Andreas Krause

Chapter 18.1.1

Fixed-price deposit insurance

The effect on deposit rates

- Deposit insurance is often unpriced or any charges are fixed
- Deposit insurance eliminates the risk to depositors, which would obtain lower deposit rates
- This will affect the incentives of banks when lending

Copyright © by Andreas Krause

Bank profits without deposit insurance

- Banks obtain the repayment of loans and in turn repay their depositors and equity owners
- $\Pi_B = \pi\left(1 + r_L\right) L - \left(1 + r_D\right) D - E$
- In competitive markets, banks make no profits: $\Pi_B = 0$

$\Rightarrow$ $1 + r_L = \frac{(1+r_D)D+E}{\pi(D+E)}$

Copyright © by Andreas Krause

Maximizing risks

- With deposit insurance, banks have to pay the insurance premium
- $\hat{\Pi}_B = \pi\left(\left(1+r_L\right)L - \left(1+r_D\right)D\right) - P - E$
- Assume loan rates are set competitively as without deposit insurance

$$\Rightarrow \hat{\Pi}_B = \left(1-\pi\right)\left(1+r_D\right)D - P$$
$$= \left(1-\pi\right)\left(1+r_D\right)\tfrac{1}{1+\kappa}L - P$$

- Bank profits are maximized if loan risks are maximized and leverage is maximized

Copyright © by Andreas Krause

Optimal deposit insurance pricing

- Deposit insurance premia should take into account the risks of banks
- Set premium such that $\hat{\Pi}_B = 0$

$\Rightarrow$ $P = (1-\pi)(1+r_D)\frac{1}{1+\kappa}L$

- The premium is increasing in loan risks and bank leverage
- This would provide no incentive to increase risks

Copyright © by Andreas Krause

Summary

- Deposit insurance premia that do not take into account the risks banks take, provide incentives to increase risks
- Deposit insurance causes moral hazard as any losses to depositors are covered, allowing them to be unresponsive to bank risks
- Any such incentives to increase risks must be countered by other regulatory measures, such as capital requirements

Copyright © by Andreas Krause

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

Copyright © by Andreas Krause

Picture credits:
Cover: Bernard Spragg. NZ from Christchurch, New Zealand, CC0, via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Bank_of_China_Hong_Kong_(9532283389).jpg
Back: Florian Lindner, CC BY 2.5 https://creativecommons.org/licenses/by/2.5 via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:Hong_Kong_Panorama_at_night.jpg

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

E-mail: mnsak@bath.ac.uk