



The Theory behind Insurance Credit Scores & The Insurance Sector Trends and Focus Areas



Background

In underwriting, risk and history remains the key factor to setting rates, but credit scores play an important role as well. "Several studies have shown that credit information can indicate how a person manages financial risk. People who manage their finances responsibly also tend to have fewer accidents, which translates into lower costs for insurers," Ewing said.

"Those people, in turn, can receive lower rates on insurance premiums because they are less likely to incur costs for insurers."





Tycho Brahe Days is a name for 32 days of the year that were previously considered unfortunate for the one who was born, married, moved, entered into and agreed, etc. on such a day. Such days already existed in the calendar of the Roman Republic (die atri 'black days')



Insurance scoring is research-based. The industry has used credit information in making rating decisions. Several studies have affirmed the connection between credit history and the likelihood of a filing an insurance claim."





The future: Macro Trends of Insurance



Migration to digital is expected to improve market positions and drive the growth of new acquisition channels.

Solutions based on a correlation between external data such as geo-marketing, payment behavior, fraud or web data and insurance claims, could greatly enhance the diversification of distribution channels, acquisition, as well as efficient and appropriate riskbased pricing schemes.



Greater focus on customer management is vital.

Bureau data, alternative data and scores, along with machine learning and artificial intelligence (AI) are key elements in insurers' strategies for their transition to digital acquisition and customer management channels.



Fraud detection, better service to customers and decision-making for insurers.

It's also a timely opportunity to update and fine-tune acquisition and customer management strategies. Modification of application, customer management models and strategies, are among the first critical steps insurers must take to manage any emerging impacts on their portfolios.





Business Challenges for Insurance Companies

Situation

Ever-increasing requirements for compliance and standards

It is increasingly important to have effective risk management

Insufficient customer insight despite large amounts of customer data

20% of customers deliver 80% of the bottom line - but which ones?

Focus on improving pricing to match claims ratio

Innovation in the industry is more new products rather than innovation of customer processes

Cost-intensive distribution channels that self-identify and qualify items

Consequence

Compliance draws on massive internal resources for reporting

Lack of direct dialogue with customers and market pressure

Increased risk of customer departure and oversights of potential customers

Sales channels are not optimally developed and utilized

Activities that reduce costs are prioritized

Selling unprofitable products results in losses and wasted resources

Increased damage and cost percentage

Areas of Focus

A very structured approach to compliance and central coordination

Create customer insight that enables intelligent pricing and individual assessment of terms and conditions

A large need for portfolio monitoring and focus on customer satisfaction

Automation and execution of targeted cross-selling campaigns that ensure the utilization of customer potential

Retention programs with identification of customers that are at risk of churning

Cost breakdown on all customer groups, channels, products and activities in relation to profitability





Synopsis

Actual use case – Company name Friendly Insurance

Background

Over the last few years, **Friendly Insurance** has experienced an increase in both the frequency of insurance claims, as well as an increase in payments:

Resulting in:

- ☐ Significant pressure on the organization
- Loss on customers is increasing and leads to a deteriorating bottom line
- An increased demand for data also adds considerable pressure on the underwriting departments
- Raises time-to-yes and need for manual intervention.

The segmentation departments are constantly working to refine their assessments and selection methods.

Action Plan

Based on the increase in claim frequency and average claim cost **Friendly Insurance** wishes to conduct an in-depth analysis of the coherence between claim frequency and average claim cost and a customer's credit score based on the point of application. The analysis is to answer two main questions:

- Can a credit score be used to foresee if customers are more likely to file an insurance claim?
- Can a credit score be used to further automate the underwriting process as the customer propensity to financial default can be derived implying if they are able to pay the premium and/or other costs?







Defining the coherence

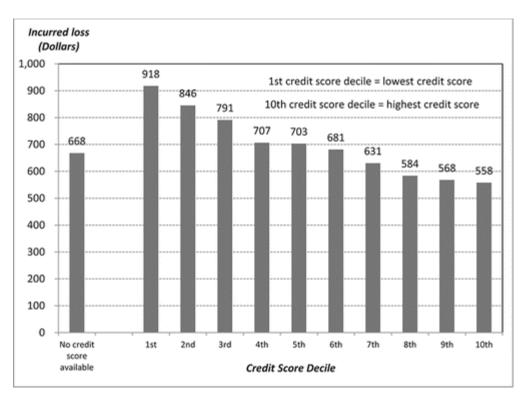
Indications of financial behavior (such as credit-scoring variables) have been used for decades as an aid in classification and underwriting in commercial lines and life insurance. Although not used until recently in personal lines, there have been indications for more than 65 years that financial history may be related to driving accidents.

Tillman and Hobbs (1949) found that drivers with bad credit histories have repeated crashes at a rate six times higher than those with good credit history.

Credit scores may provide information concerning the financial stability and responsibility of the insured that can impact both credit-related behavior and driving behavior, expanding on the observation by Tillman and Hobbs (1949).

The rationales for the relationship likely lie in the:

- Fundamentals of human biochemistry
- Psychology
- Sociology
- Behavioral science



Empirical Evidence on the Use of Credit Scoring for Predicting Insurance Losses with Psycho-social and Biochemical Explanations
Linda L. Golden, Patrick L. Brockett, Jing Ai & Bruce Kellison





Summary of Coherence

In summary, this research into the relationship between credit scores and insurance losses finds the following:

- (1) There is a strong relationship between credit scores and insured losses.
- (2) Although there is overlap between credit scores and traditional rating variables, credit scoring contains information that goes beyond and is not duplicative of traditional rating variables.
- (3) Credit scoring is statistically and substantively significant to practice, as it is linked to both filing a claim or not and to the size of the claim were it to be filed. Residual information is captured by the credit score that is statistically and substantively significant beyond the traditional underwriting variables.





