Utility Maximization for a Defaultable Security with Discrete Monitoring

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A derivative security whose payoff depends on a discretized random time is considered: typical examples are derivatives on defaultable securities, equity-linked life-insurance policy with an asset value guarantee (ELPAVG), and vulnerable derivatives with event risk. With the filtration generated by information of basic financial market and the random time, utility maximization is studied for pricing and hedging of these securities. This work is based on a joint research with Hyejin Ku of York University.

Keywords: random time, stopping time horizon, discrete monitoring, defaultable security, insurance product, incomplete market, hedging, indifference pricing.