



SAS® Fraud Framework for Insurance

Prevent, detect and manage fraud across the enterprise



Overview

It is estimated that 10 percent of all insurance claims are fraudulent and that annual losses due to fraud for the property and casualty insurance industry total \$30 billion in the US alone. And the problem is growing.

Unfortunately, most fraud solutions in use today are reactive and often only detect fraud after the fact, once a claim has been paid. Though some innovative organizations use data mining techniques to develop scorecards that will drive business rules for detecting fraud, such approaches are only capable of operating at a single customer level.

There's also a continuous trade-off between setting thresholds too low and spending too much time investigating false positives or setting thresholds too high and allowing too many fraudulent claims to be paid. The problem is further exacerbated by the fact that organized fraudsters actively test and exploit the thresholds and detection rules to ensure that their fraudulent claims go undetected. The SAS Fraud Framework for Insurance can help.

Challenges

- **Siloed business units.** Different departments often use disparate legacy solutions that don't talk to each other, making it almost impossible to share information and spot suspicious activity across product lines.
- **Staff limitations.** There aren't enough analysts and investigators to detect and investigate all suspicious activity.
- **Poor data quality.** Disparate systems and the inability to integrate data from suppliers and third parties means data is often incomplete and unreliable.
- **Changing tactics.** Fraudsters actively test rules and thresholds to find ways to operate around or under them, and they constantly change elements of their identities, which makes it difficult to match a new policy or claim to a previously known fraudster.
- **Limited scope.** Current data models rarely produce a view beyond a single customer identity, making it difficult to spot high-risk relationships and to get a full picture of a customer, claims and related entities.
- **Too many false positives.** Scoring at a claim or customer level alone generates a large number of false positives, which can take up too much of an investigator's time.



Detect, prevent and manage claims fraud across all lines of business

■ The SAS® Fraud Framework

The SAS Fraud Framework for Insurance is an end-to-end framework for detecting, preventing and managing claims fraud across the various lines of business within today's insurance companies.

The framework includes components for detection, alert management and case management, along with a category-specific workflow, content management and advanced analytics.

These components are fully integrated with SAS Social Network Analysis, a solution that offers both top-down and bottom-up functionality for making hidden and risky networks visible to investigators.

The SAS approach provides enhanced fraud detection and improved operational efficiency while decreasing fraud spending from a total cost of ownership perspective.

How SAS® can help

Many insurance companies accept claims fraud as the cost of doing business since it is not cost-effective to pursue fraudulent claims after settlement. But it doesn't have to be that way.

The SAS Fraud Framework for Insurance is designed to help insurance companies detect and prevent both opportunistic and professional fraud within the claims process and spanning multiple lines of business – auto, homeowners, disability and workers compensation.

Opportunistic fraud refers to low-level, high-frequency fraud perpetrated by individuals (i.e., claimants) who inflate the size of a loss in order to offset deductibles, etc. Opportunistic fraud tends to rise with a downturn in the economy.

Professional fraud is often perpetrated by organized groups or service vendors (e.g., body shop repairers and medical providers). These criminals know how fraud detection systems work, and they routinely test thresholds to stay just under the radar. These crime rings often place or groom insiders to help them defraud the insurer.

The SAS Fraud Framework for Insurance calculates the propensity for fraud at each stage of the claims process with a fraud analytical engine that uses multiple techniques, including:

- Automated business rules.
- Predictive modeling.
- Text mining.
- Database searches.
- Exception reporting.
- Network link analysis.

Alerts for potentially fraudulent claims are routed to special investigation units where investigators are provided with case management tools that help them rapidly investigate.

Once a claim is scored and prioritized based on severity, an investigator may perform a more in-depth review of the claim characteristics to determine if the claim or any associated historic claims are fraudulent.

Capabilities

The SAS Fraud Framework for Insurance includes components for:

Detection and Alert Generation

These components enable the systematic detection of suspicious activity using a combination of analytic techniques to determine the likelihood of claims fraud.

The fraud scoring engine detects fraud for auto, home, disability and workers compensation lines of business and can be extended easily to support others.

The detection and alert components:

- **Score claims in real time** with an online scoring engine that lets you detect fraudulent claims using a combination of business rules, anomaly detection and advanced analytical techniques.
- **Calculate the propensity for claims fraud at first notice of loss** and rescore claims at each stage of the settlement process as new claims data is captured.
- **Enable you to go beyond claims fraud detection** by deploying at policy inception to prevent fraudsters from taking out policies in the first place.

Alert Management

The alert management component assembles alerts from multiple monitoring systems, associates them with common claimants and provides investigators with a more complete perspective on the risk of a particular claimant or individual. Additional functionality includes:

- **Risk score calculation.** Each alert generated is assigned a risk score based on the specific characteristics of the activity, with transparent reason codes.
- **Alert prioritization.** Prioritizes and routes potentially fraudulent claims to appropriate team members, resulting in greater efficiency, increased detection rates and reduced losses.
- **Work assignment.** Organizations can appoint automated alert assignments to various investigators or analysts based on rules and requirements set by the user.

Social Network Analysis

SAS Social Network Analysis helps insurers detect and prevent organized claims fraud by going beyond transaction and account views to analyze all related activities and relationships at a network dimension. In addition, the solution:

- **Improves investigator efficiency.**
The solution lets you produce complete dossiers of networks surrounding a case using an intuitive interface that provides fast access to full customer details and all related parties and networks.
- **Uncovers previously unknown relationships.** Using a unique network visualization interface, the solution gives investigators the ability to identify linkages among seemingly unrelated claims.
- **Produces independent and combined claims fraud scores.**
The solution enables you to assess overall risk on a customer, claim or network basis.

Case Management

Once an alert has been triaged and requires further investigation, the case management functionality provides a systematic means for facilitating the investigation and capturing and displaying all information pertinent to that case. In addition, you can:

- **Store fraudulent activity information,** including interview notes and evidence needed for criminal or civil prosecution, restitution and collections.

- **Assess your organization's overall fraud exposure,** including losses due to fraud as well as fraud detected or prevented.
- **Use a configurable workflow** for the management and resolution of cases.

Benefits

Decrease fraud losses

The SAS Fraud Framework for Insurance enables you to decrease your fraud losses by:

- **Preventing fraud before claims are paid** using online real-time scoring.
- **Detecting loss padding in similar claims** with anomaly and loss comparisons.
- **Detecting repeat offenders** and more accurately scoring incoming claims by searching databases of known fraudsters and by capturing all fraud outcomes, referrals and suspects within the system for reuse.
- **Detecting insider or collusive fraud** by integrating staff data and audit records that show who handled which claims.

Lower loss adjustment expenses

The SAS Fraud Framework for Insurance enables you to lower your loss-adjustment expenses by:

- **Greatly reducing false positives.**
- **Improving investigation efficiency** with advanced case management tools.

- **Increasing ROI per investigator** by prioritizing higher value networks and conducting more efficient and accurate investigations.
- **Capturing all claims settlement amounts within the system** for reuse with similar claims in the future.

A consolidated view of fraud risk

The SAS Fraud Framework for Insurance gives you a consolidated view of fraud risk, enabling you to:

- **Identify cross-brand/product fraud** by seeing customer claims for all lines of business.
- **Improve models on an ongoing basis** and adapt the system continuously to address changes in fraud trends.
- **Better understand new claim threats** and prevent substantial losses early using social network diagrams and sophisticated data mining capabilities.

Improved competitive position

The SAS Fraud Framework for Insurance can also help you improve your competitive position through:

- Fewer false positives means higher customer satisfaction.
- Fraudsters are driven to target other insurance companies.
- Enhanced fraud management satisfies regulatory and rating agency pressures.

About SAS

SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market. Through innovative solutions delivered within an integrated framework, SAS helps customers at more than 45,000 sites improve performance and deliver value by making better decisions faster. Since 1976, SAS has been giving customers around the world THE POWER TO KNOW®.

www.sas.com



THE
POWER
TO KNOW®

SAS Institute Inc. World Headquarters +1 919 677 8000

To contact your local SAS office, please visit: **www.sas.com/offices**

SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. Copyright © 2009, SAS Institute Inc. All rights reserved. 103882_531129.0309