The Insurance Fraud Race
Using Information and Analytics to Stay Ahead of Criminals
Presenters

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SAS
An SMA Perspective: The Insurance Fraud Race

Today’s Discussion Points

» Current State of Fraud
» Approaches & Solutions
» Business Benefits
» SMA Call to Action
Top 10 Imperatives for Insurers

- Chart a Path for MARKET GROWTH
- Fast Path NEW PRODUCT DEVELOPMENT
- Drive Dynamic DISTRIBUTION Channels
- Apply Smarts to UNDERWRITING
- Link CUSTOMER COMMUNICATION Holistically
- Capitalize on Intelligence to manage CLAIMS
- Embrace ENTERPRISE RISK MANAGEMENT
- Rethink Business & Technology LEGACY
- Unleash ANALYTICS On the DATA

Source: SMA
Current State of Insurance Fraud

- An Old Problem in a New Age
- Current Efforts to Combat Fraud
- Growing Sophistication of Criminals
Insurer Fraud Fighting Approaches

Any Combination...

- Analytics and Advanced Tools
  - SIUs
    - Effective referrals
    - More skilled resources
  - Information Sharing
    - Reporting
    - Aggregation
  - Lobbying
    - Stiffer penalties
    - Improved legislation
    - More law enforcement resources

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Required Business Capabilities

- Prevention
- Detection
- Management

Case Management
Current Fraud Management Environment

Information Sources

Policy | Claims | Vendors/Other 3rd Parties | HR | External Databases | Social Media Info | Other Unstructured Data

Manual Case Management | Automated Case Management

Detection and Investigation Tools

Spreadsheets | Manual Analysis | Physical Damage Fraud Systems | Specialized Fraud Systems | Custom-Built Predictive Models | Core Claim Systems
Advanced Fraud Management Environment

Common Data Repository

Integrated Tools

Automated Fraud Case Management

Policy
Claims
Vendors/Other 3rd Parties
HR
External Databases
Social Media Info
Other Unstructured Data

Business Rules
Anomaly Detection
Predictive Models
Social Network Analysis
Business Benefits from Advanced Fraud Techniques

*Insurer’s consistently report on business benefits beyond loss costs and expense reductions...*

- Improve Adjuster/Investigator Efficiency
- Accelerated and Enhanced Investigation
- Current/Future Saving from Thwarting Organized Rings
SMA Call to Action
Find the Champion

Determine Your Fraud Solution, Create the Strategy & Plan

Prepare the Data, Buy Technology, & Develop Release Plan

Deliver Quick Win, Continue to Expand & Roll Out

Get buy-in

Gain Momentum

Source: SMA
An SMA Perspective:
Featuring as an example: SAS Fraud Framework for Insurance
The Insurance Fraud Race
Using Information & Analytics to Stay Ahead of Criminals
The Shifting Landscape of Insurance Fraud

Insurance fraud is on the rise & today’s schemes are:

- Increasingly sophisticated
- More agile
- Higher velocity
- Cross industry

Yesterday’s methods are insufficient to address today’s fraud risk!
Suspicious Claim Identification Methods

- Push
  - Reliance on rules / red flags
  - Inconsistent
  - First-come, first-served

- Pull
  - Advanced detection methods
  - Consistent
  - Optimal prioritization
SAS® Fraud Framework for Insurance

Business Analytics Framework

SFFI Core Components

Insurance Lines of Business

- Auto
- Home
- Workers’ Comp.
- General Liability
- Life & Health

Detection & Alert Generation
- Real-time Decisioning
- Network Analysis
- Alert Management
- Case Management

Prevention
Detection

Business Intelligence
Data Quality & Integration
Analytics
# SAS Fraud Analytics

## Using a Hybrid Approach for Fraud Detection

<table>
<thead>
<tr>
<th>Enterprise Data</th>
<th>Suitable for <strong>known</strong> patterns</th>
<th>Suitable for <strong>unknown</strong> patterns</th>
<th>Suitable for <strong>complex</strong> patterns</th>
<th>Suitable for <strong>associative link</strong> patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
<td>Rules</td>
<td>Anomaly Detection</td>
<td>Predictive Models</td>
<td>Social Network Analysis</td>
</tr>
<tr>
<td>Providers</td>
<td>Rules to filter fraudulent claims and behaviors</td>
<td>Detect individual and aggregated abnormal patterns vs. peer groups</td>
<td>Predictive assessment against known fraud cases</td>
<td>Knowledge discovery through associative link analysis</td>
</tr>
<tr>
<td>Applications</td>
<td>Examples:</td>
<td>Examples:</td>
<td>Examples:</td>
<td>Examples:</td>
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<tr>
<td>Referrals</td>
<td>• Claim within certain period from policy inception</td>
<td>• Ratio of BI to APD exceeds norm</td>
<td>• Like staged / induced accident indicators as known fraud</td>
<td>• Claim associated to known fraud</td>
</tr>
<tr>
<td>Payments</td>
<td>• Delay in reporting claim</td>
<td>• % accidents in off peak hours exceeds norm</td>
<td>• Soft tissue injury patterns across claims</td>
<td>• Linked policies &amp; claims with like suspicious behaviors</td>
</tr>
<tr>
<td>NICB Alerts</td>
<td>• No witness</td>
<td>• # claims / year exceeds norm for policy or network</td>
<td>• Like network and claim growth rate (velocity)</td>
<td>• Identity manipulation</td>
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<tr>
<td>History</td>
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**Hybrid Approach**

Proactively applies combination of all 4 approaches at the claim, entity, and network levels.
SAS® Fraud Framework for Insurance
End-to-End Solution

Data
• Structured & Unstructured Data Sources
• Batch or real time processing
• Data Cleansing
• Data Integration
• Variable Extraction & Sentiment Analysis with Text Mining

Detection
• Business Rules
• Anomaly Detection
• Advanced Predictive Models
• Watch Lists
• Social Network Analysis
• Network-level analytics
• Hybrid Technology

Reporting
• Advanced Ranking Technology
• Easy to use web based interface
• Advanced Query of integrated data
• Full business intelligence reporting capability
• Claim system integration

Administration
• Self administered
• Saas or Installed
• Custom alert queues
• Alert suppression & routing rules
• Workflow analysis
• Direct integration with SAS Enterprise Case Management

For more information on SAS fraud solutions, please visit  www.sas.com/insfraud