Using Data Analytics to Prevent & Detect Fraud

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Overview

The sophistication and complexity of fraud schemes continue to grow and outclass conventional anti-fraud measures. Fraudsters, or people who commit corporate fraud, whether employed internally or externally, continue to develop new strategies to defraud organizations. These scenarios can include vendor fraud, employee expense fraud, financial statement fraud, bribery, and asset misappropriation.

According to the Association of Certified Fraud Examiners (ACFE) 2018 Report to the Nations, organizations that implement preventive data monitoring detect fraudulent activity 58% faster and experience 52% lower losses than organizations that don't. As these numbers suggest, understanding your data—and analyzing it effectively—can provide significant benefits to your organization's effort to prevent and detect fraud.

But where do you begin? Global data volumes continue to grow exponentially and this data can be harnessed to quickly identify unusual patterns or red flags. Historically, this was not possible through traditional auditing techniques or sampling alone. Management and audit teams need a more powerful analytics platform to identify fraud patterns that may have previously gone undetected. For organizations or groups just starting to use data analytics to prevent or detect fraud, this can seem time-consuming or even impossible. It's not.

Here is a five-step plan that will help you deploy data analytics as part of your anti-fraud program.

1. Identify fraud risk factors.

Start by documenting and/or reviewing your organization's anti-fraud risk program. Relevant questions to consider as part of this exercise include:

- Are all relevant fraud risks to your organization identified?

- Have these fraud risks been prioritized?

- Has the organization mapped controls or business processes to prioritized fraud risks?

- Where have controls failed in the past at preventing fraud?

Once these questions are answered and fraud risks are identified, assessed, and prioritized, evaluate whether mitigating controls exist or are effective.

2. Identify areas susceptible to fraud schemes.

Once you have identified the fraud risk factors, brainstorm potential fraud schemes or scenarios to design a more effective plan. Examples of fraud schemes include the following:

- Personal expenses of employees claimed as business expenses through T&E reimbursements.

- Inflating the number of hours worked or rate per hour, before submitting time details for payroll calculations.

- Kickback payments or bribes made for government inspections and permits.

- Issuing credit discounts to customers or sharing rebates with customers for personal gain.

- Creating multiple invoices for the same vendor and for the same goods or services leading to overpayment or duplicate payments for personal gain.

3. Understand relevant data sources.

With potential areas of fraud risk and fraud schemes identified, work with your stakeholders across the business to understand when and where data is captured. Determine the appropriate data sources that may help drive analytic insights into potential fraud schemes. Here are additional questions to answer: Where is this data stored and in what format? How do you access this data and get it out of the source system? Can you automate this process? Have you aggregated this data and prepped it for analysis?

4. Mix, match, and analyze the data.

Generally, reviewing data sets in isolation may not be the most productive activity. There is power in combining data sets and effectively employing analytics across multiple data sources to detect fraud. One compelling example is the combination of sales data with corresponding employee travel and expense details which may highlight instances of potential improper bribes or gifts to influence sales deals.

Visualizing this data is one way to identify patterns and outliers quickly. What other analytic techniques can be used to identify potential red flags, fraud, or failures in the process? What analytic techniques are the most reliable in identifying risk or fraud with your particular data set? For example, when analyzing travel and expense data, looking for outliers based on expense type, amount, and region may be effective in identifying policy violations or personal expenses submitted as business expenses.

One of the most powerful ways to work with data is to relate different views of the data into a single Tableau dashboard. For example, if you are a retail provider, add a scatter plot showing customer demographics on a heat map and combine this data with types of products associated with the purchases. Viewing these various data points on one dashboard makes suspicious patterns more apparent.

5. Share insights and schedule alerts.

If you identify fraud, policy violations, or control gaps and breakdowns, share this with management and determine how to deploy analytics for ongoing monitoring at scale. How can fraud be prevented in the future? How can stakeholders be empowered to support fraud detection efforts? Are there avenues for people to report fraud?

With Tableau, one effective monitoring technique is to set up data-driven alerts. For example, let's say you want your team notified if a flight is booked exceeding a certain threshold (e.g., $5,000). By establishing that threshold as a data-driven alert, you can automatically send email notifications to the team tasked with monitoring. This strategy will improve your organization's first and second lines of defense, enhancing management's controls to prevent or detect fraud.

With a powerful analytics platform and implementation of this five-step plan into your fraud detection program, understanding, identifying, and preventing fraud becomes not only possible, but faster and scalable across your enterprise.

To discover how you can deliver powerful analytics on a flexible and governed platform, visit the Tableau Finance Analytics solutions page.

About Tableau

Tableau helps extract meaning from information. It's an analytics platform that supports the cycle of analytics, offers visual feedback, and helps you answer questions, regardless of their evolving complexity. If you want to innovate with data, you want an application that encourages you to keep exploring—to ask new questions and change your perspective. If you're ready to make your data make an impact, download a free trial of Tableau Desktop today.

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