عنوان مقاله:

Pricing life settlements in the secondary market using fuzzy internal rate of return

نویسنده:

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خلاصه مقاله:

In this paper, fuzzy set theory is implemented to model internal rate of return for calculating the price of life settlements. Deterministic, probabilistic and stochastic approaches is used to price life settlements in the secondary market for the Iranian insurance industry. Research findings were presented and analyzed for whole life insurance policies using the interest rates announced in the supplement of Regulation No. ۶۸ and Iranian life table, which recently has been issued to be used by insurance companies. Also, the results of three approaches were compared with surrender value, which indicates the surrender value is lower than the fuzzy price calculated based on the probabilistic and stochastic approaches and it is higher than the price calculated based on the deterministic approach. Therefore, selling life settlements in the secondary market in Iran based on calculated fuzzy price using probabilistic and stochastic approaches will benefit the policyholder. Also, the price is obtained in the form of an interval using the fuzzy sets theory and the investor can decide which price is suitable for this policy based on financial knowledge. Furthermore, in order to show validity of the proposed fuzzy method, the findings are compared to the results of using the random internal rate of return.

کلمات کلیدی:

Life settlements Fuzzy random variables life expectancy Secondary market, Adjustment multiplier

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