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Banking and Finance (2688)
Hanken School of Economics, Spring Semester 2014
Rune Stenbacka

EXAM 17 May 2014

Time limitation: 4 h Help aid: Calculator

Answer the two questions below!

1.a) Explain in a detailed way the mechanism for how moral hazard leads to credit rationing in credit markets. **(10 p)**

credit evaluations
collateral
bank representation in board of directors
conservative contracts
immediate payment of loans

b) Present and discuss different remedies (policies or institutions) against bank runs. **(10 p)**

narrow banking
DI
interbank market
bank run bank panic contagion

2. (20 p) Assume that 100.000 different projects apply to a monopoly bank for funding. The bank attracts funding at the deposit rate r_0 meaning that its per-unit cost of funds is $R_0 = 1 + r_0$. The population of applicants is heterogeneous. The proportion λ is creditworthy. Creditworthy projects have a return ψ with probability p. With the probability $1 - p$ creditworthy projects fail, implying zero return. The proportion $1 - \lambda$ of projects is not creditworthy, and these projects always fail (yielding zero return).

$p(H|L) = \alpha$
$p(L|H) = \beta$

Assume that the bank has access to a technology for project-specific screening. Further, assume that the cost of project-specific screening is c for each project. Finally, assume that the screening technology is imperfect in the following sense: A project which is not creditworthy is misclassified as a creditworthy one with probability 0.05. For simplicity, the classification technology is such that a creditworthy project is never misclassified.

a)Under which condition is it optimal for the bank to grant funding to all projects without project-specific screening?

b)Under which condition is it unprofitable for the bank to operate at all?

c)Under which condition is it optimal for the bank to conduct project-specific screening?

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Tom Berglund

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1. Assume that likelihood that the Ukranian crisis escalates further in way that will cause Russian shares to drop in value by half (50 %) is estimated by the markets to be 10 %. For simplicuty assume that otherwise everything will return to normal within a year. (Just two possible alternatives) Assume further that the required expected return by investors to invest in Russian shares 10 % per year.

$\beta = \frac{\text{cov with market return}}{\text{var of market return}}$

$r_e = r_f + \beta(r_m - r_f)$

a) Use the logic in the Capital Asset Pricing Model to discuss how realistic 10 % is as required rate. (10 p)

b) Now assume that things will return to normal within a year and there are no suprises in one direction or the other. What will be the realized return on an investment in Russian shares today (that we will observe after one year). (10 p) martingale. stochastic process

2. The top management in large firms should act in a way that will increase the value of the firm (total protfolio of resources controlled by the firm) within the limits of existing laws and regulations.

a) Which stakeholders have personal interests that should correspond closely to this goal? (4 p)

b) What type of problems may arise between these stakeholders and the top management? Explain briefly! (8 p)

c) What mechanisms are there that these stakeholders can use to reduce problems that may otherwise arise? (8 p)

contract design
markets
monitoring