

Credit rationing



Equilibria in economics


- ▶ An equilibrium is usually a price and quantity at which markets clear, hence demand and supply are equal
- ▶ Such an equilibrium exists if the supply is increasing in price and demand decreasing
- ▶ If demand or supply is not monotonous, market clearing might not exist, giving us excess demand or supply
- ▶ The equilibrium would then be where the price setter maximizes its profits

Excess demand for loans

- ▶ It might be that companies apply for a loan, but are granted only a smaller loan
- ▶ Even if offering a higher loan rate, they are not granted a larger loan
- ▶ In this case we have excess demand by companies for loans
- ▶ This is referred to as credit rationing

Loan rates and repayments

- ▶ If investment outcomes are unknown, banks do not know how much of their loan is repaid
- ▶ A higher loan rate requires a higher investment outcome to repay the loan fully
- ▶ A higher loan rate therefore does not necessarily increase profits to the bank
- ▶ Banks will anticipate this relationship and might not be willing to lend as much as loan rates increase



Andreas Krause

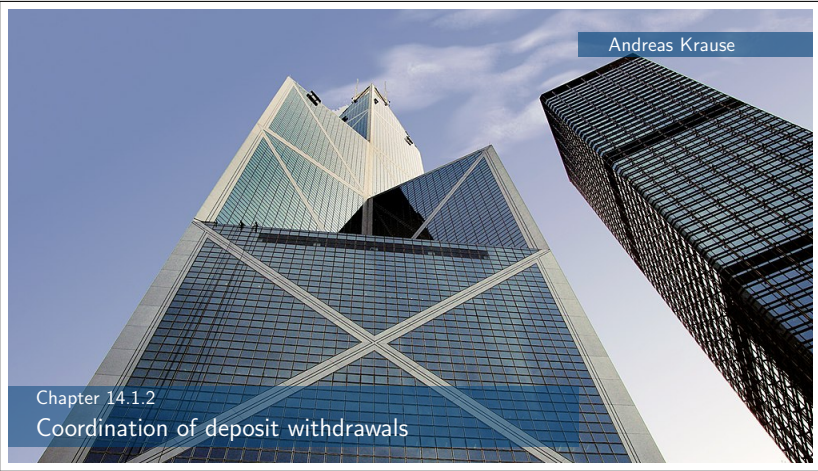
Chapter 7.1
The consequences of uncertain outcomes

Discussion of model results

- ▶ A higher loan rate makes the repayment of the full loan less likely, this induces a non-monotonous supply function
- ▶ If the loan demand is sufficiently high, this demand cannot be met and credit rationing occurs
- ? If companies anticipate credit rationing, would they apply for larger loans than they need?
- ! This would not alleviate the problem as banks have a maximum loan size they are willing to give, regardless of the size the company seeks; it is not a case of limited resources where these are allocated through rationing

Decisions by companies

- ▶ Companies obtaining loans decide on how much risks they take with their investments
- ▶ Banks will always prefer companies to take lower risk, hence a moral hazard in the decision of the company exists
- ▶ Banks will anticipate this moral hazard and how it affect their profits
- ▶ This assessment will then determine how much they are willing to lend



Andreas Krause

Chapter 7.2
Credit rationing caused by moral hazard

Discussion of model results

- ▶ Banks use the loan size to induce companies to reduce the risks they are taking
- ▶ For intermediate loan demand this can lead to credit rationing
- ? Would providing a collateral alleviate the problem of credit rationing?
- ! Losing the collateral if defaulting, provides additional incentives to reduce risks; this might avoid credit rationing

Summary of key results

- ▶ Credit rationing can occur if the demand for loans by a company is sufficiently high and the supply of bank loans is not monotonous
- ▶ Credit rationing occurs due to higher loan rates inducing more risky behaviour or increasing the risk of default due to higher repayments
- ▶ Companies with good prospects seeking loans for additional investments may be subject to credit rationing if they demand large loans



Copyright © by Andreas Krause

Picture credits:

Cover: The wub, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Canary_Wharf_from_Greenwich_riverside_2022-03-18.jpg

Back: Seb Tyler, CC BY 3.0 <https://creativecommons.org/licenses/by/3.0>, via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Canary_Wharf_Panorama_Night.jpg

Andreas Krause
Department of Economics
University of Bath
Claverton Down
Bath BA2 7AY
United Kingdom

E-mail: mnsak@bath.ac.uk