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Credit-Based Insurance Scoring Studies

American Academy of Actuaries Risk Classification Subcommittee of the Property/Casualty Products, Pricing, and Market Committee, *Use of Credit History for Personal Lines of Insurance*, November 15, 2002

Reviews four previous studies of the predictiveness and use of credit-based insurance scores. Makes recommendations against a study of causality between credit history and risk of loss by the National Association of Insurance Commissioners (NAIC) because causality is "not a requirement for any element in a risk classification system." Notes that "drivers with past accidents and driving violations have been shown to have higher rates of accidents in the future, and therefore driving record is a useful and commonly accepted element of risk classification systems for automobile insurance. However, histories of past accidents and violations do not cause driver to have more accidents. The rating practice that does exist is based on the fact that, as a group, drivers who have been accident-prone in the past are likely to be accident-prone in the future."

Arkansas Insurance Department, *Use and Impact of Credit in Personal Lines Insurance Premiums Pursuant to Ark. Code Ann. § 23-67-415*, Published Annually 2005-2017

Annual survey of the impact of credit-based insurance scores on personal lines insurance premiums from 2005-2017. Consistently found approximately 45% of policyholders enjoyed a decrease in their premium versus 13% who incurred an increase. The remaining approximately 42% of policyholders were otherwise unaffected.

Brockett, Patrick and Linda Golden, *Biological and Psychobehavioral Correlates of Credit Scores and Automobile Insurance Losses: Toward an Explication of Why Credit Scoring Works*, Journal or Risk and Insurance, 2007, Vol. 74, No. 1, 23-63

Study examining why credit-based insurance scores are such accurate predictors of risk. Finds similarity between "psychological and behavioral attributes of risky automobile drivers" and "psychological and behavioral attributes of financial risk takers."

Colorado Division of Insurance, *Credit-Based Insurance Scoring Study Final Report*, January 7, 2010

Overview of controversy containing multiple misstatements of fact. Reviews state law requirements for use of credit information while acknowledging "actuarial standards of practice and Colorado statutes do not require an actuary to explain why a rating factor is predictive of future losses, only that its use does correlate with future loss." Recommends use of credit information continue, but with provisions for extraordinary life circumstances and/or prohibiting use at renewal.

Conning Financial Intelligence and Solutions, ***Insurance Scoring in Personal Automobile Insurance – Breaking the Silence*, 2001**

Describes use of credit information by insurance companies. Suggests insurers may explain to consumers that the use of credit scoring will likely improve their chance of receiving a better rate. Notes that using credit data to enhance risk classifications reduces the likelihood that consumer groups with low loss expectancy will subsidize consumer groups with higher loss expectancy, and the use of automated underwriting decisions based on objective data like insurance credit scores removes the potential for human bias and helps to ensure that prices are distributed equitably across risk classifications.

EPIC Actuaries, LLC, *The Relationship of Credit-Based Insurance Scores to Private Passenger Automobile Insurance Loss Propensity*, 2001

Using multivariate analysis techniques to adjust the data for interrelationships among risk factors, found that insurance scores are correlated with the propensity for loss. Found that while insurance scores overlap to some degree with other risk characteristics, after fully accounting for all interrelationships, insurance scores significantly increase the accuracy of the risk assessment process.

ECONorthwest, *The Use of Credit Information by Insurers*, October 2006

Study to evaluate the relationship between the use of credit information and insurance rates. It was conducted in response to a 2006 Oregon ballot initiative, “Measure 42,” that would have prohibited insurance companies from using credit information. Key findings include: better credit scores correlate with lower insurance risk; lower insurance risks allow insurers to offer lower rates to those consumers; and most consumers pay lower rates when insurers use credit information.

Fair, Isaac, *Predictiveness of Credit History for Insurance Loss Ratio Relativities*, October 1999

Study gives examples of five specific credit variables and how they are related to personal property and automobile insurance loss ratios. Shows the credit information further separates insurance policies by loss ratio above and beyond the separation that is provided by the other rating variables that are commonly used.

Federal Trade Commission, *Credit-Based Insurance Scores: Impacts on Consumers of Automobile Insurance*, July 2007

The Federal Trade Commission issued this study of the impact of credit-based insurance scoring on the pricing and availability of automobile insurance as required by the Fair and Accurate Credit Reporting Act of 2003. The FTC found that, “Credit-based insurance scores are effective predictors of risk under automobile policies. They are predictive of the number of claims consumers file and the total cost of those claims. The use of scores is therefore likely to make the price of insurance better match the risk of loss posed by the consumer. Thus, on average, higher-risk consumers will pay higher premiums and lower-risk consumers will pay lower premiums.”

With respect to disparate impact, the study concludes, “Credit-based insurance scores appear to have little effect as a ‘proxy’ for membership in racial and ethnic groups in decisions related to insurance.” Also, “Several other variables in the FTC’s

database…have a proportional proxy effect that is similar in magnitude to the small proxy effect associated with credit-based insurance scores."

Insurance Research Council, *Public Opinions on Credit Scoring and the Use of Credit-Based Insurance Scores*, November 7, 2022

Study based on the results of an online survey of more than 7,000 consumers showed U.S. drivers are generally knowledgeable about credit, credit histories, and credit scores. Survey results indicated nearly all respondents believed it was important to maintain a good credit history, and the majority believe it would be very or somewhat easy to improve their credit score. Consumers understand the link between credit history and future bill paying but are less confident about the link between credit history and future insurance claims. Most consumers agree with using credit-based insurance scores to rate insurance, especially for drivers with good credit who could benefit. Paying for auto insurance does not represent a financial burden for most U.S. households.

Morris, Darcy Steeg, Daniel Schwarcz and Joshua C. Teitelbaum, *Do Credit-Based Insurance Scores Proxy for Income in Predicting Auto Claim Risk?*, Georgetown University Law Center, 2015

Study analyzed a panel of households that purchased auto and home policies from a U.S. insurance company. It measured the median income in a household's census tract, an aggregate measure, and the insured value of the household's dwelling, a policyholder-level measure. Using these measures, it found that credit-based insurance scores do not act as proxy for income.

Powell, Lars, Risk-Based Pricing of Property and Liability Insurance, Journal of Insurance Regulation, Vol. 39, No. 4, 2020

Argues that excluding accurate rating variables from the insurance pricing process has negative consequences. "The accuracy of insurance prices decreases, creating cross-subsidies where lower-risk insureds pay higher premiums and higher-risk insureds pay lower premiums. In addition to being objectively unfair, cross-subsidies increase the overall cost of insurance and distort policyholder incentives to take appropriate precautions. The end result is higher prices, more property damage, more injuries and more fatalities."

Powell, Lawrence, Credit-Based Scoring in Insurance Markets, Independent Institute, October 2009

"Although some people are uncomfortable with the use of credit information in insurance rating, it actually benefits individuals and society. Its accuracy increases the fairness of the rating process by concentrating on variables that directly predict losses. Insurance scores also enable companies to determine suitable premiums for low-risk consumers, thus aiding companies in selecting appropriate premiums for higher-risk applicants whom they may have otherwise declined. Finally, the low cost of insurance scoring reduces the overall cost of providing insurance, savings that insurance companies pass on to customers in the form of lower premiums."

St. Ambrose University, *Use of Credit Scores by the Insurance Industry: Iowa Consumers' Perspective*, December 2009

Survey of Iowans' knowledge and attitudes regarding credit-based insurance scores conducted on behalf of Iowa Consumer Advocate Angel Robinson. Finds consumers' attitudes about insurance scoring do not comport with reality that insurance scoring is an effective predictor of risk. Recommends study of insurance at the high school level on both insurance and affects of credit scores in general.

Texas Department of Insurance, *Use of Credit Information by Insurers in Texas*, December 2004

Review of approximately 2 million policies from six leading insurer groups (1.2 million auto and 800,000 homeowners). Reaches the following conclusions: individual policyholder data shows a consistent pattern of differences in credit scores among the different racial/ethnic groups; there appears to be a strong relationship between credit scores and claims experience on an aggregate basis; and individual policyholder data shows a consistent pattern of differences in credit scores depending on an individual's age, with younger people having lower credit scores than older people.

Texas Department of Insurance, *Use of Credit Information by Insurers in Texas-The Multivariate Analysis*, January 2005

Supplement to December 2004 study includes following key findings: credit score was related to claim experience even after considering other commonly used rating variable (meaning credit "provides insurers with additional predictive information distinct from other rating variables"); for personal auto liability, credit score was related to the probability of filing a claim or claim frequency; for homeowners, credit score was related to the probability of filing a claim; and for both personal auto liability and homeowners, the difference in the frequency and severity of claims by credit score was substantial.

Cover letter written by Commissioner Jose Montemayor to this portion of the study includes the following statements:

"By the nature of risk-based pricing and underwriting, all factors used in insurance have a disproportionate impact to some extent…[a ban on all risk-related factors] would be a set-back to all Texans, of all races, especially those of moderate to lower income whose risk remains low."

"Credit scoring, if continued, is not unfairly discriminatory as defined in current law because credit scoring is not based on race, nor is it a precise indicator of one's race…Further, its use is justified actuarially and it adds value to the insurance transaction."

Vermont Department of Financial Regulation, A Study of Credit-Based Insurance Scoring for Motor Vehicle Insurance—Impact and Limitations, December 15, 2016

Reviews existing studies of credit-based insurance scoring to assess its efficacy as a predictor of risk and attempts to assess the potential impacts of limitations on the use of credit-based insurance scoring on insurance rates in Vermont. Concludes that if the use of credit-based insurance scores was prohibited, "approximately two-thirds of vehicles with premiums influenced by credit-based insurance scoring would see an increase in premium."

Virginia Bureau of Insurance, The Use of Insurers of an Insured's or Applicant's Credit Information in Connection with Underwriting Motor Vehicle Insurance Policies, 2016

Legislature-requested study reviews various aspects of the use of credit information. Given the low number of consumer complaints and inquiries related to the use of consumer credit information, the study finds that policyholders are not "unfairly burdened by insurers' use of consumer credit information or insurance credit scores." In reviewing various studies on the subject, concludes that "a fairly strong relationship exists between credit-based insurance scores and losses." Finds that it is less apparent from the studies whether the use of credit information in setting insurance rates discriminates against poorer or young people.