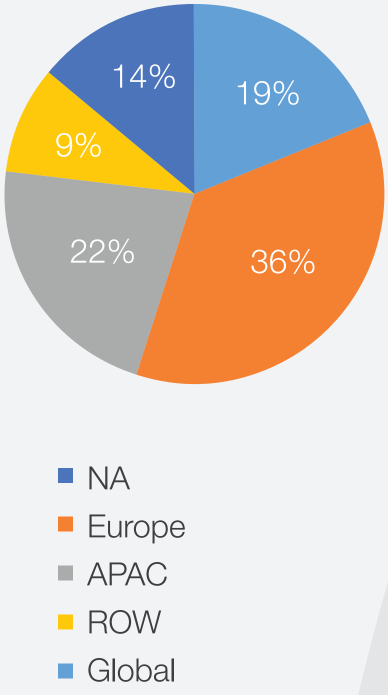
NICE Actimize partnered with Infosurv in 2017 to deploy an industry survey on the emergence of behavioral analytics in financial markets compliance. The survey defined behavioral analytics as the measurement of anomalies from an individual's "normal" behavior or their peer group across multiple risk factors.

The objectives of the survey were:

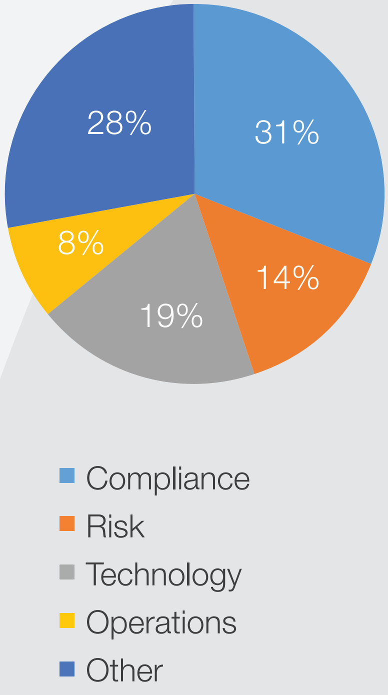
1. Quantify the adoption of behavioral analytics in surveillance programs by financial services firms
2. Identify the challenges and use cases firms believe behavioral analytics can address
3. Understand the business value firms believe behavioral analytics can produce for them
4. Identify the data, entities and risk factors firms intend to analyze in their behavioral analytics program

Sixty individuals from financial institutions worldwide including broker/dealers and investment banks participated in the anonymous survey.

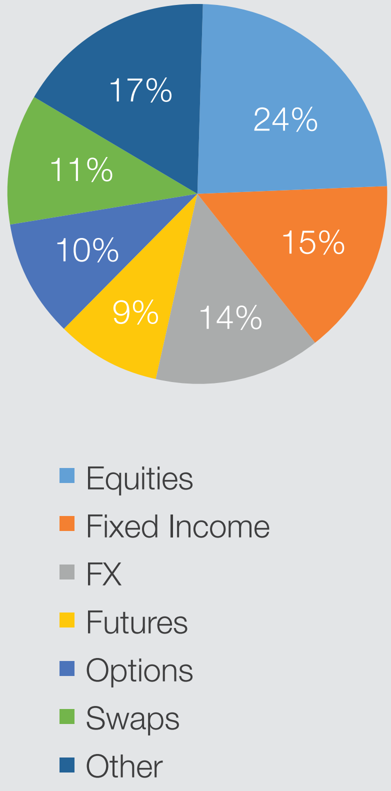
Respondents by Region of Responsibility



Respondents by Functional Area



Respondents by Asset Class Focus*



*Respondents were allowed to choose multiple responses

Key Findings

The adoption of behavioral analytics among financial services firm is at an inflection point.

42%
expect to implement behavioral analytics in the next 12 months.

79%
believe behavioral analytics will have a positive impact on their compliance program.

84%
state behavioral analytics as one of their top 5 priorities for 2017-2018.

Behavioral analytics will mitigate multiple forms of risk.

82%
agree or strongly agree that behavioral analytics can uncover hidden threats that model-based analytics aren't designed to detect.

77%
believe uncovering hidden threats will enable them to reduce regulatory risk.

82%
believe detecting hidden threats will enable them to reduce their operational risk and financial losses.

Firms will seek an integrated surveillance solution – combining model-based analytics and behavioral analytics – in order to improve effectiveness, while reducing the total cost of compliance.

91%
believe that using behavioral analytics accelerates the investigation process when used in conjunction with model-based analytics.

73%
believe that using behavioral and traditional, model-based, analytics together helps them more accurately assess alerts.

Only 15%
plan to build a home-grown behavioral analytics solution.

Behavioral Analytics Enriches Surveillance

There's a strong consensus among respondents that behavioral analytics uncovers hidden threats traditional analytics can't detect. With firms adopting a risk-based approach to surveillance, this aspect of behavioral analytics can significantly transform existing surveillance programs.

Respondents view behavioral and traditional analytics as complementary technologies, enabling them to more effectively address threats.

91% agree that viewing alerts generated by traditional analytics and behavioral data together will accelerate the investigation process and 86% say that using behavioral analytics in conjunction with traditional alerts will enable them to more accurately assess alerts for known forms of market abuse and insider trading.

69% believe it is very important or critical that behavioral and traditional analytics are integrated in one platform, but only 23% currently have a platform that correlates behavioral data with alerts.

82%

say that Behavioral Analytics will enable them to detect hidden threats that can't be detected by traditional analytics such as conduct risk or conflicts of interest

Reduced Regulatory Risk

Regulators require firms to prevent market abuse, minimize conduct risk and establish a culture of compliance. To meet this mandate firms must uncover conduct-related threats such as collusion, unauthorized trading and benchmark manipulation. These threats often remain hidden because they don't follow a predictable pattern that can be modeled. Firms must also catch all threats early to minimize their impact. The vast majority of respondents believe that behavioral analytics helps firms detect hidden threats.

Regulators and standard boards are generally not prescriptive about how firms mitigate risk, particularly from conduct-related threats. However, direction from several organizations seems to favor an approach based on analyzing anomalies from normal behavior:

- FEMR
  suggests mitigating risk by monitoring an individual's conduct and identifying vulnerabilities
- FINRA
  advises mining trade data for deviations from normal trading patterns
- FICC
  Markets Standard Board endorses systems to prevent transaction-based conduct risks
- MAS
  recommends advanced analytics to detect complex patterns for market abuse

77%

of respondents agree or strongly agree that detecting hidden threats reduces their regulatory risk

Reduced Operational Risk

Basel II defines operational risk as the risk of losses from inadequate internal processes, people and systems. Losses are often staggering legal fees, irreversible reputational damage and eight-figure financial losses. Conduct violating company processes and policies—missed training, trading outside of normal hours, breaching risk limits—creates operational risks such as weak trade controls, inability to detect suspicious behavior and improper market conduct. Mitigating these risks requires the analysis of behavior patterns to uncover the hidden violations driving them. The vast majority of respondents believe that behavioral analytics helps firms detect such hidden threats,

Everyone at the firm – front office, compliance and the risk group—is vulnerable to operational risk and tasked with preventing it. That's likely why respondents agree or strongly agree that behavioral analytics will have a positive impact on the risk team (81%) compliance (79%) and the front office (74%).

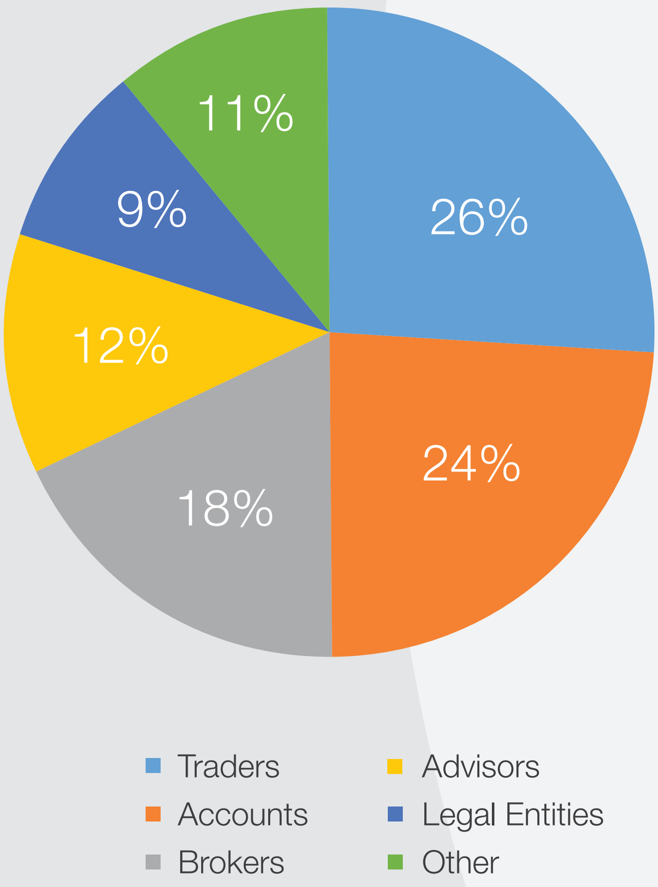
82%

of respondents agree or strongly agree that detecting hidden threats reduces their operational risk and financial losses

Behavioral Analytics Will Focus on Individual Threats

Behavioral analytics can be used to identify anomalous behavior and uncover hidden threats posed by individuals as well as entities – peer groups, legal entities, business units and so on. According to the survey, firms will use behavioral analytics to focus mainly on individuals – especially traders and brokers – rather than the analysis of groups. This is understandable due to the fact that behavioral analytics can detect threats as they are developing, and bad behaviors start at the individual level.

What will your behavioral analysis focus on?



Data Types Used For Behavioral Analysis Will Increase Over Time

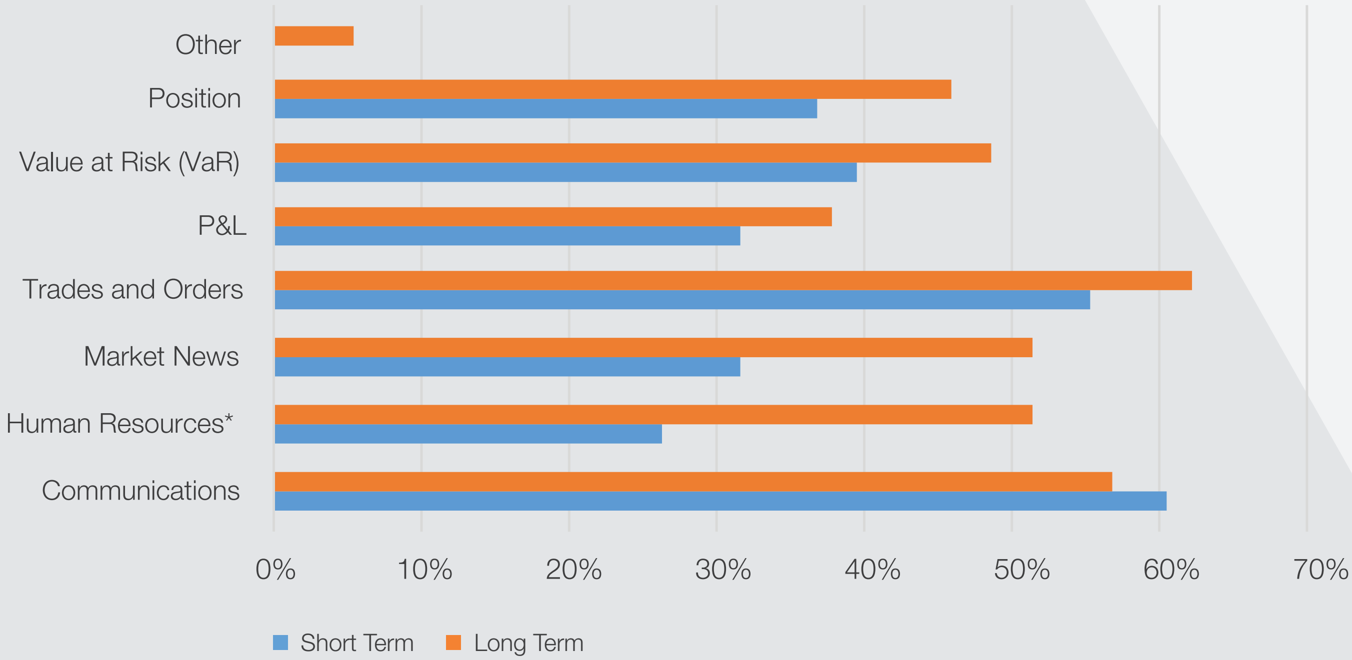
The survey indicated clear differences in the types of data used for behavioral analytics in the short term versus the long term. As evidenced by the chart, firms will predominately use trade and communications data as well as market news in their behavioral analytics over the short term. This aligns closely with the recent trend toward the use of metadata from communications rather than content of the communications to most accurately identify non-compliant behavior. In the longer term, Human Resources data will be significant.

Although there is a planned increase in data types used to support behavioral analysis, the majority – nearly 65% – agree that behavioral analytics can generate new, valuable insights from trade data (i.e., orders, executions) alone. Thus, respondents recognize the immediate value that can be derived from behavioral analytics as well as the longer term possibility and benefit of integrating additional data sources and metadata.

Nearly **65%**

agree that behavioral analytics can generate new, valuable insights from trade data (i.e., orders, executions) alone

What types of data will be used for your behavioral analysis?

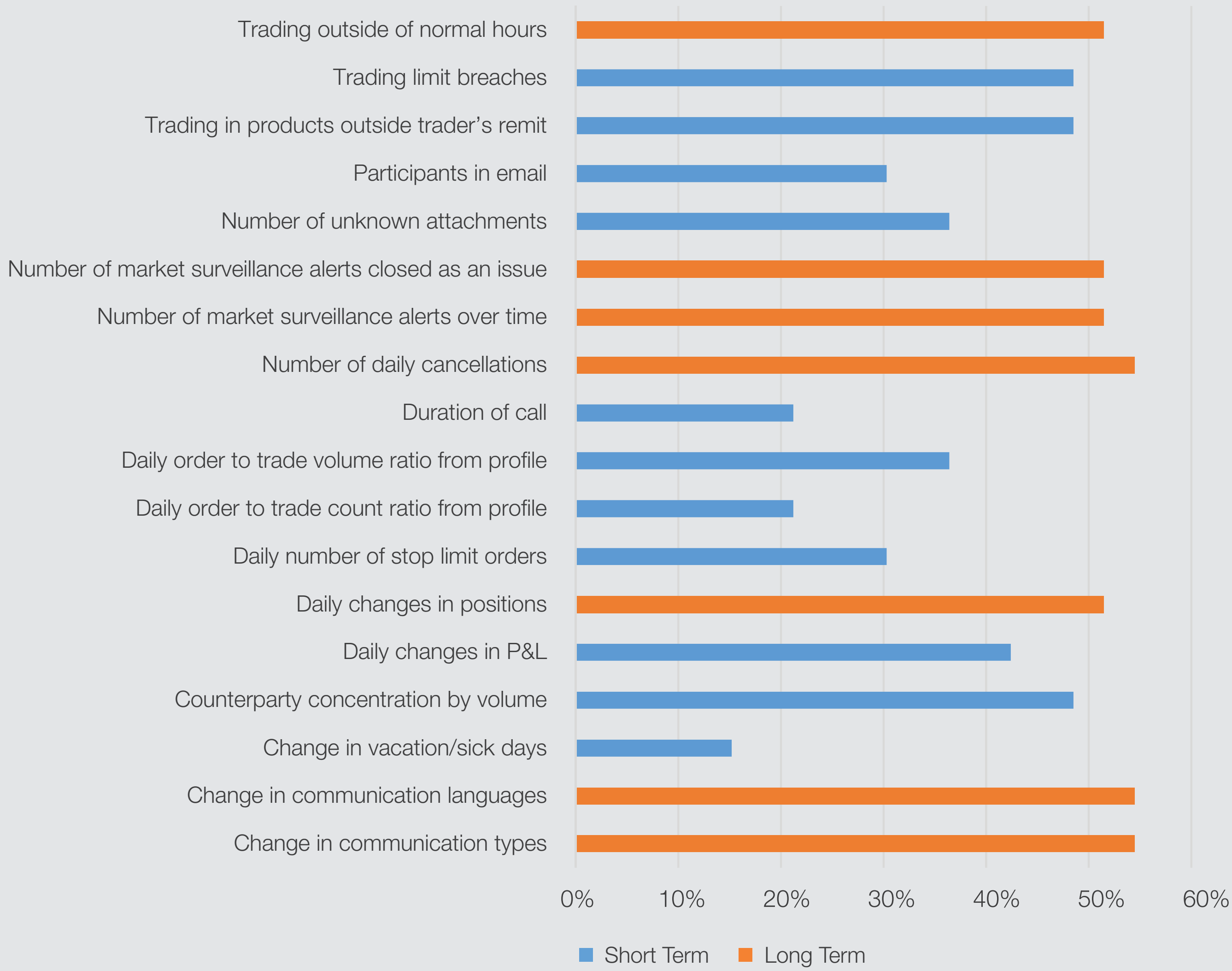


* Human Resources data was described as T&E, gifts, conformance with vacation policies, building access and so on

Firms Know What They Want to Measure

The survey showed that respondents were consistent with regard to the type of behavioral factors they want to be able to measure. Out of 20 possible factors, there were a total of 7 that at least 50% of respondents reported they would like to measure. All of these factors can be categorized as communications data, trade data or HR data.

Which behavioral factors would you like to be able to measure?



Firms Are Eager to Adopt

This eagerness seems to reflect their strong belief that behavioral can reduce operational and regulatory risk while accelerating investigations. It can also be explained by the perceived positive impact to the front office, compliance and risk organizations.

Finally, in terms of adoption of behavioral analytics, it's clear that no one wants to go it alone. Nearly 70% of respondents indicated that they want to purchase their solution from a vendor or have a mix of homegrown— and vendor-supplied behavioral analytics. Just 15% of respondents want to build the solution themselves.

Only **16.7%**

of respondents have implemented behavioral analytics in their surveillance program, but 42% plan to deploy in the next 12 months

Selecting the Right Solution

As indicated by the report, firms are eager to adopt behavioral analytics to complement their traditional analytics. This will help them address both sides of the compliance coin—known forms of market abuse such as layering and spoofing as well as hidden conduct-related threats.

Our experts at NICE Actimize have outlined the following components to look for when selecting and implementing a behavioral analytics solution:

- Correlates behavioral and traditional alerts in one case manager
- Includes OOTB risk factors and ability to create custom ones
- Easily incorporates trade, communications, HR data and more
- Vendor has proven expertise in financial markets compliance

NICE Actimize recently introduced **Holistic Behavioral Analytics**, which is designed to help financial institutions uncover conduct-related threats that traditional analytics weren't designed to detect.

Visit our website or contact us at info@niceactimize.com for a demo.

Why NICE Actimize

Safeguarding the financial industry by preventing, detecting and investigating financial crimes

Focus

Focus exclusively on enabling predictive, preventative compliance for regulatory and reputational risk.

Knowledge

Complete and packaged suite of offerings across all asset classes, instruments, markets, communications and global jurisdictions.

Experience

Experience with widespread deployments across financial institutions globally.

Partnership

Single view of risk allows you to safeguard your firm and clients and grow your business

About **NICE Actimize**

NICE Actimize is the largest and broadest provider of financial crime, risk and compliance solutions for regional and global financial institutions, as well as government regulators. Consistently ranked as number one in the space, NICE Actimize experts apply innovative technology to protect institutions and safeguard consumer and investor assets by identifying financial crime, preventing fraud and providing regulatory compliance. The company provides real-time, cross-channel fraud prevention, anti-money laundering detection, and trading surveillance solutions that address such concerns as payment fraud, cybercrime, sanctions monitoring, market abuse, customer due diligence and insider trading.