
The Auto Insurance Industry is Under Attack

How Cunning Policyholders Continue to Boost Auto Premium Rating Error

FACT: In 2006, Auto Insurers Lost \$16BN Through Preventable Premium Leakage

In 2006, the Private Passenger Auto Insurance industry lost \$16.6 billion due to premium rating error. This estimate is based on nationwide premium audits conducted by Quality Planning Corporation. Premium rating error represents 10% of a total \$166 billion in personal auto premium written. Without action, insurers will continue to lose billions more over the coming years – all due to premium leakage that could be stemmed if appropriate action were taken.

This report, *The Auto Insurance Industry is Under Attack*, aggregates and summarizes audit results of more than 18 million policies representing 20 major carriers. The sample includes substandard to preferred books of business, all distribution channels, and national and regional carriers.¹ Sample results were weighted to reflect the total national private passenger auto line.

How Does Rating Error Cut into Insurance Industry Revenue?

Direct Premium Loss

For individual carriers, opportunities for profit gains in rating error reduction are significant. In a good year, individual carriers can expect to have average profits of 5% of premium. Under such circumstances, every 1% reduction in error can result in a 20% profit gain. Likewise, every 1% of error left uncorrected results in a 20% profit loss.

Risk Management Costs

Rating error leads directly to failures in risk management. For instance, policies with unrated 16-year-old male drivers in the household experience an average loss-ratio of more than 200%.

Moral Hazard Costs

An often-overlooked cost of rating error is moral hazard. Analyses repeatedly demonstrate that individuals who misreport policy-rating information are associated with high loss experience. For example, an individual driving 20,000 miles per year but reporting mileage of 5,000 will, on average, have higher claim costs than an individual driving and reporting 20,000 miles. Rating error also causes honest insureds to subsidize dishonest insureds. This results in low-risk drivers subsidizing high-risk drivers.

Similarly, the majority of agents who work to accurately determine premium have a strong interest in rating integrity. In the absence of meaningful controls, however, the honest agent is placed at a competitive disadvantage by the minority of agents willing to misrate a policy to close a sale.

Business Management Costs

The modern insurer relies on rating and underwriting data in all primary areas of corporate management. Policy data provides key inputs to marketing, sales, business segmentation, financial planning, corporate planning, staff compensation, among others. Errors, or worse still, systematic biases in underwriting data, deteriorate performance in all management functions. Each is subject to the same law of information – garbage in, garbage out.

¹ The sample was limited to audits where Quality Planning retained contractual rights to aggregate data for industry analysis.

What Causes Rating Error and Multi-Billion-Dollar Premium Leakage?

Rating error can be introduced at all stages of the underwriting cycle: sales, risk analysis, policy servicing and renewal. While significant error occurs at initial application, analysis shows that the majority of rating error – and massive premium leakage – arises through changes in rating factors over time.

Cause #1: Consumer fraud

But what's most alarming is the proliferation of policyholders that are purposely contributing to historic levels of premium leakage. This frightful trend of cunning individuals is perhaps best exemplified on Internet sites that outline *exactly* how insureds can fraudulently reduce their automobile insurance.

Just type the words "automobile insurance reduce premium" into Google and be prepared to receive a seemingly endless list of websites that detail how honest policyholders can launch a full-scale attack against their insurance company. A typical site lists all of the rating factors, making it clear which of these are open to misinformation.

What is even more worrisome is that these sites often encourage policyholders to switch companies and even coach them on how to get the lowest quote from a competitor. Of course, these "tricky" customers aren't necessarily those that a carrier would like to acquire, so safeguarding against these folks is imperative.

Cause #2: Change

But Internet tips on how to commit fraud aren't the industry's only enemy. Another is the nature of America itself. Let's face it. Americans lead more dynamic lives than ever before. Every hour there are²:

- 254 marriages and 124 divorces
- 25,608 vehicles registered of which 6,402 are new
- 163 drunk-driving arrests
- 5 traffic fatalities
- More than 2,800 auto insurance claims paid
- 445 new drivers licenses issued

On top of that, every hour 3,453 Americans move and another 6,526 change jobs.

The risk profile of auto policies is constantly changing, making personal auto insurance risk management a rapidly moving target. Consider job changes. The time has long passed when a worker got a job soon out of school and stayed with the same company throughout their career. In fact, the average worker has held 10 jobs by the age of 36. Overall, 25% of workers change jobs every year. Why should underwriters take note of this trend? Because if an individual's job changes, it is also likely to be associated with changes in vehicle usage, commute distance, and annual mileage.

Unlike homeowners insurance, the basic facts of a personal auto insurance change frequently.

- 52% of household auto policies experience a change of vehicles or drivers every year
- Nearly 30% of households replace vehicles every year

² Marriage and divorce statistics from Census Bureau Current Population Reports; move estimates based on 2000 US Census, job change estimates from the Bureau of Labor Statistics, drunk driving arrests from MADD web site, traffic fatalities from Department of Transportation, and auto claims paid from National Association of Insurance Commissioners and National Association of Independent Insurers Fast Track.

These changes are associated with changes in vehicle-driver assignment, annual mileage, commute, and other rating factors.

While insurers provide their policyholders with multiple methods to report changes, many changes aren't reported at all. Not surprisingly, policyholders are significantly more likely to report life changes that reduce auto premium than report changes that increase premium.

In fact, analysis shows that policyholders are more than **five times more likely** to report mid-term mileage changes that lower annual premium than to report mileage changes that raise premium.

Every day, in the course of conducting premium audits, Quality Planning Corporation uncovers examples of this behavior. For instance, younger drivers who retain the policy address of their parents in the suburbs long after they've moved to higher rated territories in central cities, or individuals who've changed jobs and extended their commute, but somehow forgot to let their insurance company know. One suburban mom, when asked about her 17-year-old daughter who was not listed on the policy, even emphatically stated that she "totally forgot she was in the household!"

Billions Are Lost Each Year Due to Premium Leakage

More than \$16 billion was lost in 2006 due to premium rating error. It's important to understand how this error is broken down, revealing areas where leakage can – and should – be prevented.

Types of Rating Error

The 2006 study conducted by Quality Planning Corporation found substantial rating error exists in all common factors used to determine auto premium. Table 1 presents estimated premium loss by rating factor.

<i>Private Passenger Auto</i>	<i>Percent of Premium</i>	<i>Total Error Cost (\$ Billions)</i>
Vehicle Rating Factors		
Commute	1.10%	1.8
Annual Mileage	1.00%	1.7
Vehicle Usage	0.95%	1.6
Vehicle Characteristics, Discounts ³	0.30%	0.6
Rated Territory	0.95%	1.5
<i>Vehicle Subtotal</i>	4.30%	7.1
Driver Rating Factors		
Unrated Operators	1.45%	2.4
Vehicle-Driver Assignment	1.10%	1.8
Driver Characteristics, Discounts ⁴	1.45%	2.4
Violations/Accidents	1.40%	2.3
<i>Driver Subtotal</i>	5.70%	9.5
Other Rating Factors ⁵	0.30%	0.5
Total Rating Error	10.00%	16.6

Rating error costs were found to vary greatly by individual insurer. The amount and kind of rating error varies by many factors including: characteristics of the book of business, geographic location, distribution channels, rating plan, rate pursuit history, state regulatory environment, agent relations, and underwriting standards.

³ Includes symbol, safety discounts such as alarms, and vehicle body type discounts.

⁴ Includes years driving experience, age, marital status, student discounts, affinity group membership, driver identification such as DL and SSN.

⁵ These factors vary greatly by carrier including multi-car discounts, years insured, credit score, and multiple products.

Increase Profit Today

The insurance industry can prevent multi-billion-dollar premium leakage by leveraging new detection methodologies. These tools address the new dynamics of America – changing jobs, locations, life circumstances, etc. By adopting new approaches to ensure accurate rating, insurers can easily reduce premium leakage by 60% in a single policy period.

Three-Step Rating Integrity Process Reduces Leakage by 60%

As mentioned earlier, rating error can be introduced at all stages of the underwriting cycle. While significant error occurs at initial application, Quality Planning Corporation's analysis shows the majority of rating error arises through changes in rating factors that occur over time.

On average, and after initial policy screening, 82% of audits uncover policies lacking enough premium to cover the intended risk. By efficiently revealing flaws in rating data, carriers can take the steps necessary to correct costly errors and restore profitability to a book of auto policies.

Premium Leakage Prevention: Step One

Get it right at the point of sale.

To ensure rating integrity and limit premium, leakage, insurers need to employ available technologies and conduct sophisticated data analyses. This should be done on all new business, in real time, from an agent's or customer service representative's desktop. New business audit checks should also be applied to numerous rating variables to identify potential rating errors.

These audit checks should look to verify:

- Commute distance
- Annual mileage
- Vehicle garaging territory
- Unlisted drivers
- Accidents and violations
- Identity theft
- Farm use
- Vehicle-driver assignment
- Non-owned vehicles
- Vehicle symbols
- Salvage vehicles
- Business use
- Marital status
- Commercial use
- Criminal records
- VIN identification

With additional analytic tools such as pattern analysis and statistical algorithms, insurers can flag questionable policyholder information for a variety of findings, including:

- Vehicles garaged at a mail-drop address
- Households with unreported youthful operators
- Incorrect vehicle-driver assignments
- Under-reported commute distances
- False driver licenses and Social Security Numbers
- Commercial vehicles insured as private passenger autos

Premium Leakage Prevention: Step Two

Get it right at renewal.

Whether or not a policy is reviewed at new business, great likelihood exists that changes in everyday lives will create a different risk profile over time. A change in marital status, job

changes, new cars, new houses, and ‘new’ 16-year-olds — all these create very different risks. Staying on top of these changes can be accomplished by annually reviewing renewals.

This renewal process is similar to the new business review, but it should be done in greater depth. By adding in the right combination of letter, website and telephone communications, customer contact rates of more than 80% to 90% can be easily achieved. This is important not only for securing customer acknowledgement of rating variable changes, but also for improving the overall customer insurance experience.

Far too often, a policyholder’s only contact with his or her insurance company is the annual invoice. An annual “check-up” call goes a long way towards maintaining a positive, and long-term, company-policyholder relationship, but only if a few key concepts and readily available re-underwriting tools are implemented. For instance, a contact strategy that is both comfortable (for the policyholder) and comprehensive consists of letters, website interaction and telephone calls.

When used appropriately in concert with each other, these methods of contact can be very effective. If calling, it’s most beneficial to develop dynamic scripts that are customized to the specific re-underwriting effort, and to follow calling patterns designed to find customers at home. This can boost response rates well in excess of 80%.

Premium Leakage Prevention: Step Three

Develop a long-term approach.

Once an insurer has completed steps one and two—and cleaned up its auto book of business—a baseline of accurate information then exists to enable regular maintenance of a premium leakage program. This baseline will help enable affordable rating integrity effectiveness in the coming years. The key is to avoid lapses that could allow rating error to creep back in. Studies show that changes made during re-underwriting have a life span of two to three years. That means there is substantial lifetime value in a rating integrity program that goes far beyond the first year cost of execution.

A streamlined approach during the second-year and subsequent reviews will dramatically cut costs. If a baseline for a particular policy is established in year one, and nothing changes on that policy in year two, then a process that can identify this policy and pre-select it prior to a full review will pay sizeable dividends.

The bottom line is that a great deal of time and effort goes into a one-year, clean-up effort. Only minimal time and effort, though, is required to *keep* an auto book clean. Smart companies realize this and have integrated rating integrity into their regular renewal processes.

Conclusion

Increasingly, insurance companies are losing contact with their policyholders. The uses of the Internet-based communication and mass-mailing techniques have replaced the direct contact that builds healthy customer relationships. From high turnover rates to adversarial relationships, there are hidden costs to this ever-increasing depersonalization.

In addition, the Internet itself is introducing policyholders to clever ways to commit fraud against carriers. Without detailed analytics and audits, this type of insurance leakage is virtually undetectable.

By conducting the research and analytics necessary, insurers can, collectively, recover more than \$16 billion in lost premium each year. If nothing is done, this figure will continue to rise year after year, cutting into carriers' profits.

As a by-product of establishing an effective premium leakage detection program, carriers need to reinstate regular direct contact with policyholders. This direct contact will, in addition to putting a stop to premium leakage, help to create a trusting relationship, lead to increased sales, and have an overall beneficial effect on future reported claims.

About Quality Planning

Quality Planning Corporation, the Rating Integrity Solutions Company, was founded in 1985 and is headquartered in San Francisco. A member of the ISO family of companies, QPC is focused exclusively on providing decision integrity solutions to the insurance industry. QPC works with insurance companies to identify areas of significant premium leakage using sophisticated database management, statistical analysis and modeling, customized survey design, and highly targeted customer interaction. For more information, visit www.qualityplanning.com

Appendix: Audit Methods

The 2006 Premium Rating Error Report aggregates and summarizes audit results of over 14 million policies from 16 major carriers. The sample includes substandard to preferred books of business, all distribution channels, and national and regional carriers.⁶ Sample results were weighted to reflect the total national private passenger gross written premium.

Two primary methods were used to develop the estimates of rating error: *Statistical Risk Estimators* and *Direct Measures*.

Statistical Risk Estimators: The first method we employ to estimate rating error is to compare the “expected distribution” of rating factors to the “rated distribution”. In the case of annual mileage the “expected distribution” is the distribution given the characteristics of policies written. We “expect” the average new Ferrari to be driven an average of 3,500 miles per year and the average new Chevy cargo van to be driven more than 20,000 miles. Based on numerous studies of vehicle use patterns we have estimated and validated equations which develop an “expected mileage” based on vehicle make, model, and year; number of vehicles in the household; garaging ZIP code; number of drivers in the household; age and occupation of driver and so on. Actual odometer reading data from over 80 million vehicles was used in developing the statistical models. For every vehicle insured, “expected mileage” is compared to “reported mileage” to detect any patterns of systematic error.

Direct Measures: The second method we use to estimate rating error is direct measurement. For over a million vehicles in the sample we had data for multiple odometer readings to evaluate actual annual mileage. In addition, for multiple carriers, we interviewed over one million insureds concerning their vehicle usage patterns and annual mileage. Results of the odometer and interview data, in turn, were used to validate and refine the statistical models.

Statistical and direct measures were combined for each carrier in the sample and contrasted with rated values. These were then consolidated for this industry report.

⁶ The sample was limited to audits where Quality Planning retained contractual rights to aggregate data for industry analysis.