

QUANTIFYING THE VALUE OF COUNTER FRAUD ANALYTICS IN INSURANCE

November 2016

By taking full advantage of the integration and advanced capabilities currently being offered by leading counter fraud solution providers — including predictive analytics and cognitive computing — enterprises can expect to achieve significantly better outcomes. Aberdeen Group’s analysis helps to quantify the value of counter fraud analytics in the insurance industry.



Aberdeen Group has applied a simple but highly effective analytical approach to better understand the risk of insurance fraud, and to quantify the value of investments in counter fraud analytics capabilities to reduce this risk.

Putting the Risk of Insurance Fraud in Perspective

Publicly available estimates for the impact of **fraud** in the insurance industry come in a variety of formats, from an aggregate annual cost for the entire industry, to an average per-family cost for annual premiums. On a per-company basis, the prevailing wisdom seems to be that insurance fraud costs an average of between 5% and 10% of annual revenue.

But averages can be misleading, and inconsistent formats can make these estimates difficult to interpret. To help address these issues, Aberdeen Group has applied a simple but highly effective analytical approach to better understand the *likelihood* and *business impact* — i.e., the *risk* — of insurance fraud, and to quantify the value of investments in **counter fraud analytics** capabilities to reduce this risk.

Focus for Aberdeen’s Analysis: Property and Casualty Insurance

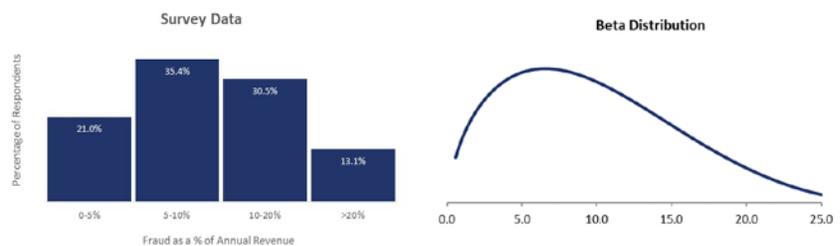
Aberdeen’s focus for this analysis is the risk of fraud in **property and casualty insurance**, which is designed to protect against:

- ➔ Property losses to vehicles, homes, or businesses
- ➔ Legal liability as a result of injury to others, or damage to the property of others

➔ Related Research:
[Fighting Fraud in Online Banking](#)

Estimates for the annualized cost of fraud in the property and casualty insurance industry, as a percentage of top-line revenue, range **from 0% to more than 25%** (e.g., see [FICO Insurance Fraud Survey 2013](#)). Aberdeen’s Monte Carlo model uses a *probability distribution* that closely mimics this empirical data (Figure 1).

Figure 1: Annualized Cost of Fraud in Property and Casualty Insurance, as a Percentage of Top-Line Revenue – Empirical Data, and Distribution for Aberdeen’s Monte Carlo Analysis



Source: Adapted from FICO Insurance Fraud Survey 2013; Aberdeen Group, November 2016

Figure 1 provides a good illustration of the statement “averages can be misleading,” as well as not very useful in terms of gaining insights into the *risk* of insurance fraud. For example, based on these particular estimates, the *median* annualized cost of fraud in property and casualty insurance is about 9% of top-line revenue — but what’s the likelihood that it’s greater than, say, 15%? Insights into questions such as these can help senior business leaders to make better-informed about their current risks, and about the value of incremental investments in counter fraud analytics solutions to help reduce those risks to an acceptable level.

Fraud is a Drain on Profitability: A Reduction in the Cost of Insurance Fraud Goes Directly to the Bottom Line

Some may argue that the cost of fraud is already baked into the property and casualty insurance industry’s operating models, i.e., as “a cost of doing business” that is reflected in higher cost structures for insurers, and higher premiums for the insured. But

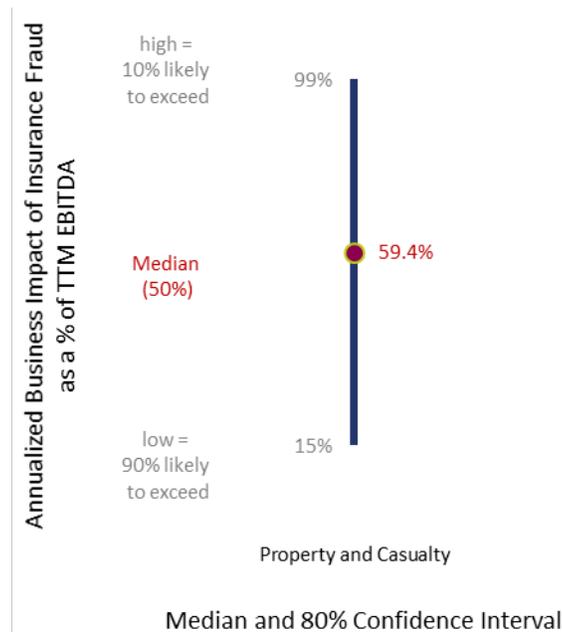
Earnings before interest, taxes, depreciation, and amortization (EBITDA) is an indicator of the overall profitability of a business.

even so, fraud is a drain on profitability — and a reduction in fraud goes directly to the organization’s bottom line. To put this point in perspective, consider the average **earnings before interest, taxes, depreciation, and amortization (EBITDA)** for the property and casualty insurance industry: over the past five quarters, the annualized (based on the *trailing twelve-month* period, or *TTM*) EBITDA ranged **between 11.85% and 18.95%** of top-line revenue (Source: CSImarket.com, October 2016).

By incorporating the empirical TTM EBITDA for the property and casualty insurance industry into its simple Monte Carlo model, Aberdeen’s analysis shows that the annualized cost of fraud has a significant business impact: under the status quo, **the median annual cost of fraud equates to about 59% of TTM EBITDA**, with an 80% confidence interval of between **15% to 99%** (see Figure 2).

Figure 2: For Every Dollar of the Property and Casualty Insurance Industry’s Profitability, the Annual Cost of Fraud Under the Status Quo is Most Likely to Be About 60 Cents

For every dollar of the property and casualty insurance industry’s profitability, the annual cost of fraud under the status quo is most likely to be about 60 cents — with a 10% likelihood that it will equate to nearly an extra dollar of cost. Is this really an acceptable “cost of doing business?”



Source: Monte Carlo model, adapted from CSImarket.com for 2Q2015 to 2Q2016; Aberdeen Group, November 2016

The price to earnings (P/E) ratio is an indicator of the multiple that investors are willing to pay for every dollar of earnings.

Under the status quo, every \$1 in fraud reduction that falls to the bottom line would in turn translate to between \$10.80 and \$24 in market valuation, with a median P/E multiple of about 17.7.

In other words, for every dollar of the property and casualty insurance industry's profitability, the annual cost of fraud is most likely to be about 60 cents — with a 10% likelihood that it will equate to nearly an extra dollar of cost. Is this really an acceptable “cost of doing business?”

To take this analysis to the next level, consider the **price to earnings (P/E) ratio** for the property and casualty insurance industry: over the past five quarters, the P/E ratio ranged **between 5.70 and 29.59** (Source: CSImarket.com, October 2016).

By incorporating the P/E multiples for the property and casualty insurance industry into its Monte Carlo model, Aberdeen's analysis further illustrates the significant impact of fraud: under the status quo, **every \$1 in fraud reduction** that falls to the bottom line would in turn translate to **between \$10.80 and \$24 in market valuation**, with a median P/E multiple of about 17.7.

Aberdeen's analysis makes it clear that business discussions about fraud in the insurance industry need to begin by fully appreciating the significant impact of fraud — not only the cost to the insurer, which is increasingly unaffordable, but also the social impact of fraud, which is increasingly unacceptable. Senior business leaders need to bring the days of fraud being viewed strictly as a “cost of doing business” that can be absorbed into the organization's standard operating model to a swift and inglorious end.

Putting the Value of Counter Fraud Analytics in Perspective

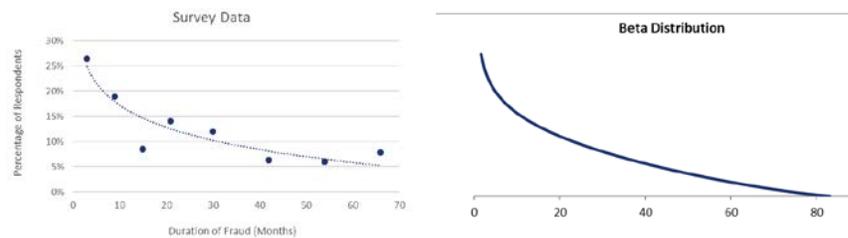
The primary value of counter fraud analytics solutions is in **detecting fraud sooner** — before fraudulent claims are paid. In this sense, the changing dynamics of successful counter fraud initiatives are remarkably similar to the changing dynamics in the domain of cyber security, in which *attackers are quick* to identify and exploit vulnerabilities to gain access to enterprise systems, and quick to begin exfiltrating sensitive data — while *defenders*

➔ Related Research:
[The Business Value of a Security Monitoring and Analytics Platform](#)

are trying desperately to be faster to detect, respond to, and recover from successful compromises. By leveraging monitoring and analytics capabilities to reduce the time it takes to identify, investigate, and remediate security-related incidents, organizations drive a proportional reduction in business impact: twice as fast, half the risk.

To better appreciate **the importance of time** in counter fraud initiatives, consider the available empirical data for the duration of fraud. Again, the insights for better-informed decision-making come not from the misleading use of averages, but from the use of a *probability distribution* that closely mimics this empirical data (Figure 3). Under the status quo, companies consistently report that fraud is being committed for **up to five years or more** before being detected, with a **median duration of about 20 months**.

Figure 3: In the Battle Between Fraudsters and Counter Fraud Initiatives, Time Currently Favors the Bad Guys



Source: Adapted from ACFE 2016 Global Fraud Study; Aberdeen Group, November 2016

The simple premise is that **the faster fraud is detected, the less business impact it has**: e.g., twice as fast, half the impact. (It seems reasonable to assume that the business impact of fraud grows non-linearly with time — in which case, detecting it twice as fast would actually cut the business impact by *more* than half. Aberdeen plans to continue developing this aspect of its analysis, as additional empirical data on this point becomes available.)

These insights make the value of incremental investments in **counter fraud solutions** — especially when integrated with

By taking full advantage of the integration and advanced capabilities currently being offered by leading counter fraud solution providers — including predictive analytics and cognitive computing — the enterprise counter fraud department can expect to achieve significantly better outcomes.

predictive analytics and **cognitive computing** capabilities — come into much sharper focus. These solutions should not be expected to eliminate *all* fraud, of course, just as there is no such thing as “100% secure” in the realm of cyber security.

By taking full advantage of the integration and advanced capabilities currently being offered by leading counter fraud solution providers, the enterprise counter fraud department can expect to achieve significantly better outcomes, including:

- Swifter detection and investigation of fraudulent activity
- Lower fraud losses, higher profitability, and higher market valuation, as illustrated by Aberdeen’s analysis
- Lower operating costs for counter fraud activities
- Improved productivity for counter fraud activities, which frees up resources for other strategic tasks
- Competitive advantage, e.g., keeping insurance rates low

Author: Derek E. Brink, CISSP, Vice President
and Research Fellow, Information Security and IT GRC



About Aberdeen Group

Since 1988, Aberdeen Group has published research that helps businesses worldwide to improve their performance. Our analysts derive fact-based, vendor-neutral insights from a proprietary analytical framework, which identifies Best-in-Class organizations from primary research conducted with industry practitioners. The resulting research content is used by hundreds of thousands of business professionals to drive smarter decision-making and improve business strategies. Aberdeen Group is headquartered in Waltham, Massachusetts, USA.

This document is the result of primary research performed by Aberdeen Group and represents the best analysis available at the time of publication. Unless otherwise noted, the entire contents of this publication are copyrighted by Aberdeen Group and may not be reproduced, distributed, archived, or transmitted in any form or by any means without prior written consent by Aberdeen Group.