

Underwriting Is Dead— Long Live Pricing

BY RICHARD W. DORMAN

In the beginning, there were underwriters—and it was good. Wise, old, well-dressed men sat at their high desks in a large room, saying yea or nay to the many risks brought before them for judgment. Their signatures indicated approval of a “good risk.”

How did these early underwriters make the decisions that affected the fortunes of business, property and people? Through a combination of knowledge, experience, gut feeling, old-boy relationships and help from agents and clients, they created an industry that, in many ways, is little changed to this day.

And how did these underwriters know if they were right? They counted up the money at the end of the year, and if there was more than they started with, the decisions were right. If there was less, they had made some bad choices. While these first underwriters probably had been able to im-

prove their ability to evaluate the specific types of risks they covered, they possibly learned only a little about how to make better choices next year. They frequently learned what had occurred to create losses but rarely why.

The frightening thing in the insurance industry today is that for many companies, little has changed since Lloyd's first opened for business. Underwriters still make yes or no judgments on risks, based on limited information with little feedback on their decisions. With the computers and data now available to us, there is no valid reason to avoid making decisions that are far more advanced than simple acceptance or rejection.

Yet many property/casualty companies today still have a single price for a risk classification. These companies simply decide whether a risk is eligible for their price—if it is, the risk is insured; if it is not, it is declined. Black-and-white decisions that result in large pools of risks accepted at a single price not only cause companies to lose money, but they also avoid maximizing profit opportunities.

The time has come to “shoot the

underwriters” or, at least, to teach them how to price. Unless the risk has an extremely low frequency (less than 0.1%) and a very high severity (more than \$1 million), the concept of pricing can be used by every property/casualty insurance company in the world. Whether the insurance covers automobiles, hole-in-one contests, mobile homes, workers' compensation or professional malpractice, pricing can be used to properly evaluate every risk.

The decision is no longer yes or no but only at what price. As long as the insurer receives an adequate price and provides the necessary service, it can insure anything and still make a profit. The immediate reaction of many people to pricing is that some risks will be too costly to sell. The corollary, however, is that other risks will be priced lower than what the rest of the market is charging. Is this good or bad?

If the right price for a risk (that is, the amount needed to cover the exposure and earn the standard profit) is too high for the marketplace, why should an insurer care? The alternative is to charge the same price

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other carriers are charging and lose money every time. On the other hand, if another class of risk is priced lower than the market, the insurer likely will get a great deal of business in that class. While the margin of profit may be smaller on each of these risks, the insurer will write many more of them, while avoiding unprofitable risks. Thus it will make a larger profit—or, at least, a profit it didn't have before.

All insurance companies take on groups of risks—some result in losses, and others do not. The goal is to identify those risks that do not result in losses or, at least, those which have them at a lower frequency and cost. By properly identifying these risks, an insurer can turn a current losing situation into a profitable one by splitting the risk group into two or more parts.

DIVIDE AND CONQUER

This concept is called market segmentation: in other words, divide and conquer. The technique has been practiced in the area of homeowners coverage for years. Underwriters look at a number of aspects, including construction, age, location, condition and equipment to make a decision. Consider the following example of the market segmentation technique at work with a hypothetical insurer offering homeowners coverage.

In our example, if all construction risks were accepted at a single price, say \$100, underwriters would accept more masonry than wooden construction risks because wood burns more easily. But if two rates were charged, for example, \$90 for masonry and \$110 for wood, and if there were an equal number of risks in both categories, the total amount of premium would be unchanged.

If our insurer, however, priced masonry construction at \$90 and wooden construction at \$110 and if the rest of the market priced all construction at \$100, all masonry risks would be placed with the hypothetical insurer, and the rest of the industry would get the wooden construction risks. If the hypothetical insurer's rates are correct, it will make a profit, and the rest of the industry will lose money since it is now writing only wood and needs \$110 per risk. An extra opportunity for the insurer would arise if the real rate needed for masonry were only \$80, but that would be "leaving money on the table." Now the insurer is writing all

the masonry risks at \$90 and making a big profit.

In this example, the insurer using the market segmentation approach identified specific segments in an area that was common rated and determined the proper price for each segment of risk. By charging the correct price, this company was indifferent as

surprising even to the actuaries. The best way to identify the best segments is to look at everything. Set up a data system that analyzes all possible criteria of a risk. There almost always will be some risk characteristics that are good predictors of loss that are not in use today.

I call this concept the "throw it

Companies can become the dominant force in the industry simply by detecting one variable in a coverage that none of the competition understands.

to which class of risk it wrote (if it wrote only wooden houses, it still would have earned a profit), and it was able to become the market leader of a profitable segment. By writing more of the most profitable segment, it caused the rest of the industry to write more of the unprofitable business. If the rest of the industry did not understand what was happening, it might have reacted by raising all construction rates to \$110—causing the company using market segmentation to be more competitive, even on wooden frames.

This is only a simple example, but one that has already taken place in the industry. The clear opportunities are in areas that do not seem so obvious. Perhaps it has never been done, or the segments cannot be broken. But these excuses are the kiss of death for the future of the industry.

Computers and data are available to segment and price nearly every kind of risk. It just takes a little imagination and willingness. It does not even require a company to have its own data.

Often, competitive and industry data are available, sometimes even from sources outside the insurance industry. For example, the Highway Loss Data Institute findings on crash and injury rates for various types of automobiles have led a number of companies to use a completely new series of vehicle symbols, even for liability coverages.

Sometimes the market segments are obvious, and other times they are

against the wall theory of data analysis." This means that the computer program should record every possible statistic that is obtained on the application, compare the statistics (throw them against the wall) and identify those that are important (the ones that stick to the wall). This should be done even when the elements appear irrelevant. Zip code, age of insured, and years experience are obviously important, but some hidden gems may be less obvious. Their reliance depends on the type of risk and its coverage.

CALIBER OF THE GOLFERS

For example, for a hole-in-one golf course coverage, the length of the hole and the caliber of the golfers are important, but the quality of the course, the age of the golfers and even the time of year (early or late in the season) can make a difference. For automobile insurance, the color of the vehicle (red cars are more likely to be purchased by younger, more aggressive individuals) and the number of doors on the car (a four-door vehicle is more family oriented and less likely to be driven fast or recklessly) are factors for the underwriter to consider.

Consider the advantage your company would have if it identified one factor that made a difference for every coverage. Some companies become the dominant force in the industry simply by detecting one variable in a coverage that none of the competition understands. For example, in motorcycle insurance, the first

company to rate the insurance by the age of the driver—an innovation at the time—became the dominant writer of this business and has maintained that position ever since.

The segmentation technique requires that data be tracked for enough time to get a sufficient number of losses. The data then can be run by looking at loss ratio, loss frequency and loss severity for each of the variables. In other words, for the golf course, the loss ratio for contests could be broken down by the course rating, the average age of the golfers and the month in which the contest was held. For auto insurance, the color and the number of doors on the application could be tracked for loss experience. If one or more of these factors showed a significant difference in loss behavior, they could be considered important variables meriting additional scrutiny.

This is not a complex mathematical exercise. Finding an important variable when writing a coverage simply requires a tracking system. Since each variable initially is examined individually, it requires only a single variate analysis, which most computer programmers can develop. In fact, this methodology does not even require a major investment in computer hardware or software. In many cases, the analysis can be performed on a personal computer and even by hand calculation. Don't forget the walk before you run concept. Work on one or two ideas in a simple way before making the major time and dollar investment for a new system.

One of the best ways to identify potential items that could determine the best way to write a coverage is to work with underwriters, listing the various factors they long have used. Some of these factors will be obvious, while others may be more subtle and require some careful thought and review. Underwriters need to look for factors that may have caused losses and those they wished they had used.

The goal is to determine the appropriate price for each risk. Once the right price is found, the marketing department can sell comfortably anywhere the market will buy without fear

that underwriters will reject the risk. In this approach, the underwriting is done up front, that is, during pricing rather than after the risk has been submitted. The objective is to create a system in which acceptable risks and their prices are clearly understood.

PRESENT THE DATA

Later, you may be able to look at the segments you have created and break them down even further, creating more pricing breaks. One limitation, however, is the company's ability to present the data to its producers. This is important because you do not want to have a program that is too complicated for the agent to use or for the insured to understand. Under this approach, rates must be provided in advance to the agents or customers so that they can determine if the rates are appropriate. Agents will not want a large rate chart with thousands of alternatives because it will be too complicated to use.

The advent of computers for rating and agency management makes this complexity easier to deal with.

this approach. Most underwriting systems already have rating criteria. Sometimes the problem is that the rating criteria are known only to underwriters. The underwriters should document, step by step, the things they look for when examining a risk. Each item should be used as a data point for the first analysis. In addition, everything else should be examined for relevance.

To implement the market segmentation approach, the insurer needs only to review enough past applications to obtain information about the number of losses. These may or may not be on the computer. If they are not, they can be added easily using a PC spreadsheet program. The initial objective is to identify the relevant statistics for further examination. Once the few important elements are identified, more detailed analysis can begin to determine the correct prices.

Because insurance is a commodity, many purchase decisions will be based on price, regardless of how much advertising, promotion, sales messages and service advantages are

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Certain products can be preprogrammed on rating disks or even transmitted on-line for companies that have direct links to producers. If these can be provided in such a way that the user can answer questions about the various rating characteristics, then the computer can determine the rate, and the agent does not need to know how complicated the rating program is.

In this way, once you get sophisticated at this approach, you can have hundreds of different rates within a program, if it is statistically justified. It is not that difficult to implement

thrown on the table. Computers have made marketing insurance easier. The insurers that recognize this are starting to move toward the front of the pack.

When we treat insurance as a commodity, pricing the product becomes the most critical element. If all coverage is offered at the same price, the choice of an insurer is made at random. The advantage belongs to the company that can differentiate its prices in such a way as to move to the areas that are profitable. Competitive pricing is proactive; underwriting is merely reactive. □