Andreas Krause

Moral hazard

Incentives to take risk

- Risks are reducing the utility of individuals, but often the costs of risks are shared, while the benefits are not shared
- Such a situation gives an incentive to increase risks
- This is referred to a moral hazard

Examples of moral hazard

- Insurance policy holders might become less careful as losses are covered
- Councils might take more risks in spending as they expect to be bailed out if they fail
- Managers might make decisions that reduce their efforts rather than maximize company profits

Company decisions

- Assume companies can choose between two investments, one low-risk and the other high-risk
- The company invests the loans and obtains a return, provided the investment is successful, and then repays the loan
- $\Pi_C^i = \pi_i \left(\left(1 + R_i\right) I - \left(1 + r_L\right) L \right)$
- Companies will choose the low-risk investment if $\Pi_C^H > \Pi_C^L$

$\Rightarrow$ $1 + r_L \leq 1 + r_L^* = \frac{\pi_H (1+R_H) - \pi_L (1+R_L)}{\pi_H - \pi_L}$

Bank lending

- If banks wanted to avoid companies choosing high-risk investments, they cannot charge a high loan rate
- Banks lending to low-risk companies would be repaid the loan if the investment is successful and repay their depositors
- $\Pi_B = \pi_H (1 + r_L)\, L - (1 + r_D)\, D$
- They lend only if it is profitable: $\Pi_B \geq 0$

$\Rightarrow$ $1 + r_L \geq 1 + r_L^{**} = \frac{1+r_D}{\pi_H}$

Market breakdown

- As banks need to ensure the low-risk investment is chosen, we need a loan rate with $1 + r_L^{**} \leq 1 + r_L \leq 1 + r_L^{*}$

$\Rightarrow$ This condition might not be fulfilled, for example if $\pi_H (1 + R_H) \approx \pi_L (1 + R_L)$

- Low-risk investments might not be financed as the constraints on the loan rate are too strict

Preventing market breakdown

- Moral hazard can only be prevented if the decisions of the company can be controlled by the bank, for example through monitoring
- In other cases, only incentives can be given to choose low-risk investments, this might be the ability to obtain loans in the future
- Banks might choose mechanisms that do not affect their profitability or combine different mechanisms

Picture credits:
Cover: Premier regard, Public domain, via Wikimedia Commons, https://commons.wikimedia.org/wiki/File:DALL-E_-_Financial_markets_(1).jpg
Back: Rhododendrites, CC BY-SA 4.0 https://creativecommons.org/licenses/by-sa/4.0, via Wikimedia Commons, https://upload.wikimedia.org/wikipedia/commons/0/04/Manhattan_at_night_south_of_Rockefeller_Center_panorama_(11263p).jpg

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

E-mail: mnsak@bath.ac.uk