

Chapter 18.2.1

The optimality of deposit insurance limits

Outline

- Problem and model assumptions
- No deposit insurance
- Full deposit coverage
- Partial deposit coverage
- Summary

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Switching banks

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- ▶ Depositors staying with bank j are **repaid deposits** if the **loans are repaid** to the bank
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$$D_i = \lambda \left(1 \right) 2D + (1 - \lambda) \left(1 \right) D$$

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- ▶ Deposits a bank holds will consist of **existing large** and **small deposits**, plus those it attracts **from the other bank**
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$$D_i = \lambda \left(1 + 2\pi \frac{(1+r_D^j) - (1+r_D^i)}{c} \right) 2D + (1 - \lambda) \left(1 + \pi \frac{(1+r_D^j) - (1+r_D^i)}{c} D \right) D$$

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- ▶ Full deposit coverage gives banks **less profits** than no deposit insurance

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- ▶ $\Pi_D^{ji} = (1 + r_D^i) D - D + \pi (1 + r_D^i) D - D - (1 - \pi) D - cd_j$
- ▶ They can switch D to bank i and have the **full deposits insured**
- ▶ $\Pi_D^{jij} = (1 + r_D^j) D - D + (1 + r_D^i) D - D$

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$$\Rightarrow d_i \leq d_i^{***} = \frac{(1+r_D^j) - \pi(1+r_D^i) + (1-\pi)}{c} D$$

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- ▶ Large depositors are attracted from other banks seeking to increase their deposit insurance coverage

$$\text{▶ } D_i = \lambda \left(2D - \frac{(1+r_D^i) - \pi(1+r_D^j) + (1-\pi)}{c} D^2 \right)$$

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- ▶ Large depositors are attracted from other banks seeking to increase their deposit insurance coverage
- ▶ Large depositors are lost to other banks seeking to increase their deposit insurance coverage
- ▶ Small depositors will be fully insured and behave as indicated above
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$$D_i = \lambda \left(2D - \frac{(1+r_D^j) - \pi(1+r_D^i) + (1-\pi)}{c} D^2 + \frac{(1+r_D^i) - \pi(1+r_D^j) + (1-\pi)}{c} D^2 \right) \\ + (1 - \lambda) \left(D + \frac{(1+r_D^i) - (1+r_D^j)}{c} D^2 \right)$$

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■ Problem and model assumptions

■ No deposit insurance

■ Full deposit coverage

■ Partial deposit coverage

■ Summary

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