Background on: Credit scoring

Insurance Industry

April 8, 2019

IN THIS ARTICLE

SHARE THIS

DOWNLOAD TO PDF

Overview

Insurance scores (also called "credit-based insurance scores") are confidential numerical ratings based in whole or in part on a consumer's credit information. Many insurers use these scores in conjunction with other factors to help underwrite and price policies, typically for personal lines such as homeowners and personal automobile insurance.

Insurance companies often use insurance scores because actuarial studies suggest that how a person manages his or her financial affairs, which is what these scores indicate, is a good predictor of insurance claims. Statistically, people with a poor insurance score are more likely to file a claim. This allows carriers to better match insurance premiums with the risk that an individual insured might pose, helping prevent better risks from subsidizing bad risks.

It is important to note that **insurance scores are not the same as credit scores**. Credit scores predict credit delinquency whereas insurance scores predict insurance losses. Though both are based on a person's credit report, an insurance score does not measure how much money a consumer makes; rather it serves to measure how well an individual *manages* their money. Emphasis is placed on those items associated with credit management patterns proven to correlate most closely with insurance risk, such as outstanding debt, length of credit history, late payments, collections and bankruptcies, and new applications for credit.

Information such as income, ethnic group, age, gender, disability, religion, address, marital status and nationality are ***not*** considered when calculating an insurance score.

Historical background

Insurers need to be able to assess the risk of loss—the possibility that a driver or a homeowner will have an accident and file a claim—in order to decide whether to insure that individual and what rate to set for the coverage provided. In some insurance companies, underwriters have long used credit records in cases where additional information was needed. Where such information was insufficient, underwriters used personal judgement, and applicants for insurance might have been placed in the wrong risk classification. That means that, for instance, some good drivers would have paid more than they should have for coverage and some bad drivers would have paid less than they should have. Insurance companies probably still collected enough premiums between the two groups to pay claims and expenses, but the good drivers might have been subsidizing the bad.

Insurance scores were developed in the 1990s, in part to help address the weaknesses inherent in an underwriter's personal judgment. Since the development of these scoring models, the use of credit-related information in underwriting and rating for many insurers has become routine. According to Fair Isaac (FICO), 95 percent of all U.S. personal lines insurers use insurance scores to help in underwriting and rating.

However, **insurance scores are not the sole factor used to underwrite and price insurance**. In auto insurance, other factors are combined with insurance scores, including geographical area, previous crashes, and age and gender (in some states). In homeowners insurance, other factors include the home's age and construction, location and proximity to water supplies for firefighting, and proximity to flood risks.

How insurance scores work

By law in every state, insurers are prohibited from setting rates that unfairly discriminate against any individual. But the underwriting and rating processes are geared specifically to differentiate good risks from bad risks. One of the key competitive aspects of the personal lines insurance business is the ability to segment risks and price policies accurately according to the likely cost of claims generated by those policies.

Insurance scores help insurers accomplish these objectives, though different companies use insurance scores to different extents and in different ways. Factors that might be included in an insurance score include outstanding debt, length of credit history, late payments, collections and bankruptcies, new applications for credit, number of installment accounts, types of credit used, and unused credit.

Insurance scores developed by FICO involve a set of credit characteristics, each with an assigned weight. The lower the score, the greater the risk.

Insurance scores correlate with claims experience. The reason for such widespread adoption of insurance scores for underwriting and rating is that most studies have found a strong relationship between insurance scores and losses.

For example, an actuarial study published in 1996 by Tillinghast, an actuarial consultant firm, showed a “highly statistically significant” correlation between insurance scores and loss ratio—the cost of claims filed relative to the premium dollars collected. In other words, people who have low insurance scores, as a group, account for a high proportion of the dollars paid out in claims. A subsequent study published in 2003 in the *Casualty Actuarial Society Forum* came to similar conclusions: “From a statistical and actuarial point of view, it seems to us that the matter is settled: credit *does* bear a real relationship to insurance losses.”

Insurance regulators have also found similar results. A 2004 study commissioned by the Texas Department of Insurance found a strong relationship between credit scores and claims experience for both personal auto and homeowners insurance. The study also found that the use of insurance scores significantly improves pricing accuracy in predicting risk when combined with other rating variables such geographical area and age of driver.

A 2005 supplemental report found the same relationship between insurance scores and claim experience: “For both personal auto liability and homeowners, credit score was related to claim experience even after considering other commonly used rating variables. This means that credit score provides insurers with additional predictive information distinct from other rating variables.”

Furthermore, in July 2007 the U.S. Federal Trade Commission (FTC) released a report to Congress that examined how insurance scores impacted the “availability and affordability” of auto insurance. The study found, in part, that insurance scores correlate with both the number of filed claims and the total cost of the filed claims, leading the FTC to conclude that insurance scores allow for more accurate underwriting and risk pricing.

The reason for the predictive power of insurance scores is up for debate. But why are insurance scores so predictive? One possible answer is behavioral.

People who manage their finances well tend to also manage other important aspects of their lives responsibly, such as driving a car. People who manage money carefully may be more likely to have their car serviced at appropriate times and may also more effectively manage the most important financial asset most Americans own—their house—making routine repairs before they become major insurance losses.

How insurance scores impact customers

Many customers see lower premiums when carriers use insurance scores. Just as insurance scores help insurance companies assess and price risks, so too can these scores help insurance customers – particularly if they are considered good risks. Depending on the company and state, roughly 50 percent of policyholders can pay lower premiums because of good credit, insurers say.

For example, a 2017 report from the Arkansas insurance department shows the impact of insurance scoring on calculations of the final premium in 2016 for some 3.4 million personal lines policies. In 54.5 percent of those policies, the use of credit information resulted in a decrease in the final premium. In 19.8 percent of cases, it resulted in an increase. Credit scoring was a neutral factor—meaning it did not affect the outcome—in the remaining 25.7 percent of policies. Policies for which credit information decreased the premium outnumbered policies for which it increased the premium by 2.76 to 1.

When analyzed by type of insurance policy, the data showed that the use of credit scoring lowered premiums for homeowners policies (56.6 percent) and auto insurance policies (57.4 percent) roughly the same amount. More auto policies experienced premium increases (23.4 percent) than did homeowners policies (16.5 percent).

Does the use of insurance scores unfairly discriminate? Even though carriers do not use income or race/ethnicity when calculating insurance scores, some have suggested that the use of insurance scores might unfairly discriminate against certain demographic or economically-disadvantaged groups.

Most analyses dispute these claims.

For example, the 2007 FTC report noted that African Americans and Hispanics are "substantially overrepresented" among lower scores. As a result, the report found that using insurance scores without controlling for race or ethnicity would increase the average predicted risk for African Americans and Hispanics by 10 percent and 4.2 percent, respectively. But nonetheless, after controlling for race, ethnicity, and income, and after examining other variables, the FTC concluded that **credit scores cannot easily be used as a proxy for race and ethnic origin**. In other words, credit scoring predicted risk for members of minority groups in much the same way that it predicted risk for members of nonminority groups.

An earlier, 2004 Missouri department of insurance study *did* find evidence that low-income households and minorities are adversely affected by insurance scoring. However, it has been argued that the department's findings were based on flawed methodologies. For example, the study aggregates ZIP code credit score data for everyone in a ZIP code area, whether they own cars or homes and therefore purchase auto or homeowners insurance or not.

State and federal responses to insurance scores

Federal law: The 2003 Fair and Accurate Credit Transactions Act (FACTA) permanently reauthorized the Fair Credit Reporting Act (FCRA). Under the FCRA, if an insurance score is a deciding factor in rejecting an insurance application or results in another "adverse decision," the insurer must notify the individual that credit report information was used and may have to make a copy of the credit report available to the consumer free of charge. Of note, many states had already required insurers to notify their policyholders if credit histories were used or played a role in adverse decisions, such as raising rates or placing a policyholder in a higher rating tier.

State law: Most states generally permit using insurance scoring as a factor for determining premiums in personal lines. However, some states restrict their use. For example, in California the use of credit is not permitted under Proposition 103 for rating auto insurance policies unless specifically allowed by the regulator. In Hawaii, auto insurers cannot apply a standard or rate based on "credit bureau rating." In Maryland, homeowners insurers may not use credit history in any underwriting or rating decision, and auto insurers may not use it any underwriting or renewal rating decisions. In Massachusetts, although not banned, regulators will not approve rate filings for auto or homeowners insurance that include the use of credit scoring.

States differ on how they regulate insurance scoring, including:

- **Restrictions on factors.** An insurance score uses information from an individual's credit history that has been shown to statistically correlate with claim costs. Restrictions on factors that may be used vary from state to state but may include:

    — Total available credit
    — Disputed items under review
    — Number of credit inquiries (credit card or loan applications)
    — Debt from financing payments to hospitals or for health reasons
    — Use of certain types of credit (personal loans, credit cards)

- **Limits on use.** Different states have proposed varying thresholds, but in general they allow insurers to accept or reject an application based on an insurance score.

- **Prohibitions on penalizing consumers with no credit histories.** While credit cards, mortgages and other debt instruments are widely used today, there are still segments of the population (some elderly people, certain religious sects and some low-income individuals, including students) that have no experience with credit. Regulations generally require insurers to consider an applicant with a so-called "thin" or "no-hit" file an average risk.

- **Sole use rules.** Insurance companies are usually barred from using insurance scores as the sole determining criterion in making underwriting or rating decisions.

- **Disclosure rules.** Insurers are required to inform consumers they are using credit information in the underwriting/ratemaking process. If that is a deciding factor in rejecting the application for insurance or another adverse decision, the insurer must notify the individual that credit report information was used and may have to make a copy of the credit report available to the consumer free of charge.

Many state laws regulating insurance scores are based on a model law developed by the National Conference of Insurance Legislators (NCOIL). Among other things, the model legislation requires insurers to disclose to consumers that a credit report may be used and to notify the policyholder in compliance with the federal Fair Credit Reporting Act when credit is the basis for an adverse action. The model law prohibits the use of credit information as the sole basis for refusal to insure, to non-renew or to cancel. It also bars the use of disputed information or information identified as medical collection accounts in the credit report. And it encourages insurers to take into account extraordinary life events, such as catastrophic illness or the death of a spouse.

Additional Resources

Are Income and Credit Scores Highly Correlated? The Board of Governors of the Federal Reserve System

The Use of Occupation and Education Factors in Automobile Insurance, The State of New Jersey

Back to top