A Study on How Insurance Companies Can Cover Weather Risks Using Index Insurance

Recently, due to an increase in abnormal climate and weather change, people have increasingly focused on weather risks. In Korea, however, only a few public insurance products are available due to difficulties in damage assessment and moral hazards, along with a small number of traditional weather insurance products. To get around this problem, index weather insurance was introduced in 2006, but the sales of it have been insignificant. In this regard, the purpose of this report is to investigate exemplary precedents of countries in which index weather insurance has propagated, and to provide some implications for expanding the ability to insure with it.

On the other hand, note that index weather insurance is not related to a catastrophic disaster, but to ordinary changes in weather for daily life and business. An interesting feature is that the index insurance is a product which compensates for a gap between an actual value and a predetermined index, depending upon weather changes. Unlike traditional weather insurance, it has some advantages of not being adverse selection and moral hazards, not to speak of damage assessment. On the contrary, it has disadvantages of not precluding basis risks and spreading weather risks, leading to high insurance premiums.

Based on the examples of the United States, Canada, and Mexico, it is important to enhance policyholder’s accessibility to weather index insurance, build a professional facility calculating weather indices, and develop new products meeting customer’s needs, leading to invigorate weather index insurance. In addition, it is required that the public sector
including the government play an important role in helping insurance companies easily deal with weather index insurance. Furthermore, it is necessary to amend an ordinance of the Insurance Business Act so that the insurance industry can trade in weather-related derivative products. In this regard, note that to expand weather index insurance, it should be possible for insurance companies to transfer weather risks to the capital market using derivatives, along with reinsurance, and that they have the expertise to design and develop derivatives associated with weather.