

A stochastic model for financiers

Raffaella Barone, Roy Cerqueti, Anna Grazia Quaranta

Abstract

In this work, two models for legal and illegal financiers are presented. The aim of the financiers are different: a bank try to minimize the default probability of the funded company, while the illegal financier aims to bring the company to bankruptcy and, at the same time, to obtain the maximum level of the firm's guarantee wealth. A couple of stochastic dynamics optimization problems are solved. The illegal case let intervene a numerical analysis of the microeconomic situation of the firm, starting from real data and writing new simulation procedure in Matlab and GAMS. The legal case has been solved in closed-form, by using stochastic control theory.

Raffaella Barone, Università di Lecce.

E-mail: r.barone@economia.unile.it.

Roy Cerqueti, Università di Roma "La Sapienza".

E-mail: roy.cerqueti@uniroma1.it.

Anna Grazia Quaranta, Università di Camerino.

E-mail: annagrazia.quaranta@unicam.it.