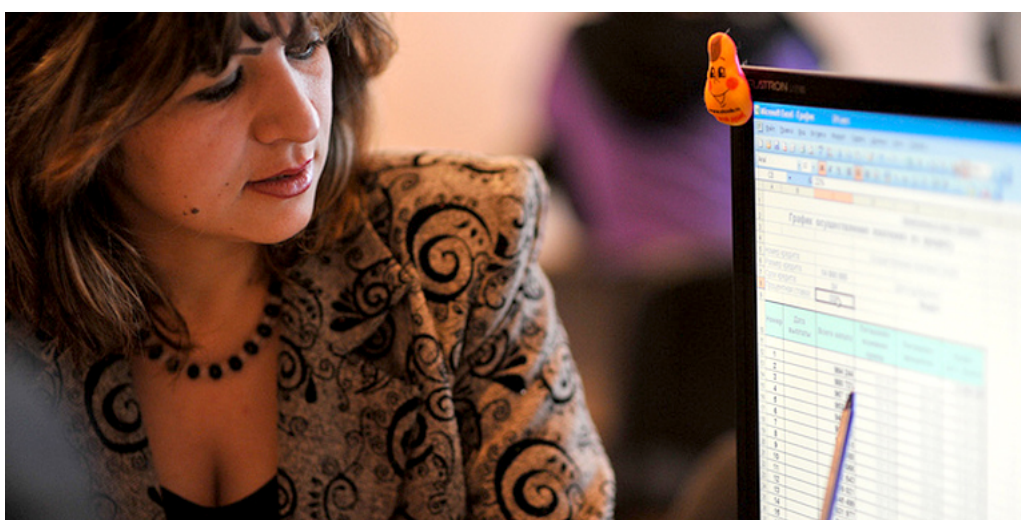INSIGHT

The Relationship between Personal Insurance Information and Credit Worthiness and Its Implications

Finding solutions in the relationship between credit and personal insurance information. Photo credit: ADB.
Personal credit information could be an important determining factor in insurance underwriting and the calculation of premiums.

Introduction

Personal credit information may be used as one of the determining factors for underwriting insurance contracts and calculating premiums; and conversely, information on individuals' history of insurance holding may be reflected in credit evaluation. To do so, more reliable research needs to be conducted on the interrelationship between these two information, backed by sufficient testing and expert opinions.

Analysis

Drawing from studies that demonstrated a close relationship between individuals' credit information and insurance information, discussions have been made on the possibility of utilizing the former for insurance underwriting and the latter for credit evaluation as is the case in the US where credit information has been broadly used in insurance underwriting.

In many countries, research has been undertaken on whether individuals' credit information could be one of the determining factors in insurance underwriting and calculation of premiums. Many of them confirmed that individuals' credit status has a significant correlation with the probability of insurance claims and insurers' loss rates. A report by the US FTC (Federal Trade Commission)[1] demonstrated a statistically significant relationship between credit-based insurance score[2] and automobile insurance claims. Individuals with higher credit-based insurance score had less cases of making insurance claims and received less amount of insurance benefits. The report also showed that credit-based insurance score enhances accuracy of insurance underwriting, and concluded that it can be used as predictors of risks associated with incident rates and loss rates of automobile insurance. Similarly, Texas Department of Insurance (2005)[3] conducted an empirical analysis of automobile insurance and homeowners' insurance to show that the use of personal credit information can contribute to improving accuracy of underwriting and calculation of insurance rates. Arkansas Insurance Department (2014)[4] analyzed 3.2 million insurance contracts, and showed that when credit information is reflected in an underwriting process, insurance premium fell in 45.2% of all contracts, and rose in 14.4%, that is, the number of consumers who benefited from reduced premium was 3.13 times higher than consumers who had to pay more premium.
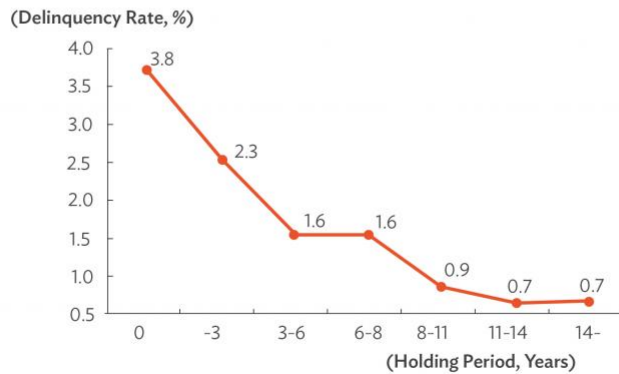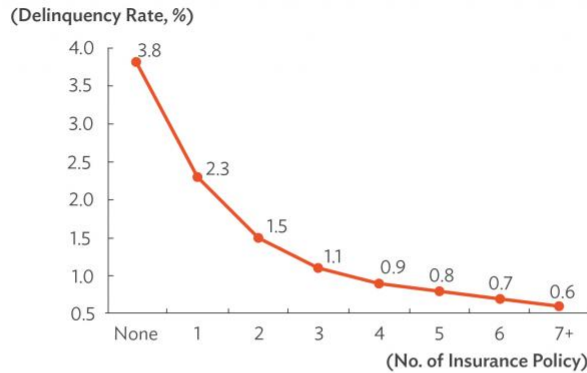
In most US states, using credit information for insurance underwriting and calculation of insurance premium is legally permissible?however, such information cannot be the sole determining criteria?and it is known that about 95% of automobile insurers and 85% of housing insurers do so[5].

In the Republic of Korea, few studies have been conducted on the relationship between personal credit information and the probability of making insurance claims and insurers' loss rates. Jeong and Son (2009) analyzed the correlation between the probability of accidents for personal automobile insurance and insurers' loss rates, and found a strong negative correlation between policy holders' credit rating and probability of insurance claims (frequency of accidents and loss rates). In terms of predicting insurance claims, a model that considered credit information showed superior predictability compared to a model that only used insurance information. Jeong and Yeo (2011) analyzed a correlation between personal credit information and the rate of life insurance claims, and produced a similar result. Meanwhile, legal provisions on utilizing credit information for underwriting and calculation of insurance premium are absent, and insurance firms are not using the credit information.

Some research has been undertaken to analyze whether information on the history of insurance contracts affects credit status, and it was shown that the more insurance policy and the longer the contract holding period, the lower the delinquency rate. According to Korea Credit Information Services (2016)[6], loan delinquency rate of people with one or more insurance policies (1.4%) was about merely one third of those without insurance policy (3.8%). For those with seven or more policies, the rate was

about one sixth of those without insurance policy. As for the contract period, the loan delinquency rate steadily declined until the eighth year. From these, it can be surmised that the number of insurance policy holding and contract holding period can be an effective proxy that shows whether people are actively engaging in economic activities.

Figure 1: Relationship between Number of Policy Holding and Holding Period and Loan Delinquency Rates

(Delinquency Rate, %)

None	1	2	3	4	5	6	7+
3.8	2.3	1.5	1.1	0.9	0.8	0.7	0.6

(No. of Insurance Policy)

(Delinquency Rate, %)

0	-3	3-6	6-8	8-11	11-14	14-
3.8	2.3	1.6	1.6	0.9	0.7	0.7

(Holding Period, Years)

Source: "Analysis of Big Data of Korea Credit Information Services". Now. 2016, KCIS

[1] Federal Trade Commission, "Credit-Based Insurance Scores: Impacts on Consumers of Automobile Insurance," July 2007
[2] The score is calculated based on credit-related information such as loan delinquency, bankruptcy and credit transactions, and similar to credit score and credit rating.
[3] Texas Department of Insurance, "Use of Credit Information by Insurers in Texas," January 2005
[4] Arkansas Insurance Department, "Use and Impact of Credit in Personal Lines Insurance Premiums Pursuant to ARK. Code ANN. § 23-67-415," June 2014
[5] NAIC (National Association of Insurance Commissioners), U.S. News & World Report, "The Surprising Relationship Between Your Credit and Insurance Rates," March 6, 2017
[6] Korea Credit Information Services, "Analysis of KCIS Big Data," Nov. 2016

Insights

Given these, it would be advisable to conduct a more rigorous analysis of the relationship between credit information and insurance contracts, verify their validity, garner expert opinions so that personal credit information could be used as one of determining factors in insurance underwriting and calculation of premiums; this is expected to set premium rates more reasonably for both insurers and consumers, and contribute to more stable loss rates for insurers; in doing so, it is important not to cite poor credit information as a reason to refuse or restrict insurance contract; also, rigorous supervision is needed to avoid using credit information as the sole determining factor for insurance premiums or to charge excessive premiums. Lastly, it would be worth considering the idea of reflecting information on the history of insurance policy holding in credit evaluation, which is expected to make the credit evaluation model more trustworthy and elaborate; it is likely to be particularly useful for assessing credits of consumers with insufficient credit records.

References

Korea Institute of Finance website.

Resources

Summary: *Six Lessons to Learn from Asia's World-Class Universities*

Case Study: *An Eco-friendly Approach to Waste Management*

Case Study: *Sustainable Water Management for Smart Cities*

Insight: *How East Asia Can Reduce Climate Change Impact*

Explainer: *Get On My Cloud - Explaining the MathCloud System of Learning*

Insight: *Smart Strategies for Getting More Women into the Workforce*

Insight: *A Successful Example of How to Shift to Cyberlearning*

Explainer: *Using Television to Improve Education Systems*

Case Study: *Revitalizing a City by Reviving a Stream*

Sukho Lee

Senior Research Fellow, Banking and Insurance Industry Division, Korea Institute of Finance

His research area is insurance. He received his BBA, MS, and PhD degrees from the Fox School of Business and Management, Temple University, concentrating in risk management and insurance. He worked as research fellow at the KIF since 2004; assistant editor at the Journal of Economics and Business; and research fellow at the Hanyang Economic Research Institute, Hanyang University.

Last updated: June 2018