



## ■ Business Impact

“SAS has speed, sophistication, power and a friendly user interface.”

**Ned Wilson**  
Vice President, Treasury and Planning,  
FCCI Insurance Group

## ■ Challenges

- **Increased competition.** The growth of the Internet and price comparison Web sites makes it easier for customers to find the cheapest price.
- **Customer retention.** Competition is forcing insurers to adjust rates more frequently in order to retain existing customers and attract new business.
- **Rate changes.** It's practically impossible to predict the impact of a proposed rating change on the existing book of business.
- **Insufficient data.** It's difficult to consolidate data from multiple legacy systems across siloed business units (e.g., claims and underwriting) to accurately price products.
- **Risk classification.** Insurers cannot accurately forecast the cost or exposure of new risks – e.g., how much should a new vehicle be rated?
- **Catastrophe planning.** Infrequent but catastrophic events like hurricanes can have a dramatic impact on premium rates and product profitability.



## How can we price our insurance products more accurately?

### YOUR GOAL: Ensure success through more effective pricing

Insurance is rapidly becoming more of a commodity, with customers often choosing their insurer purely on the basis of price. As a result, accurate ratemaking has become more important than ever. In fact, a Towers Perrin survey found that 96 percent of insurers consider sophisticated rating and pricing to be either essential or very important.

Multiple factors go into determining premium rates, and as competition increases, insurers are introducing new, innovative rate structures. The critical question in ratemaking is, “What risk factors or variables are important for predicting the likelihood, frequency and severity of a loss?” Although there are many obvious risk factors that affect rates, subtle and nonintuitive relationships can exist among variables that are difficult, if not impossible, to identify without applying more sophisticated analyses.

In addition, insurers must identify the risks they don't wish to underwrite as well as answer such questions as: “Are 30-year-old drivers really less expensive to insure than 16-year-old drivers?” and “What is the relationship between claims severity and a driver's educational background?” Traditional univariate analysis methods are outdated, and insurers have turned to multivariate statistical techniques, such as generalized linear modeling, to understand the relationships between multiple risk variables. Finally, insurers need to consider marketing costs, conversion rates and customer buying behavior in accurately pricing insurance products.

### OUR APPROACH

The key to gaining an edge in today's competitive market is the ability to quickly and efficiently explore, understand and act on the data in order to improve pricing competitiveness. SAS approaches the problem by delivering software and services to help you:

- **Enhance information credibility** by integrating disparate data sources – including third-party sources – regardless of format and applying embedded data quality techniques to ensure greater accuracy.
- **Increase rating granularity** by using multivariate statistical techniques – e.g., neural networks, decision trees, cluster analysis and generalized linear modeling – for calculating risk costs.
- **Quickly implement new rate changes** by reducing the time it takes to gather data, conduct analyses and create new pricing structures to gain competitive advantage.
- **Create geographical exposure reports** by augmenting existing data with socio-geographic data to assess and monitor exposure by geographic region.

SAS delivers a comprehensive solution to enable the creation of accurate predictive models of claims, retention and other customer behavior for precise product pricing.

## THE SAS® DIFFERENCE: More granular rate structures, greater pricing accuracy

Only SAS provides proven software, services and insurance best practices backed by superior analytics – the driving force behind the dramatic improvement in pricing models that has reshaped the insurance industry over the last 10 years. No other vendor provides a comprehensive framework of capabilities – from data management to advanced statistical analytics – to help insurers accurately price their products and remain competitive in the aggressive insurance industry. With SAS you get:

- **Superior data integration capabilities** that let you extract, manipulate and cleanse large volumes of data from multiple legacy systems for more accurate pricing.
- **The most powerful predictive analytics available**, combining actuarial techniques and marketing analytics to help you extract maximum understanding from your data.
- **An integrated environment for tracking and monitoring model performance**, so your model efficiency changes as the insurance business changes.

Recognized as the industry leader in analytics and with more than 30 years of experience in insurance, SAS delivers a proven solution that gives insurers the ability to create profitable, more accurate rates in less time – ultimately giving them a competitive advantage.

### CASE STUDY: FCCI Insurance Group

#### ■ Situation

The company wanted to overcome individual biases in underwriting decisions and find a way to learn from underwriters' collective experience. An initial attempt at doing this by contracting out the analysis produced unsatisfying results. Because the company's actuarial team was already using SAS for reserving, FCCI decided to use SAS to take a data-driven approach to selecting and pricing accounts.

#### ■ Solution

SAS delivered a solution designed to replace intuition and enhance general industry guidance by looking at existing data to create some pricing rules based on analysis.

#### ■ Results

FCCI anticipates a 1 to 1.5 percentage point improvement in its combined ratio from being able to choose which businesses and customers to insure, and from pricing products appropriately.

#### ■ What if you could ...

##### Ensure data integrity

What if your data was properly cleansed, provisioned and managed as part of the data integration process so you could ensure more granular pricing and greater pricing accuracy?

##### Achieve price optimization

What if you could do real-time pricing based on risk attributes, competitors' rates, key demographics and customer demand elasticity models?

##### Perform renewal impact analysis

What if you could analyze the effect of a proposed rating change on your existing book of business?

##### Conduct catastrophe evaluation

What if you could evaluate your loss exposure by performing catastrophe modeling on low-frequency, high-severity events?

#### ■ You can. SAS gives you THE POWER TO KNOW®

### SAS FACTS

- More than 1,000 insurance companies worldwide are SAS customers.
- SAS has more than three decades of experience working with insurance companies across the globe.
- SAS solutions are used at more than 50,000 sites in more than 125 countries – including 93 of the top 100 companies on the 2011 Fortune Global 500®.

Learn more about SAS software and services for insurance at:  
[www.sas.com/industry/insurance](http://www.sas.com/industry/insurance)



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