

A wide-angle photograph of a city skyline, likely New York City, viewed from across a body of water. The foreground shows the water's surface with gentle ripples. In the middle ground, there is a row of older, multi-story brick buildings with dark roofs. Behind these, a dense cluster of modern skyscrapers rises against a clear blue sky. The buildings vary in height and design, including several cylindrical towers and rectangular high-rises. A few construction cranes are visible in the distance. The overall scene is bright and clear, suggesting a sunny day.

Andreas Krause

Chapter 6.2  
Accepting merger offers

# Outline

- Problem and model assumptions
- Fixed fee contract
- Conditional fee contract
- Contingent fee contract
- Summary

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# Investment banking advice

- ▶ Investment banks advice clients on whether to accept a merger offer being made to them
- ▶ Investment banks advice clients on making merger offers for companies they want to acquire
- ▶ This advice might be biased in order to maximize the profits of investment banks rather than the surplus of clients

# Merger offers

- ▶ Assume a merger offer to a target with their surplus being  $V_L$  has been made and can be accepted
- ▶ A better offer with surplus  $V_H > V_L$  can happen with probability  $\pi$  if the original offer is rejected
- ▶ A merger offer by a bidder with surplus  $V_L$  is considered and it is certain the target will accept this
- ▶ Alternatively, an offer with surplus  $V_H > V_L$  can also be made, but it will only be accepted with probability  $\pi$

# Investment banking cost

- ▶ If the current offer  $V_L$  is accepted investment banks have costs  $C^*$
- ▶ If the offer is rejected, the costs increase to  $C > C^*$
- ▶ We investigate the optimal decision of clients to accept or reject  $V_L$
- ▶ and the optimal advice of investment banks

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# Client decision

- ▶ Regardless of the decision of the client, the investment bank charges a fee  $F$
  - ▶ Clients accepting the low offer, obtain the low surplus and pay the fee to the investment bank
  - ▶ Clients holding out for a high offer, obtain the high surplus only if such an offer is made and pay the fee regardless of the outcome
  - ▶ They prefer the low offer if the net surplus is bigger
  - ▶  $V_L - F \geq \pi V_H - F$
- $\Rightarrow \pi \leq \pi_C^* = \frac{V_L}{V_H}$



# Investment bank advice

- ▶ For low offers, investment banks obtain the fee from their client and face their costs
- ▶ For high offers, investment banks obtain the fee from their client and face their costs
- ▶ They prefer the low offer if the net surplus is bigger
- ▶  $F - C^* \geq F - C$
- ▶ As  $C > C^*$  the investment bank would always advice accepting the low offer
- ▶ A conflict of interest emerges if  $\pi > \pi_C^*$

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## Client decision

- ▶ A fixed fee  $F$  is only payable to the investment bank if the merger is completed
  - ▶ Clients accepting the low offer, obtain the low surplus and pay the fee to the investment bank
  - ▶ Clients holding out for a high offer, obtain the high surplus only if such an offer is made and pay the fee only in this case
  - ▶ They prefer the low offer if the net surplus is bigger
  - ▶  $V_L - F \geq \pi (V_H - F)$
- $\Rightarrow \pi \leq \pi_C^{**} = \frac{V_L - F}{V_H - F} < \pi_C^*$
- ▶ The offer is less likely to be accepted than with fixed fees as the fee is not payable if the merger does not commence at the higher surplus

## Investment bank advice

- ▶ For low offers, investment banks obtain the fee from their client and face their costs
  - ▶ For high offers, investment banks obtain the fee from their client if a better offer arrives and face their costs
  - ▶ They prefer the low offer if the net surplus is bigger
  - ▶  $F - C^* \geq \pi F - C$
- ⇒  $\pi \leq \pi_B^{**} = 1 + \frac{C - C^*}{F}$  and hence  $\pi_B^{**} > 1$
- ▶ The investment bank would always advice accepting the low offer
  - ▶ A conflict of interest emerges if  $\pi > \pi_C^{**}$  and as  $\pi_C^{**} < \pi_C^*$  the conflict of interest covers a wider range

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## Client decision

- ▶ Clients pay the investment bank a fraction of their surplus if the merger is completed
- ▶ Clients accepting the low offer, obtain the low surplus and pay the fee to the investment bank
- ▶ Clients holding out for a high offer, obtain the high surplus only if such an offer is made and pay the fee only in this case
- ▶ They prefer the low offer if the net surplus is bigger
- ▶  $V_L - fV_L \geq \pi (V_H - fV_H)$
- ⇒  $\pi \leq \pi_C^{***} = \frac{V_L}{V_H} = \pi_C^*$
- ▶ Clients have the same threshold for accepting a merger offer than with fixed fees

# Investment bank advice

- ▶ For low offers, investment banks obtain the fee from their client and face their costs
- ▶ For high offers, investment banks obtain the fee from their client if a better offer arrives and face their costs
- ▶ They prefer the low offer if the net surplus is bigger
- ▶  $fV_L - C^* \geq \pi fV_H - C$
- ⇒  $\pi \leq \pi_B^{***} = \frac{V_L}{V_H} + \frac{C - C^*}{fV_H}$
- ▶ If  $f(V_H - V_L) > C - C^*$ , then  $\pi_B^{***} < 1$  and the investment bank does not always advise to accept the initial offer
- ▶ The conflict of interest is reduced as  $\pi_C^{***} = \pi_C^* < \pi < \pi_B^{***} < 1$

# Minimum offers

- ▶ Re-arranging the minimum probabilities for clients and investment banks we get the minimum offers that would induce clients to accept an offer and investment bank to advise to accept
- ▶  $V_L^C \geq \pi V_H$   
 $V_L^B \geq \pi V_H - \frac{C-C^*}{f}$
- ▶ Investment banks would advise to accept offers with lower benefits than is optimal for their clients



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# Reduced conflicts of interest

- ▶ Fixed and conditional fee contracts would have the investment bank always advise to accept an offer
- ▶ Contingent fee contracts distort the advice given by investment banks the least
- ▶ Investment banks will recommend clients to accept offers that provide too small surplus

# Investment bank incentives

- ▶ Investment banks have limited incentive to wait for an improved offer
- ▶ The higher surplus has to be weighed against the uncertainty of the merger commencing and the higher costs
- ▶ This causes investment banks to advise accepting offers that are giving low surplus



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