

Scientific Underwriting, why it is essential and what challenges face its implementation

Marcus Carter

With the advent and growth of direct insurance companies competing for their share of the South African market, traditional insurers have been forced to respond even more vigorously by providing better service at lower prices. One way of improving service and providing quick, efficient service is through the use at the point of sale and at renewal of an automatic quoting engine utilizing scientific underwriting. Scientific underwriting involves determining a “good” risk from a “bad” risk based on various aspects of the combined risk. Common examples on a motor risk, for example, could include but are certainly not limited to:-

- the age and experience of the driver;
- the use of the vehicle;
- the area where the car is generally kept overnight;
- the vehicle make and model; and
- the age of the vehicle

These determining factors will then each be assigned a relative weighting based on an actuarial study of the significance of that factor. The weighting of each factor constitutes a probability. The product of all these probabilities will constitute the likelihood of occurrence of the peril concerned and will arithmetically determine the base premium necessary. Add to this a provision for commission, insurer overhead and the cost of the capital which the insurer must maintain to carry the risks in question and the sum will be the premium to be charged.

The advantages to a broker of such systems are instant quotes with guaranteed acceptance by the underwriter (assuming all underwriting criteria are adhered to) and a reduction in the broker's accountability for the loss ratio as the insurer is responsible for setting the rate. Advantages for the insurer include consistent pricing across multiple books thus eliminating internal competition and providing the ability to rapidly adjust premium requirements as market conditions change across the insurer's whole book. Also, specific risk classes can be targeted by introducing discounts for desirable risk traits. In addition, successful implementation of automatic underwriting will erode some of the advantages experienced by direct insurers which results from their complete control of data from point of contact with the client onwards. However, direct insurers nevertheless still retain the advantage of only operating on one system whereas general insurers need to interface with numerous brokers and administrators all utilizing different systems and, therefore, requiring multiple interfaces.

There are a few challenges to be faced when using scientific underwriting systems caused mainly by risks which combine several adverse penalised factors and lead to high or low premiums that are out of line with the market. This then forces the broker to seek out a competitive premium from a source which does not yet apply scientific methods to determine premium. While scientific selection can be useful in preventing brokers from discounting premiums to sub-economic levels for the underwriter just to win the business, it can result in the loss of business if one of several risks on a policy is deemed so undesirable as to drive up the overall premium of the policy. In such a case discounts

to the system driven rate may be considered should it be worthwhile when considering the policy as a whole. This is why the human factor remains important to insurers not wishing to lose business unnecessarily. However, cross-subsidisation within a policy should be used with caution failing which the resulting undermining of the required premium will ultimately lead to poor results and underwriting losses. It should be mentioned that cross-subsidisation within a book is undesirable as it will inevitably drive up the premium for “good” risks leaving them vulnerable to correctly priced competitive offers which would, ultimately, lead to the weighting of the book towards perceived “bad” risks.

With the current loss ratios being experienced by the market in general, especially in the motor sections, it is inevitable that premium increases will be required. Brokers and administrators that are cancelled due to the poor performance of their book should be able to redirect such books to a carrier which applies scientific underwriting methods. This will ensure that rather than across the board increases, only poorly rated business will be affected. Generally, a scientific rerating will result in the loss of a portion of the book as those insured clients who feel the increases are unreasonable seek alternative markets. However, while scientific rerates are concerning for brokers given the risk of losing a portion of their income, if properly handled, the resulting increase in premium often leads to the maintenance of premium levels with a reduction in exposure. Importantly, this result makes the book more sustainable and therefore more valuable. On a poor performing book, assuming all other reasonable corrective actions (such as eliminating multiclaimants) have been taken but to no avail, it is inevitable that the book will require a rerate as carriers cannot tolerate indefinitely unfavorable loss ratios.

With the above in mind, it must be said that it would be wise to scientifically assess the reasonableness of rates before the performance of a sub-standard book of business becomes dire so as to preserve a profitable future for both the broker and the underwriter.

While the implementation of scientific underwriting has so far been met with mixed enthusiasm, the efficacy of the rating tools used will only improve as more in depth analyses of books occurs and the rating tools are continually refined providing the underwriter with a powerful and adaptive tool to retain its competitive edge.

A singularly important issue, however, is the practicality with which scientific underwriting can be achieved. It is therefore crucial for the broker or administrator to identify a carrier which is capable of achieving scientific underwriting in policy administration systems which are operated independently of the carrier's own system.