Andreas Krause

Chapter 7.2

Credit rationing caused by moral hazard

Risk-taking by companies

- Companies can choose between investments with different risks
- Banks seek to provide incentives to choose investments with low risks
- They do so by setting loan conditions, the loan rate and the loan size

Company profits

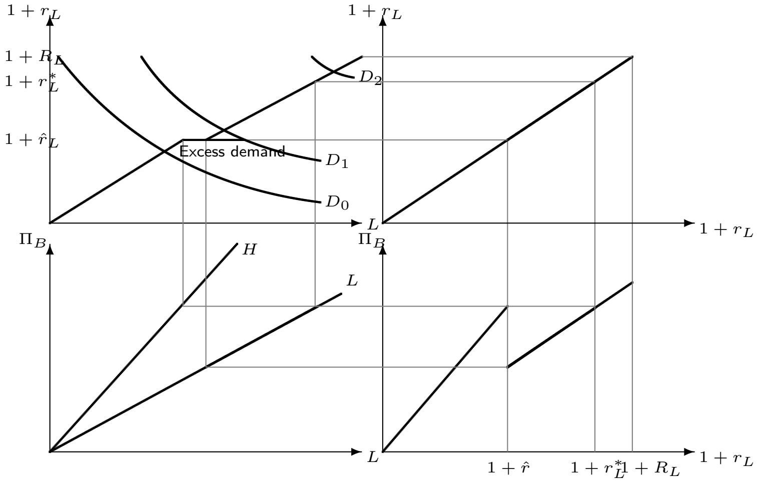
- If successful, companies obtain their return and repay the loan
- $\Pi_C^i = \pi_i \left(\left(1 + R_i \right) L - \left(1 + r_L \right) L \right)$
- Companies choose the low-risk investment if $\Pi_C^H \geq \Pi_C^L$

$\Rightarrow$ $1 + r_L \leq 1 + \hat{r}_L = \frac{\pi_H (1+R_H) - \pi_L (1+R_L)}{\pi_H - \pi_L}$

Bank profits

- Banks are repaid the loan if the company is successful, and repay deposits
- $\Pi_B^i = \pi_i (1 + r_L)\, L - (1 + r_D)\, L$
- The success rate of the company will depend on the loan rate they charge
- $\Pi_B = \begin{cases} \Pi_B^L & \text{if} \quad r_L \leq \hat{r}_L \\ \Pi_B^L & \text{if} \quad r_L > \hat{r}_L \end{cases}$
- Low loan rates will induce low risks and high loan rates high risks

Demand and supply



Summary

- Banks do not increase loan rates above a threshold as this would induce companies to choose high-risk investments
- Banks ration loans as demand exceeds supply at this loan rate

$\Rightarrow$ Banks seeking large loans due to low loan rates may be rationed

This presentation is based on
Andreas Krause: Theoretical Foundations of Banking, 2025

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