

PRINCETON UNIVERSITY
OPERATIONS RESEARCH & FINANCIAL ENGINEERING
STOCHASTIC ANALYSIS SEMINAR

Strategic Capital Accumulation as a Singular Control Game

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Abstract

The value of a real option to delay an irreversible investment strongly depends on the competitive environment. If competitors have access to the same option, the investment by any firm influences the payoff to any other. The implied strategic effect of investment then typically results in an incentive to preempt. We study this situation with arbitrarily divisible investment, which is modeled as a game with singular control exercised by the firms. The choice between the open loop or closed loop representation of controls makes a fundamental conceptual difference in dynamic games. We discuss the economic implications of this choice in terms of the different types of equilibria that arise, but also the implications for the different mathematical solution techniques that can be applied.

Monday, February 27, 2012
Bendheim Center 103
12:30 – 1:20PM